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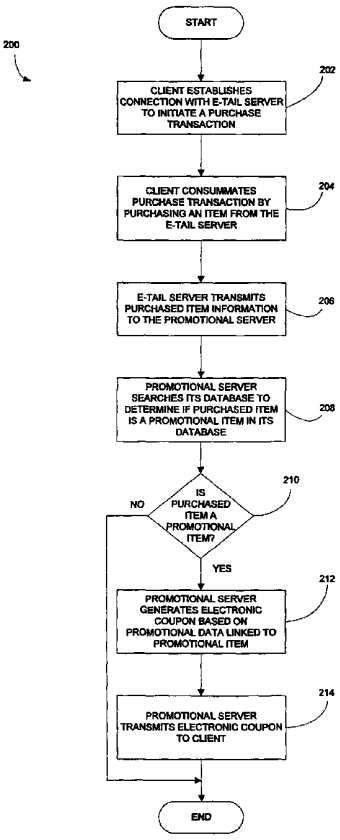
(54) Title: METHOD AND SYSTEM FOR DISTRIBUTING COUPONS OVER A NETWORK PRIOR TO CONSUMMATION OF A PURCHASE TRANSACTION



(57) Abstract: A system for distributing electronic coupons over a communication network according to the invention includes an e-tail server system (120) having a computer processor and associated memory and including items for sale, a promotional server system (130) having a computer processor and associated memory, the promotional server system (130) including a database of promotional data that define electronic coupons and a client system having a computer processor and associated memory, the client system (110) being selectively coupleable to the e-tail server (120) over the communications network. The client system (110) establishes a primary connection to the e-tail server system (120) to conduct a primary purchase transaction in which the client system purchases an item from the e-tail server system (204). The e-tail server system (120) is adapted for transmitting a cookie to the client system (206), the cookie including information about the item purchased in the primary transaction. The client system (110) establishes a subsequent connection to the e-tail server system (120) over the network. During the subsequent connection, the e-tail server system (120) reads the cookie from the client system (110) and transmits the cookie information to the promotional server system (130) and the promotional server system (130) transmits an electronic coupon to the client system, the electronic coupon being redeemable for an item that is related to the purchased item (212).

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METHOD OF AND SYSTEM FOR DISTRIBUTING COUPONS OVER A NETWORK PRIOR TO CONSUMMATION OF A PURCHASE TRANSACTION

This application claims priority of Provisional Application, U.S.S.N. _____, filed May 9, 2000.

FIELD OF THE INVENTION

This invention relates to a method of and system for distributing electronic coupons over a network and more specifically to a method of and system for determining a client's purchasing history and distributing electronic coupons to the client, based on the purchasing history, prior to the consummation of the purchase transaction.

BACKGROUND OF THE INVENTION

In order to increase the number of new customers who buy a particular product, many retail outlets, and grocery stores in particular, set up a database of certain items that it sells and links each of these primary items to a secondary item that is different from the item to which it is linked for the purpose of promoting the secondary item. As a customer is checking out and each item is scanned at the checkout, the items are monitored and simultaneously compared to the items in the database to determine whether any of the items are associated with a secondary item. If an item is associated with a secondary item, a coupon for the secondary item is printed out for the customer to use at a later date.

This system enables the store to provide to a customer, who may not normally purchase the secondary item, an incentive for purchasing the secondary item, simply because the customer purchased the particular item that was linked to the secondary item. The system thus potentially creates a new customer for the secondary item.

While this system is in use in the so-called "brick and mortar" outlets, there is no such system which enables an online retail store to provide coupons to customers for items in this manner. Furthermore, in the above-described system, there is no way for the retail outlets to provide coupons to customers based on purchases that the customer has made in the past and the customer cannot obtain the coupons until after the

purchase transaction is completed, thus preventing the customer from redeeming the coupon in the present purchase transaction.

Accordingly, it is an object of this invention to provide a method of and system for distributing electronic coupons over a network, in which the electronic coupons are distributed to the customer based on the purchasing history of the customer and prior to the consummation of the purchase transaction, so that the coupons can be redeemed during the purchase transaction in which they were received or at a later date.

SUMMARY OF THE INVENTION

The invention is directed to a method of and system for distributing electronic coupons over a network in which the electronic coupons may be redeemed during the purchase transaction in which they were received or at a later date. The electronic coupons are distributed based on the customer's purchasing history. An e-tail server includes a plurality of items for sale and has access to a promotional server that includes an database of promotional items and promotional linking code for linking the promotional items to promotional terms that define an electronic coupon. The promotional items are stored in the database according to the product category in which the products are classified. A client system is coupled to the e-tail server system over the network to consummate a purchase transaction by purchasing one of the items for sale. The e-tail server system transmits a cookie to the client system which includes information about the purchased product. When the client system establishes a subsequent connection to the e-tail server system, the e-tail server system reads the cookie from the client system and transmits the cookie information to the promotional server system. The promotional server system searches its database to find a promotional item in the same product category as the purchased item and generates an electronic coupon for the promotional item and transmits it to the client system. The electronic coupon is generated prior to the consummation of the purchase transaction, thereby enabling the client system to redeem the electronic coupon during the purchase transaction. In the preferred embodiment, the electronic coupon is redeemable toward an item which is in the same product category as the purchased item, but which is not the same as the purchased item.

