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SPECIFICATION

Online Business Management System

Technical Field

The present invention relates to an online business management method and online business management apparatus, and an online business management system that, utilizing the same system as the system that each client uses within each client, is able to carry out business management such as merchandise ordering and the like, via the internet.

Prior Art

Each client (enterprise) usually uses its own original system to carry out merchandise purchasing procedures such as merchandise ordering and the like, and the accompanying delivery and payment processing procedures and the like. Generally, this type of business management is carried out department by department, utilizing a computer network such as a LAN constructed within the company, using centralized management by means of a central host computer.

In recent years, as internet technology has advanced and the utilization thereof become widespread, systems have been proposed that use the internet to provide each client's merchandise purchasing and appurtenant business management systems. Utilizing such systems makes it unnecessary to build a business management system for each client, and is therefore advantageous from the point of expenses and system maintenance.

However, a business management system provided via the internet is a general-purpose system prepared on the side of the system provider. Therefore, in cases in which clients utilize the business management system, it is necessary for each client to get rid of its own, original system.

Also, an interface is required that changes the data input/output format of a client's system to match the data input/output format of the business management system provided over the internet. In this case, in order to perform each client's original data processing and make up the forms used, it is necessary to download data to the client's terminal via the internet, and perform such editing processing in the client system.

Disclosure of the Invention

The object of the present invention is to enable each client to conduct business management relating to purchasing of merchandise by using exactly the same terminal operations as the system inside the client, by providing, via the internet, a business management system that follows each client's original system.

The present invention relates to an online business management system that has a business management apparatus and at least one client apparatus that can be connected to said business management apparatus by a communication circuit in which, based on input data from said client apparatus, client business management procedures are carried out at said business management apparatus side via said communication circuit.

Here, said business management apparatus has a database server, and a web server that operates said business management site on the internet.

Here, said database server includes a master database in which are stored client internal business management codes, data processing formats and form formats used in relation to merchandise purchasing procedures in the client; a business management section that, based on the client internal business management codes, is able to execute the same processing as said business procedures used in relation to merchandise purchasing procedures in the client; and a business management database in which are stored business management data relating to

merchandise purchasing generated by said business management section.

Also, said web server is set up so that, with respect to clients that have access rights to said business management site, on said business management site it carries out procedures relating to merchandise purchasing utilizing said business management section, said master database and said business management database.

Thus, in the online business management system of this invention, internal business management codes, data processing formats and form formats used by each client are stored in the database server, and from the client apparatuses, via the internet, clients can carry out business procedures such as ordering of merchandise and the like, using the system specific to each client.

In general, each client has its own in-house business management system. That is, the client apparatus includes a client internal business management section that performs business management processing relating to merchandise purchasing procedures in the client concerned, based on client internal business management codes, data processing formats and form formats, and a client internal business management database in which is stored business management data relating to merchandise purchasing generated by the client internal business management section.

In this case, each client is able to operate the online business management system of the present invention by using the same input operations, screen displays and processing operations that are employed when ordering merchandise and other such operations using its in-house system.

As the above client internal business management codes, there can be mentioned department/station codes showing a client's internal organizational structure, person-responsible codes, and sorting codes and the like relating to merchandise purchasing.

In most cases the type of merchandise ordered by each department/station differs, so it is desirable for the database server of the business management apparatus to be equipped with a data output facility that outputs groups of merchandise data corresponding to the client internal business management codes. The ordering of merchandise in this case by the client apparatus is performed by the desired merchandise being searched for from the merchandise data group corresponding to the client internal business management codes called up by the input of specified client internal business management codes from the client apparatus, the selection of the desired merchandise to be ordered and the input of a command to order the selected merchandise.

Here, it is preferable for the database server of the business management apparatus to be equipped with a historical database of merchandise orders for each client internal business management code. In this case, after the order command has been input, the merchandise order history database may be updated after the input of an order confirmation from the client apparatus.

It is also preferable, after the order command has been input, to be able to cancel or correct the order command input.

