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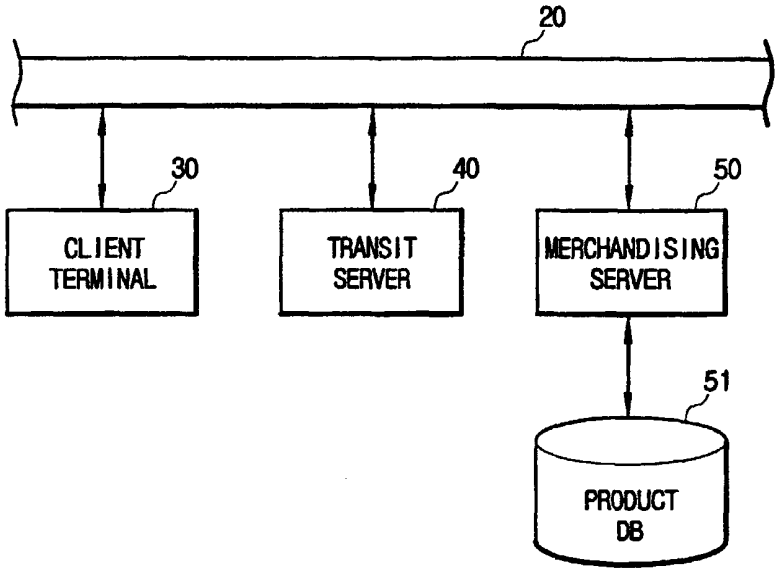
(54) Title: REAL-TIME HOME SHOPPING SYSTEM AND METHOD THEREOF



(57) Abstract: The invention relates to real-time home shopping system and method thereof which enables a user to purchase a product in response to the user's request on a communications network. More particularly, the present invention relates to a real-time home shopping system in which when a user clicks a pre-set key while watching a home shopping broadcast program through a client terminal, an Internet site corresponding to the home shopping program is caused to display on the client terminal, and a method thereof. The real-time home shopping system includes at least one client terminal (30), a transit server (40) for connecting the home shopping broadcast program and the Internet site associated with the home shopping broadcast program, and a merchandising server (50) for selling the products. The transit server (40) connects the Internet site according to the access request signal of the user in order that the user may easily purchase the products.

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REAL-TIME HOME SHOPPING SYSTEM AND METHOD THEREOF

Technical Field

The present invention relates to real-time home shopping system and method thereof which enables a user to purchase a product on a communication network. More particularly, the present invention relates to a real-time home shopping system in which when a user clicks a pre-set key while watching a home shopping broadcast program through a client terminal, an Internet site corresponding to the home shopping program is caused to display on the client terminal, and a method thereof.

Background Art

Nowadays, more and more married couples work together for double-income. As a result, it is very difficult for those double-income families to purchase commodities and other various products except on specific holidays. To mitigate such inconvenience, mail order via a telephone or the Internet is widely prevalent for the convenience of users. As the kinds of mail order and the number of users increase, a lot of companies develop various service contents for the mail order. The mail order has a drawback that users cannot check directly the real product in their eyes. However, the users become more satisfied with the mail order because exchange and refund of the purchased product are possible and, it only takes three days to complete the delivery of the

product.

The typical example of the mail order is a way via the telephone or the Internet. The Internet is very useful communications means and the number of the users is rapidly increasing. Users can access a server in the Internet via an on-line access unit.

Personal Computers (PCs) are the most widely used as on-line access units. Also, other devices which provide access to the Internet without PCs, such as a cellular phone, are being developed, and one of such devices is an Internet TV (television).

The Internet TV is a device having both functions of general TVs and communication functions of the PCs. Users can watch general TV broadcasts in a TV mode and do network communications in an Internet mode with such an Internet TV.

The Internet TV has an Internet set-top box which can receive remote control signals inputted by the user so as to link a TV channel to an Internet site.

In such as Internet TV, a mode conversion from TV mode to Internet mode or from Internet mode to TV mode is carried out by pressing a designated key. In case the user converts a mode from the TV mode to the Internet mode in order to use Internet functions, and then converts to the TV mode again, the broadcast channel viewed by the user right before converting to the Internet mode is displayed. Therefore, the user should input a designated key in order to convert to other broadcast channels.

As a result, several Patent Applications for "link and conversion of various TV broadcast channels" had been filed (Korea Patent Application No. 1999-32072, 1999-33118, 1999-35881, 1999-35882). It is an object of these Applications to directly convert to corresponding channels without key input for converting to TV mode or the corresponding channel when the user selects a desired channel while watching broadcast information on a web site which provides various TV channel information. It is another object of these Applications to provide the contents of the currently watched broadcast program to the user, without any further access to the corresponding Internet site (for example, home pages of respective broadcasting company) when the user presses a designated key on the remote controller while watching TV. The present applicant filed a Patent Application (Korea Patent Application No. 1999-51628) related to the provision of general information required for broadcast channel link. The Application also includes a web server for the link of broadcast channels.

In the meanwhile, when the user wants to purchase a product in time of watching a home shopping program through the client terminal, the user should convert the mode from the TV mode to the Internet mode and access a corresponding site associated with the home shopping program. This is a kind of cumbersome procedures.

In the mail order via telephone, which is one of the typical mail order, a user has to call a telemarketer of the corresponding company according to the phone number displayed on the TV screen and give

user's information required for purchasing a product, when the user wants to purchase the product in the middle of watching the home shopping program through the general TV. There has been existed a risk of leakage of personal information or credit information by an unexpected accident. In addition, it is cumbersome to call the telemarketer while watching the TV. Further, a lot of users try to call the telemarketer at the same time, this causes busy line, which in turn makes users inconvenient and uneasy.

A company managing an Internet shopping mall along with a home shopping broadcast can provide various product databases. However, the Internet shopping mall is not designed to link to the TV broadcast yet. Further, it is hard to make the user satisfied who wants to watch various broadcasts in one Internet site even though the company manages a home shopping broadcast on the Internet.

Disclosure of Invention

Accordingly, the present invention is designed to solve the problems in the prior art.

It is an object of the present invention to provide real-time home shopping system and method thereof, wherein an Internet site corresponding to currently watched home shopping broadcast is caused to instantly display on the client terminal if a user clicks a mouse or presses a designated key on a remote controller during the home shopping broadcast in order to facilitate product purchase by the user, by

applying the concept of channel link included in the Patent Application filed by the present applicant.

In order to accomplish the object, one embodiment of the invention provides a real-time home shopping system including 1) at least one client terminal having an Internet set-top box and 2) a merchandising server which operates a home shopping broadcast program and an Internet site associated with the home shopping broadcast program, provides information of various products and sells the products on a network, the real-time home shopping system comprising: a transit server which instantly displays the Internet site associated with the home shopping broadcast program on the client terminal according to an access request signal by a user who is watching the home shopping broadcast program.

In order to accomplish the object, another embodiment of the invention provides a real-time home shopping system including 1) at least one client terminal having an Internet set-top box and 2) a merchandising server which operates a home shopping broadcast program, provides information of various products and sells the product, the real-time home shopping system comprising: a transit server for a) organizing and operating an Internet site associated with the home shopping broadcast program and b) instantly displaying the Internet site associated with the home shopping broadcast program on the client terminal in response to an access request signal by a user watching the home shopping broadcast program provided by the merchandising server.