To enable data relating to the business management procedures that utilized the online business management system to be held also in the client system, it is preferable for specified data to be downloadable from the database server, based on client internal business management codes from the client terminal apparatus.

In this case, the downloading of the data is performed by selecting the desired data from data in the database server called up by the input of the specified client internal business management codes from the client apparatus, selecting an output format for the output data selected, selecting a designated portion of the selected data, processing and editing a designated portion of the

selected data to produce a data sheet to achieve the selected output format, and downloading the generated data sheet to the client apparatus.

Next, the online business management system of the present invention is characterized in that it also has a main system that receives and issues merchandise orders and, after the order confirmation in the business management apparatus, provides confirmed order instruction information from the database server to the main system.

Here, the main system can be constructed as a part of the business management apparatus.

Also, it is highly convenient if the contents of the master database in the database server within the business management apparatus can be set and updated from the client apparatus side, as this would enable a realtime response to system changes within the client.

Next, the present invention relates to an online business management method in which a client uses the internet to access a business management site dedicated to the client, and on the business management site performs business management relating to merchandise purchasing procedures and the procedures, characterized in that on said business management site, based on client-specific business management code groups used by the client in relation to merchandise purchasing procedures, merchandise purchasing procedures are performed in accordance with procedures that are the same as business procedures relating to merchandise purchasing procedures within the client, business management data relating to the merchandise purchasing procedures is processed and edited by a system specific to the client, and business management data relating to the merchandise purchasing procedures is output in a form format specific to the client.

In addition, the present invention relates to an online business management apparatus that operates a business management site using an online business

management method in which a client uses the internet to access a business management site specific to the client and performs business management relating to merchandise purchasing procedures and the procedures, said apparatus having a database server and a web server that operates said business management site over the internet. Also, the database server includes a master database in which are stored client internal business management codes, data processing formats and form formats relating to merchandise purchasing procedures in the client; a business management section that, based on the client internal business management codes, is able to execute the same processing as the business procedures relating to merchandise purchasing procedures used in the client; and a business management database in which are stored business management data relating to merchandise purchasing generated by the business management section. Also, the web server is characterized in that, with respect to clients that have access rights to the business management site, on said business management site, it carries out procedures relating to merchandise purchasing utilizing the business management section, the master database and the business management database.

Brief description of the drawings

Figure 1 is a diagram showing the general overall configuration of an online business management system according to an embodiment of the present invention.

Figure 2 is a general function block diagram of the main parts of the system of Figure 1.

Figure 3 is an explanatory diagram showing the flow of a merchandise ordering procedure using the system of Figure 1.

Figure 4 is an explanatory diagram showing the flow of a procedure for downloading data relating to a merchandise order utilizing the system of Figure 1.

(Explanation of symbols)

1: Online business management system

2: Business manager

3: Business management apparatus

4(1), 4(2): Client

5(1), 5(2): Client apparatus

6: Internet

11: Web server

12: Database server

13: Main system

21: Client server

22: Client terminal apparatus

23: Router

24: Client terminal apparatus

25: Terminal adapter

30: Business management section

31: Data retrieval facility

32: Data write facility

33: Data output facility

34: Data processing/editing facility

41(1), 41(2): Master database

42(1), 42(2): Order history database

43(1), 43(2): Database

44: Contract client information database

51: Client internal business management codes

52: Client internal business management form formats

53: Client internal business management processing systems

60: Client internal business management section

61: Client internal business management data retrieval facility

62: Client internal business management data write facility

63: Client internal business management data output facility

64: Client internal business management data processing/editing facility

B1: Home page access

B2: Terminal authentication
B3: User code, password authentication (one-time password system)
B4: Online business service menu selection
1) Ordering service
2) Data reference
3) Production of data sheet
4) Downloading
B5: Merchandise search
(Client internal business management codes)
B6: Merchandise selection
(Client internal business management codes)
B7: Merchandise order
(Client internal business management codes)
B8: Order history confirmation
(Client internal business management codes)
B9: Order correction
(Client internal business management codes)
B11: Output data selection
(Client internal business management codes)
B12: Output format selection
(Client internal business management codes)
B13: Data content selection
(Client internal business management codes)
B14: Data sheet production
(Client internal business management codes)
B15: Data download
(Client internal business management codes)

Best mode for carrying out the invention

Examples of embodiments of an online business management system applying the present invention are explained below with reference to the drawings.