In order to accomplish the object, another embodiment of the present invention provides a method for real-time home shopping via a home shopping system including 1) at least one client terminal having an Internet set-top box, 2) a merchandising server for operating a home shopping broadcast program in order to sell various products, organizing and managing an Internet site associated with the home shopping broadcast program, providing information of the various products and selling the products, and 3) a transit server for displaying the Internet site provided by the merchandising server on the client terminal , the method for real-time home shopping comprising the steps of:

a) transmitting a database for a product being broadcasted currently in the home shopping broadcast program to the transit server by the merchandising server, when a user selects one of the home shopping broadcast programs at the time of log-on to the client terminal;

b) instantly displaying the Internet site associated with the home shopping program to the client terminal by the transit server, when the user transmits an access request signal for purchasing the product; and

c) receiving user information of product purchase through the Internet site displayed on the client terminal, and checking payment of the user and delivering the product.

Brief Description of the Drawings

These and other features, aspects, and advantages of the present invention will help for better understanding with regard to the following

description, appended claims, and accompanying drawings, in which like components are referred to by like reference numerals. In the drawings:

Fig. 1 is a general configuration of a real-time home shopping system according to one embodiment of the present invention;

Fig. 2 is an operation flow-chart of a method for real-time home shopping according to one embodiment of the present invention; and

Fig. 3 is an operation flow-chart of a method for real-time home shopping according to another embodiment of the present invention.

Best Mode for Carrying out the Invention

Hereinafter, preferred embodiments of the present invention will be described in detail with reference to the accompanying drawings.

Fig. 1 shows a general configuration of a real-time home shopping system according to one embodiment of the present invention. In the present real-time home shopping system, a plurality of client terminals 30, merchandising server 50 and transit server 40 are interconnected physically via internet-connecting unit 20 on a computer network.

Any device which can provide Internet communication service in a TV, that is, a unit into which an Internet set-top box is incorporated or a unit having a Internet set-top box outside can be used as a client terminal 30, while the Internet set-top box provides Internet communication and TV channel link.

The Internet set-top box comprises a remote controller signal

receiver, a controller, and a remote controller signal transmitter. The remote controller signal receiver receives remote controller signal inputted by a user, and the controller analyzes the remote controller signal, generates a conversion signal in order to convert between a TV channel and an Internet site, and controls transmitting of conversion signal to the Internet TV. The remote controller signal transmitter transmits the converted signal to the Internet TV. With such a configuration, the Internet set-top box supports the link between a TV channel and an Internet site.

The merchandising server 50 broadcasts commercials for advertising products in order to give the users who are watching a home shopping broadcast their desires for buying the product. Some of the merchandising servers manage a shopping mall by organizing not only home shopping broadcasts but also Internet sites for selling products through the Internet communications network.

In addition, the merchandising server 50 analyzes user information and information on the product purchased by the user, and stores respective information into a database. So, when a product related to the previously purchased product by the user is on the market, the merchandising server 50 serves to the user with a catalogue including information of the product so as to derive a continuous purchase, for a better service.

In response to an access request signal by the user via the client terminal, the transit server 40 displays an Internet site linked with the

currently viewing home shopping broadcast on the client terminal 30. If an Internet site managed by the merchandising server is accessed by a user, the transit server 40 checks the user information (name, address, phone number, etc.) and transmits the user information and product information to the merchandising server. The transit server 40 makes the merchandising server 50 deliver ordered product accurately in shortest time.

In particularly, the transit server directly organizes and manages the Internet site linked with the home shopping broadcast when the merchandising server provides only the home shopping broadcast but does not manage the related Internet site.

Consequently, the merchandising server 50 pays commission or corresponding value to the transit server 40 according to a predetermined agreement or certification with the transit server 40 when the user has completed to purchase the product through the client terminal 30.

The access request signal transmitted from the client terminal may be for only gaining the product information or for purchasing the product. It is desirable that the merchandising server 50 pays the commission or the corresponding value to the transit server 40 in response to the access request signal for purchasing the product.

The merchandising server 50 may include a receipt means for receiving payment of the user in product purchase. The receipt means may be realized by any of phone banking or Internet banking. And an

account-to-account transfer or credit transaction may be included in the receipt means.

It is preferable for the merchandising server 50 to check the payment of the user and to perform the delivery of the ordered product.

FIG. 2 is an operation flow-chart of a method for real-time home shopping in accordance with one embodiment of the invention.

Referring to FIG. 2, if the user finds a desired product on the client terminal 30 in time of watching a home shopping broadcast managed by the merchandising server 50 which manages a home shopping broadcast and an Internet site for selling product S210, the user tries to access the Internet site linked with the home shopping broadcast in order to purchase the product S220. At this time, the user transmits an access request signal to the client terminal 30 by pressing a predetermined key on a remote controller or clicking a mouse for the convenience of the user.

The transit server 40 checks the user information S230 as the user accesses the merchandising server 50 through the client terminal 30. And then the transit server 40 determines whether the user information is correct or not S240. If the user information is correct, the transit server 40 connects to the Internet site of the merchandising server 50 and then displays the Internet site on the client terminal 30 in a step S250.

The user information is inputted when setting up the Internet set-top box and transmitted to the transit server 40 with the access

request signal. If the user information is not appropriate to the predetermined format, the transit server 40 requests to input the user information again.

If the client terminal is connected to the Internet site linked with the home shopping broadcast program, the user orders the desired product S260~S270, and then the merchandising server 50 checks the particulars of the ordered product and the payment of the user S280, and delivers the corresponding product to the user S290. At this time, a receipt system of the merchandising server 50 should be under complete security.

Moreover, when the user completes the purchasing of the product, the merchandising server 50 pays the predetermined commission to the transit server 40. In case the purchase is canceled, such as return of the product or refund of the product, the merchandising server 50 settles the situation according to a rule agreed with the transit server 40.

FIG. 3 is an operation flow-chart of a method for real-time home shopping in accordance with another embodiment of the present invention.

First, when a home shopping program is broadcasted in order to lead a user to purchase product S310, the merchandising server 50 transmits a product database 51 stored with information of the product of the currently broadcasting program to the transmit server 40 in a step S320. The transit server 40 receives the product database 51 from the corresponding merchandising server 50 in real-time or whenever the

product information is updated, as the home shopping broadcast varies in real-time or periodically.

If the user clicks a mouse or presses a designated key on a remote controller in order to access an Internet site associated with the home shopping broadcast for purchasing the product S330, the transit server 40 checks user information S340 and then determines whether the user information is correct or not S350. If the user information is correct, the transit server 40 displays the product information received from the merchandising server 50 on the client terminal 30 in a step S360.

Next, if the user orders the product, the transit server 40 checks the particulars of the ordered product and payment of the user for the ordered product, transmits the information of the ordered product and the user information to the merchandising server 50 in steps S370~S400. The merchandising server 50 delivers the ordered product to the user according to the received information of the product particulars and the user information S410.

The product database 51 may managed and controlled by the merchandising server 50 by additionally inputting/outputting the product information such as price, quality, function of the product, etc., or may be entrusted to other specialized company. In any case, the product database should provide the user with the latest product information.

As described above, when the user wants to purchase the product in time of watching the home shopping broadcast through the client terminal or a PC which provides the Internet communication, the user

may instantly access the corresponding Internet site by clicking a mouse or pressing a designated key on the remote controller. Consequently, the user may purchase the product rapidly and conveniently and companies selling the product may increase the sale of the products with the easy order.

The real-time home shopping system and method according to the present invention have been described in detail. However, it should be understood that the detailed description and specific examples, while indicating preferred embodiments of the invention, are given by way of illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art from this detailed description.

Claims

1. A real-time home shopping system including 1) at least one client terminal having an Internet set-top box and 2) a merchandising server which operates a home shopping broadcast program and an Internet site associated with the home shopping broadcast program, provides information of various products and sells the products on a network, the real-time home shopping system comprising:

a transit server which instantly displays the Internet site associated with the home shopping broadcast program on the client terminal according to an access request signal by a user who is watching the home shopping broadcast program.

2. The real-time home shopping system as claimed in claim 1, wherein the transit server has a means for charging/requesting commission or corresponding value predetermined by agreement and certification with the merchandising server.