Figure 1 is a diagram of the configuration of an example of the online business management system. As shown by this diagram, the online business management system 1 includes a business management apparatus 3 operated by a system manager 2 that is central to the execution of online business management, a plurality of clients, in the diagram client apparatuses 5 (1), 5 (2) installed at a client 4 (1) and client 4 (2); a business management apparatus 3 can be connected to each of the client apparatuses 5 (1), 5 (2) by internet 6. A public circuit,

ISDN circuit, cellular telephone circuit, packet communications circuit, frame relay circuit, ATM circuit, dedicated circuit, ADSL circuit, PHS circuit, optical communication circuit and the like can be utilized as the communication circuit for connecting via the internet.

The business management apparatus 3 at the system manager 2 side includes a web server 11 for operating a business management site on an internet home page, a database server 12 that provides resources for performing various types of business management processing on the business management site, and a main system 13 at the system manager's side.

A client apparatus, for example the client apparatus 5 (1), is configured with a plurality of client terminal apparatuses 22 connected by a LAN to a client server 21 and, via a router 23, can use the internet to access the business management site of the business management apparatus 3. The client apparatus 5 (2) is comprised by a standalone personal computer 24 and, via a terminal adapter 25, can use the internet to access a business management site. The apparatus on a client's side can have any configuration as long as it includes an internet connection terminal that is able to access a business management site via a communication circuit.

Figure 2 is a general function block diagram of the client apparatus 5 (1), the web server 11 of the business management apparatus 3 and the database server 12. The client apparatus 5 (1) at the client 4 (1) side has a client internal business management section 60 that performs business management processing in the client based on client internal business management codes 51 (1) provided beforehand, and a client internal database 65 that stores input data and client internal business management data generated by the client internal business management section 60. The client internal business management section 60 includes a data retrieval facility 61, a data write facility 62, a data output facility 63

and a data processing/editing facility 64, and as well as processing data in accordance with a predetermined business management data processing system, can produce and output various types of data sheet in accordance with a predetermined form system.

The database server 12 constituting the business management apparatus 3 at the business manager 2 side is constituted around a microcomputer, and has a business management section 30 that includes a data retrieval facility 31, a data write facility 32, a data output facility 33 and a data processing/editing facility 34. Also, each client has various databases such as a master database and a merchandise order history database; in the illustrated example these include master database 41 (1) and order history database 42 (1) of client 4 (1), and various other databases 43 (1) relating to the client 4 (1), master database 41 (2) and order history database 42 (2) of client 4 (2), and various other databases 43 (2) relating to the client 4 (2). In addition, there is included contract client database 44 that holds information on clients utilizing business management systems.

Master database 41 (1) holds client internal business management codes 51, client internal business management form formats 52 and client internal data processing formats 53 used in order management systems and other such business management systems used in client 4 (1). The client internal business management codes 51 are original business management codes used in merchandise ordering procedures and the like within the organization of client 4 (1); these include department/station codes, person-responsible codes and budget codes and the like. An example of a budget code is a sorting code that shows whether target merchandise of an order is a consumable item, or a welfare item, or a raw material, and so forth.

These business management codes are used by the internal organization of the client 4 (1); the types that

are included differ according to the business management system employed within each client. In the same way, the types of business management form formats 52 and business management data systems included differ according to the business management system employed within each client. Consequently, the client internal business management codes 51, client internal business management form formats 52 and client internal data processing systems held in the master database 41 (2) for client 4 (2) are the same as those employed in the business management system used by the internal organization of client 4 (2).

The web server 11 operates a home page HP on the internet; on home page HP, a business management site is operated for each contract client that is registered. The web server 11 runs an authentication on clients that access the home page HP business management site via the internet 6, and clients that have access rights, that is, contract clients, are allowed to access their business management site.