3. The real-time home shopping system as claimed in claim 2, wherein the means for charging/requesting the commission or the corresponding value charges and requests the commission or the corresponding value in response to the access request signal of the client terminal for purchasing product.

4. The real-time home shopping system as claimed in claim 1, wherein the transit server has a user information database for storing user information of the client terminal.

5. The real-time home shopping system as claimed in claim 1, wherein the transit server has a receipt means for receiving payment of the user for the product traded between the user and the merchandising server.

6. The real-time home shopping system as claimed in claim 5, wherein the receipt means includes an account-to-account transfer and credit transaction through phone banking and Internet banking according to the user's choice.

7. A real-time home shopping system including 1)at least one client terminal having an Internet set-top box and 2)a merchandising server which operates a home shopping broadcast program, provides information of various products and sells the product, the real-time home shopping system comprising:

a transit server for a)organizing and operating an Internet site associated with the home shopping broadcast program and b)instantly displaying the Internet site associated with the home shopping broadcast program on the client terminal in response to an access request signal by a user watching the home shopping broadcast program provided by the

merchandising server.

8. The real-time home shopping system as claimed in claim 7, wherein the transit server has a means for charging/requesting commission or corresponding value predetermined by agreement and certification with the merchandising server.

9. The real-time home shopping system as claimed in claim 8, wherein the means for charging/requesting the commission or the corresponding value charges and requests the commission or the corresponding value in response to the access request signal of the client terminal for purchasing product.

10. The real-time home shopping system as claimed in claim 7, wherein the transit server has a receipt means for receiving payment of the user for the product traded between the user and the merchandising server.

11. The real-time home shopping system as claimed in claim 10, wherein the receipt means includes an account-to-account transfer and credit transaction through phone banking and Internet banking according to the user's choice.

12. A method for real-time home shopping via a home shopping

system including 1) at least one client terminal having an Internet set-top box, 2) a merchandising server for operating a home shopping broadcast program in order to sell various products, organizing and managing an Internet site associated with the home shopping broadcast program, providing information of the various products and selling the products, and 3) a transit server for displaying the Internet site provided by the merchandising server on the client terminal , the method for real-time home shopping comprising the steps of:

a) transmitting a database for a product being broadcasted currently in the home shopping broadcast program to the transit server by the merchandising server, when a user selects one of the home shopping broadcast programs at the time of log-on to the client terminal;

b) instantly displaying the Internet site associated with the home shopping program to the client terminal by the transit server, when the user transmits an access request signal for purchasing the product; and

c) receiving user information of product purchase through the Internet site displayed on the client terminal, and checking payment of the user and delivering the product.

13. The method for real-time home shopping as claimed in claim 12, wherein the step b) further comprises a step of transmitting user information inputted when setting up the Internet set-top box to the transit server and/or the merchandising server together with the access request signal.

14. The method for real-time home shopping as claimed in claim 12, wherein the step c) further comprises a step of transmitting 1) user information on the product purchase, 2) product information and 3) the user information to the merchandising server.

15. The method for real-time home shopping as claimed in claim 12, wherein the step c) further comprises a step of checking particulars of product order and payment of the user for the product.

16. The method for real-time home shopping as claimed in claim 12, wherein the step c) comprises a step of constructing a user information database stored with the user information.