On a business management site, for example the business management site of client 4 (1), on the basis of the various facilities 31 to 34 provided by means of the web server 11, and registered master information (client internal business management codes, client internal business management form formats, client internal data processing formats), the client 4 (1) can perform ordering procedures and other such business procedures, using exactly the same operating procedures as client internal business management system employed in the client concerned. That is, on the screen of the client terminal apparatus 22, ordering procedures and the various procedures and the like related thereto can be performed as if the business management system inside the client were being used.

Next, the flow of the ordering procedure by the online business management system 1 will be explained with reference to Figure 3. Figure 3 is an explanatory diagram

that shows the ordering procedure flow at the client side, together with the function blocks at the business management apparatus 3 side. Described with reference to this diagram, first, a person in charge of a client, such as for example client 4 (1), uses the internet 6 to access from client terminal apparatus 22 the home page HP being operated by a system manager 2 (block B1). When there is the access from the client 4 (1), the web server 11 in the business management apparatus 3 at the system manager 2 side proceeds with the authentication of the client terminal apparatus 22. For example, terminal authentication (block B2) and user code/password authentication (block B3) are done. Thereby, the client 4 (1) that has been allowed access logs in to that client's business management site.

When the business management site is accessed, the screen of the client terminal apparatus 22 changes to an online business management menu selection screen. On this menu selection screen, the selection menu displays, for example, the menu "Ordering," "Data Reference," "Data Sheet Production" and "Download" (block B4).

If "Ordering" is selected from the menu, the screen changes to a merchandise retrieval screen (block B5). When this merchandise retrieval screen is being displayed, a client internal business management code is input from the client terminal apparatus 22. For example, a business management code is input that shows the station to which the person in charge of the ordering belongs. When the business management code is entered, based on the order history and the like of the station concerned, a table of the purchasing merchandise of the station concerned is produced by the business processing section 3 in the database server 12 at the management apparatus 3 side in accordance with a predetermined client internal business management forms format, and is displayed on the screen of the client terminal apparatus 22.

After this, the desired merchandise to be ordered is selected from the table on the screen of the client terminal apparatus 22 (block B6). Next, the number of order items, the delivery period and other such conditions are input via the input section (a keyboard or the like) of the client terminal apparatus 22, to input the order for the selected merchandise (block B7). This information is sent to the business management apparatus 3, in which it is held temporarily, together with which the screen of the client terminal apparatus 22 changes to an order history confirmation screen that displays the content of the order in a predetermined form format (block B8).

After the order content is confirmed, the person responsible transmits from the client terminal apparatus 22 a command indicating confirmation, whereby the order is confirmed and based on the content of the order, the content of the order history database 42 (2) is updated. In the case of a correction to the order content, the correction is made on the order confirmation screen (block B9) and a command is sent to confirm the order.

The main system 13 in the business management apparatus 3 at the business manager 2's side is, for example, a system operated by a trading company or the like, and has an accounts receivable management function 71, an accounts payable management function 72 and an orders received/issued management function 73. When there is an order from the client side, the order information is transmitted from the database server 12 to the main system 13. When an order command is received, the orders received/issued management function 73 of the main system 13 performs processing such as inventory confirmation thereof and delivery period confirmation and the like.

The transmission of the order information and the like from the database server 12 to the main system 13 is done in realtime with respect to merchandise order information such as same-day delivery, for example, and

with respect to other information is sent together at set intervals.

Next, Figure 4 shows the procedure when the "Data Download" menu is selected from the screen of the client terminal apparatus 22. The data download menu is for downloading to the business management apparatus 60 at the client side, various types of data held in the databases 41 (1), 42 (1), 42 (3), and so on, of the database server 12.

In this case, when the download menu is selected (block B4), the screen of the client terminal apparatus 22 changes to an output data selection screen (block B11). When this screen is used to select output data, such as, for example, a history of orders within a specified period, and the station code of the operator is input, this information is transmitted to the business management apparatus 3. At the business management apparatus 3, the order history database 42 (1) is searched based on the station code, and the order history data of the station concerned is output.

After output data selection, the screen of the client terminal apparatus 22 changes to an output format selection screen (block B12), and the output format, such as table format or the like, is selected from this screen. After this, data content can be selected on the screen. Selection of data content means selection of the period and the like of the output target data (block B13).

In this way, output data is selected, and after the output format and content thereof are specified and a data sheet production command is transmitted from the client terminal apparatus 22, at the management business apparatus 3 side, based on the output data selected, the output format and content thereof and the business management codes, data output from the database 42 (1) is processed and edited in accordance with a specified data processing system and a data sheet produced in a specified

form format. This data sheet is downloaded to the client terminal apparatus 22 (block B15).

The data reference menu of the business management menu in block B4 is a menu whereby, from the screen of the client terminal apparatus 22, information held in each of the client databases on the database server 12 at the business management apparatus 3 side can be referenced via the internet. Similarly, the data sheet production menu is a menu whereby information held in each of the client databases on the database server 12 can be displayed on the screen in the format of a form specific to the client concerned.

While the foregoing explanation has been made using merchandise ordering as an example, the present invention can be similarly applied to other business management tasks. For example, it can be applied in the same way to inventory management of a client's merchandise.

In the above example, also, the business manager 2 operating the online business management system functions as a trading company brokering ordered merchandise, but the web server 11 and database server 12 comprising the business management apparatus 3 can be separated from the main system 13, forming an independent business management apparatus that operates only an online business management system that only includes the web server 11 and database server 12, enabling the formation of a system configuration that, via the business management apparatus, is interposed between a plurality of clients and a plurality of trading companies.

Furthermore, to simplify the explanation, the above example describes a system that includes only clients 4 (1), 4 (2), but the number of clients can of course be one company or three or more companies.

Next, although the above example does not mention the compilation of master databases 41 (1), 41 (2) for each client in the database server 12, with respect to the database concerned, on the business manager 2 side it is

normal to produce these masters based on information provided from each client. Instead of this, via the client terminal apparatuses and the internet, masters can be prepared for each client and be made upgradable from each client's side. In this case, it is of course desirable to increase security by providing a designated administrator within the client with the right of access to the master.

Industrial utility potential

As described in the foregoing, with the online business management system, online business management method and apparatus of the present invention, a business management apparatus connected via the internet is utilized to perform business management procedures relating to merchandise purchasing such as merchandise ordering, in accordance with client internal business management codes, client internal business management data processing systems and client internal business management form formats used in each client.

Therefore, from its client terminal apparatus, each client can order merchandise and do other such business procedures using the same input operations, screen display formats, data processing operations and data output formats as those used in the client's in-house business management system. In other words, each client can use a single business management apparatus as if it was the client's own business management system.

In accordance with the present invention, therefore, an online business management system for merchandise ordering and other such business processing can be realized that is general purpose, being able to provide hardware resources in common to numerous clients while also being able to provide each client with client-specific business management processing, and is also user-friendly.

CLAIMS:

1. An online business management system that has a business management apparatus and at least one client apparatus that can be connected to said business management apparatus by a communication circuit in which, based on input data from said client apparatus, client business management procedures are carried out at said business management apparatus side via said communication circuit;

said business management apparatus being characterized in that it has a database server, and a web server that operates a business management site on the internet;

said database server including a master database in which are stored client internal business management codes, data processing formats and form formats used in relation to merchandise purchasing procedures in the client; a business management section that, based on the client internal business management codes, is able to execute the same processing as said business procedures used in relation to merchandise purchasing procedures in the client; and a business management database in which are stored business management data relating to merchandise purchasing generated by said business management section;

said web server being set up so that, with respect to clients that have access rights to said business management site, on said business management site it carries out procedures relating to merchandise purchasing utilizing said business management section, said master database and said business management database.