FIG. 1

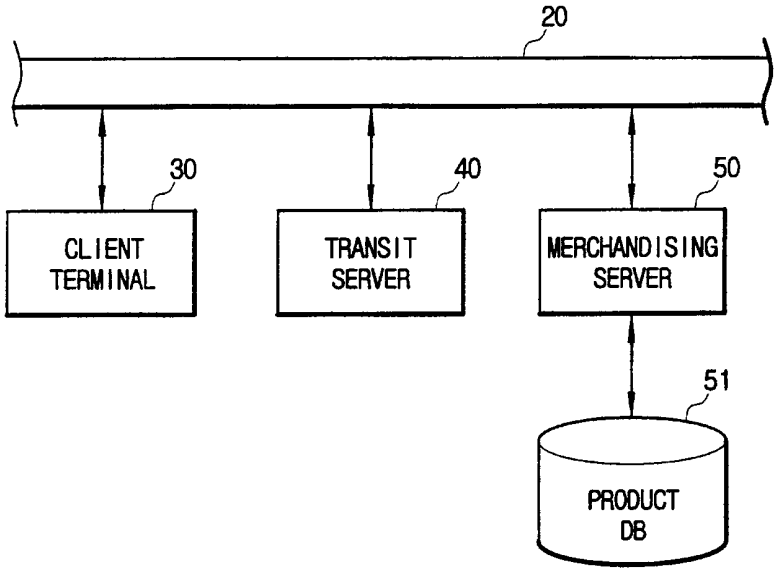

20
30
40
50
CLIENT TERMINAL
TRANSIT SERVER
MERCHANDISING SERVER