2. An online business management system according to claim 1, wherein said client apparatus includes a client internal business management section that based on client internal business management codes, data processing formats and form formats used in relation to merchandise purchasing procedures in the client, performs business management

processing relating to merchandise purchasing procedures in the client; and a client internal business management database in which is stored business management data relating to merchandise purchasing generated by said client internal business management section.

3. An online business management system according to claim 2, wherein said business management section of said business management apparatus processes data in accordance with client internal business management data processing systems stored in said master database and also output-displays data in accordance with client internal business management form formats.

4. An online business management system according to claim 3, wherein said client internal business management codes include at least one selected from a department/station code showing a client's internal organizational structure, a person-responsible code, and a sorting code relating to merchandise purchasing.

5. An online business management system according to claim 4, wherein said business management apparatus database server includes a data output function for output of merchandise data groups corresponding to said client internal business management codes;

ordering of merchandise by said client apparatus being performed by a desired merchandise being searched for from a merchandise data group corresponding to the client internal business management codes called up by input of specific client internal business management codes from the client apparatus, selection of the desired merchandise to be ordered and input of a command to order the selected merchandise.

6. An online business management system according to claim 5, wherein said business management apparatus

database server includes a historical database of merchandise orders for each of said client internal business management codes;

after said order command has been input, said merchandise order history database being updated after input of an order confirmation from said client apparatus.

7. An online business management system according to claim 6, wherein after input of said order command, the order command input can be cancelled or corrected.

8. An online business management system according to claim 4, wherein specified data can be downloaded from said database server based on said client internal business management codes from said client terminal apparatus.

9. An online business management system according to claim 8, wherein said data downloading is performed by selecting the desired data from data in said database server called up by input of the specified client internal business management codes from said client apparatus, selecting an output format for the output data selected, selecting a designated portion of the selected data, processing and editing a designated portion of the selected data to produce a data sheet to achieve the selected output format, and downloading the generated data sheet to said client apparatus.

10. An online business management system according to claim 6, wherein it has a main system that receives and issues merchandise order;

after said order confirmation in said business management apparatus, confirmed order instruction information being provided from said database server to said main system.

11. An online business management system according to claim 6, wherein said business management apparatus includes a main system that receives and issues merchandise orders;

after said order confirmation, confirmed order instruction information being provided from said database server to said main system.

12. An online business management system according to any one of claims 1 to 11, wherein content of said master database in said database server can be set and updated from said client apparatus side.

13. An online business management method in which a client uses the internet to access a business management site dedicated to that client, and on the business management site performs business management relating to merchandise purchasing procedures;

said online business management method being characterized in that on said business management site, based on client-specific business management code groups used by the client in relation to merchandise purchasing procedures, merchandise purchasing procedures are performed in accordance with procedures that are identical to business procedures relating to merchandise purchasing procedures within the client, business management data relating to the merchandise purchasing procedures is processed and edited by a system specific to the client, and business management data relating to the merchandise purchasing procedures is output in a form format specific to the client.

14. An online business management method according to claim 13, wherein said business management codes include at least one selected from a department/station code showing a client's internal organizational structure, a person-

responsible code, and a sorting code relating to merchandise purchasing.

15. An online business management apparatus that operates a business management site using an online business management method in which a client uses the internet to access a business management site specific to the client and performs business management relating to merchandise purchasing procedures;

said online business management apparatus being characterized in that it has a database server and a web server that operates said business management site over the internet;

said database server including a master database in which are stored client internal business management codes, data processing formats and form formats used in relation to merchandise purchasing procedures in the client; a business management section that, based on the client internal business management codes, is able to execute the same processing as said business procedures used in relation to merchandise purchasing procedures in the client; and a business management database in which are stored business management data relating to merchandise purchasing generated by said business management section;

said web server being set up so that, with respect to clients that have access rights to said business management site, on said business management site it carries out procedures relating to merchandise purchasing utilizing said business management section, said master database and said business management database.

16. An online business management apparatus according to claim 15, wherein said business management codes include at least one selected from a department/station code showing a client's internal organizational structure, a person-responsible code, and a sorting code relating to merchandise purchasing.