51
PRODUCT DB

FIG. 2

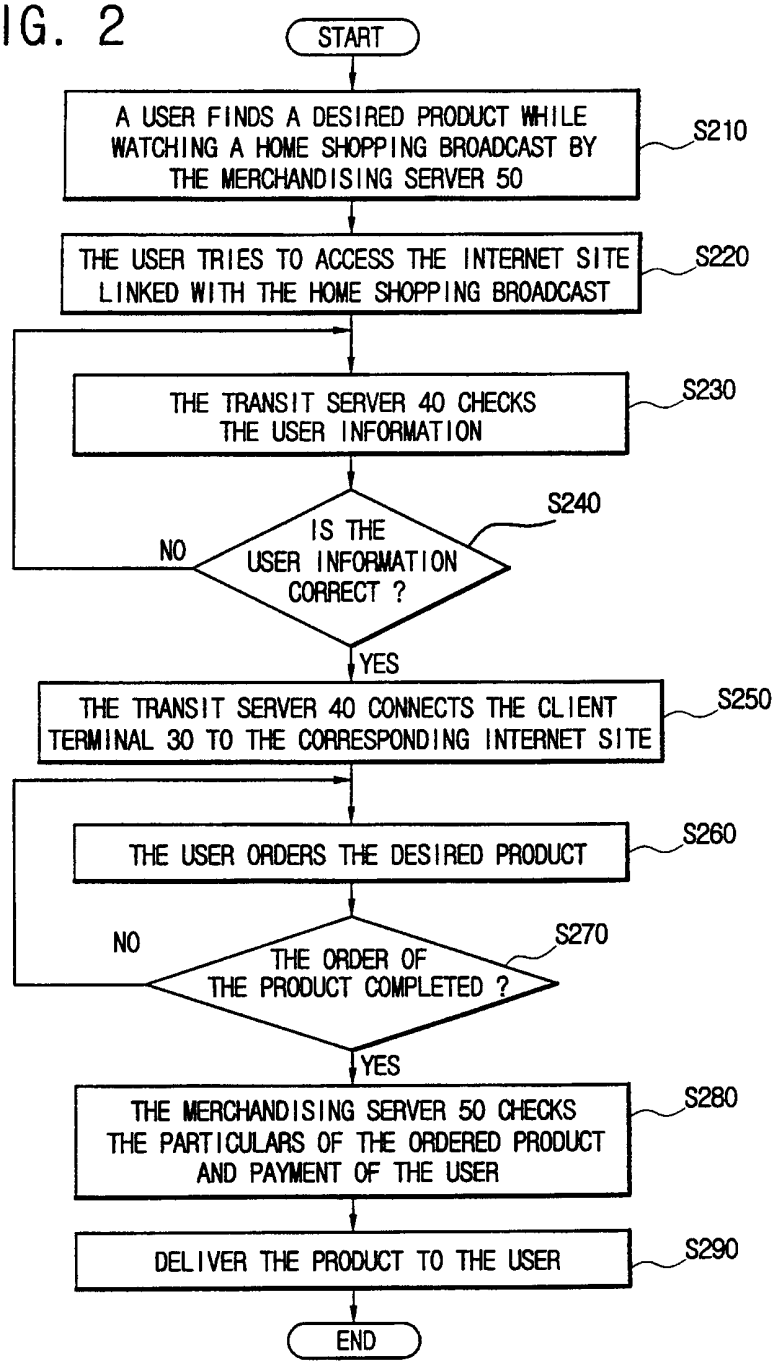
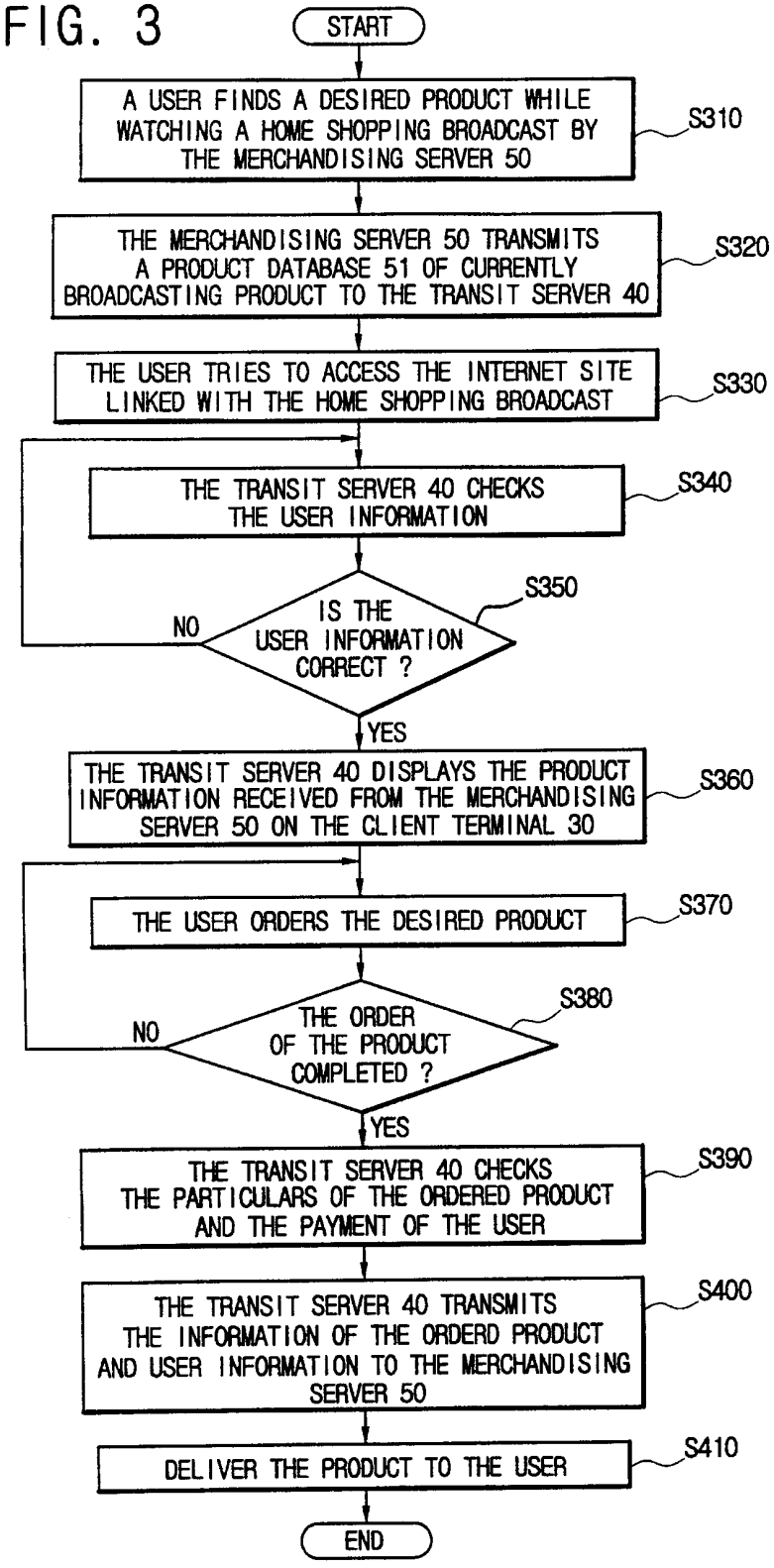

START
A USER FINDS A DESIRED PRODUCT WHILE WATCHING A HOME SHOPPING BROADCAST BY THE MERCHANDISING SERVER 50
S210
THE USER TRIES TO ACCESS THE INTERNET SITE LINKED WITH THE HOME SHOPPING BROADCAST
S220
THE TRANSIT SERVER 40 CHECKS THE USER INFORMATION
S230
IS THE USER INFORMATION CORRECT ?
S240
NO
YES
THE TRANSIT SERVER 40 CONNECTS THE CLIENT TERMINAL 30 TO THE CORRESPONDING INTERNET SITE
S250
THE USER ORDERS THE DESIRED PRODUCT
S260
THE ORDER OF THE PRODUCT COMPLETED ?
S270
NO
YES
THE MERCHANDISING SERVER 50 CHECKS THE PARTICULARS OF THE ORDERED PRODUCT AND PAYMENT OF THE USER
S280
DELIVER THE PRODUCT TO THE USER
S290
END

FIG. 3


START
A USER FINDS A DESIRED PRODUCT WHILE WATCHING A HOME SHOPPING BROADCAST BY THE MERCHANDISING SERVER 50
S310
THE MERCHANDISING SERVER 50 TRANSMITS A PRODUCT DATABASE 51 OF CURRENTLY BROADCASTING PRODUCT TO THE TRANSIT SERVER 40
S320
THE USER TRIES TO ACCESS THE INTERNET SITE LINKED WITH THE HOME SHOPPING BROADCAST
S330
THE TRANSIT SERVER 40 CHECKS THE USER INFORMATION
S340
IS THE USER INFORMATION CORRECT ?
S350
NO
YES
THE TRANSIT SERVER 40 DISPLAYS THE PRODUCT INFORMATION RECEIVED FROM THE MERCHANDISING SERVER 50 ON THE CLIENT TERMINAL 30
S360
THE USER ORDERS THE DESIRED PRODUCT
S370
THE ORDER OF THE PRODUCT COMPLETED ?
S380
NO
YES
THE TRANSIT SERVER 40 CHECKS THE PARTICULARS OF THE ORDERED PRODUCT AND THE PAYMENT OF THE USER
S390
THE TRANSIT SERVER 40 TRANSMITS THE INFORMATION OF THE ORDERD PRODUCT AND USER INFORMATION TO THE MERCHANDISING SERVER 50
S400
DELIVER THE PRODUCT TO THE USER
S410
END

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR00/01559

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G06F 17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimun documentation searched (classification system followed by classification symbols)

IPC G06F

Documentation searched other than minimun documentation to the extent that such documents are included in the fileds searched

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search trerms used)

KIPONET, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US, 6012045 A 4 January 2000 see abstract (Family : none)	1
Y,P	US, 6026377 A 15 February 2000 see abstract (Family : none)	1
A,P	US, 6029141 A (Amazon.com, Inc.) 22 February 2000 see abstract (Family : none)	1-10
A,P	US, 603212 A (International Business Machines Corporation) 29 February 2000 see abstract; figure 2 (Family : none)	1-10

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevence; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevence; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
19 APRIL 2001 (19.04.2001)	20 APRIL 2001 (20.04.2001)

Name and mailing address of the ISA/KR

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