A method of distributing electronic coupons over a communications network such as the internet according to the invention includes the steps of establishing a primary connection over the network between a client system and an e-tail server system, the e-tail server system including items for sale, the client system consummates a primary purchase transaction by purchasing an item from the e-tail server system, and the e-tail server system transmits a cookie to the client system, the cookie including information about the purchased item. The method further includes the steps of establishing a subsequent connection over the communications network between the client system and the e-tail server system, the e-tail server system reads the cookie from the client system, the e-tail server transmits the item information to a promotional server system, and the promotional server system transmits an electronic coupon to the client system, the electronic coupon being redeemable for an item that is related to the purchased item. The client system may initiate a subsequent purchase transaction during the subsequent connection by selecting the related item and redeems the electronic coupon upon consummating the subsequent purchase transaction. The subsequent purchase transaction may either take place during the subsequent connection or during a connection other than the subsequent connection.
The electronic coupon may be provided to the client system in the form of screen display data that is transmitted to the client system directly from the promotional server system over the communications network or from the promotional server system to the e-tail server system over the communications network, and from the e-tail server system to the client system over the communications network. The client system may be connected to the network by a wired or a wireless connection and the client system may be a personal computer, an interactive television system, a personal digital assistant or a cellular telephone.

A system for distributing electronic coupons over a communications network according to the invention includes an e-tail server system having a computer processor and associated memory and including items for sale, a promotional server system having a computer processor and associated memory, the promotional server system including a database of promotional data that define electronic coupons and a client system having a computer processor and associated memory, the client system being selectively coupleable to the e-tail server system over the communications network.

The client system establishes a primary connection to the e-tail server system to conduct a primary purchase transaction in which the client system purchases an item from the e-tail server system. The e-tail server system is adapted for transmitting a cookie to the client system, the cookie including information about the item purchased in the primary purchase transaction. The client system establishes a subsequent connection to the e-tail server system over the network. During the subsequent connection, the e-tail server system reads the cookie from the client system and transmits the cookie information to the promotional server system and the promotional server system transmits an electronic coupon to the client system, the electronic coupon being redeemable for an item that is related to the purchased item.

In another embodiment, a system for distributing electronic coupons over a network includes an e-tail server system having a computer processor and associated memory, the e-tail server system including items for sale, a promotional server system having a computer processor and associated memory, the promotional server system including a database of promotional data that define electronic coupons and a client system having a computer processor and associated memory. The client system is selectively coupleable to the e-tail server system over the network and includes a cookie transmitted to the client system by the e-tail server system as the result of a primary purchase transaction consummated during a primary connection between the client system and the e-tail server system, the cookie including information about an item purchased by the client system during the primary purchase transaction. The e-tail server includes means for reading the cookie from the client system during a subsequent connection between the client system and the e-tail server system and transmitting the cookie information to the promotional server system. The promotional server system transmits an electronic coupon to the client system based on the cookie information, the electronic coupon being redeemable for an item that is related to the purchased item.

In another embodiment, a method of distributing electronic coupons over a communications network includes the steps of establishing a primary connection over the network between a client system and a first e-tail server system, the first e-tail server system including items for sale, the client system consummating a primary purchase transaction by purchasing an item from the first e-tail server system, the first

e-tail server system transmitting a cookie to the client system, the cookie including information about the purchased item and establishing a subsequent connection over the communications network between the client system and a second e-tail server system. The second e-tail server system reads the cookie from the client system and transmits the item information to a promotional server system. The promotional server system transmits an electronic coupon to the client system, the electronic coupon being redeemable for an item that is related to the purchased item.

In another embodiment, a system for distributing electronic coupons over a communications network includes a first e-tail server system having a computer processor and associated memory, the first e-tail server system including items for sale, a second e-tail server system having a computer processor and associated memory, the second e-tail server system including items for sale, a promotional server system having a computer processor and associated memory, the promotional server system including a database of promotional data that define electronic coupons and a client system having a computer processor and associated memory, the client system being selectively coupleable to the first and second e-tail server systems over the communications network. The client system establishes a primary connection to the first e-tail server system to conduct a primary purchase transaction in which the client system purchases an item from the first e-tail server system. The first e-tail server system is adapted for transmitting a cookie to the client system, the cookie including information about the item purchased in the primary purchase transaction. The client system establishes a subsequent connection to the second e-tail server system over the network and, during the subsequent connection, the second e-tail server system reads the cookie from the client system and transmits the cookie information to the promotional server system. The promotional server system transmits an electronic coupon to the client system, the electronic coupon being redeemable for an item that is related to the purchased item.

In another embodiment, a system for distributing electronic coupons over a network includes a first e-tail server system having a computer processor and associated memory, the e-tail server system including items for sale, a second e-tail server system having a computer processor and associated memory, the e-tail server system including items for sale and a promotional server system having a computer

processor and associated memory, the promotional server system including a database of promotional data that define electronic coupons. The system further includes a client system having a computer processor and associated memory, the client system being selectively coupleable to the first and second e-tail server systems over the network and including a cookie transmitted to the client system by the first e-tail server system as the result of a primary purchase transaction consummated during a primary connection between the client system and the first e-tail server system, the cookie including information about an item purchased by the client system during the primary purchase transaction. The second e-tail server includes means for reading the cookie from the client system during a subsequent connection between the client system and the second e-tail server system, and transmitting the cookie information to the promotional server system. The promotional server system transmits an electronic coupon to the client system based on the cookie information, the electronic coupon being redeemable for an item that is related to the purchased item.

In yet another embodiment, a system for distributing electronic coupons over a communications network includes an e-tail server system having a computer processor and associated memory, the e-tail server system including items for sale, a promotional server system having a computer processor and associated memory, the promotional server system including a database of promotional items linked to promotional data that define electronic coupons and a client system having a computer processor and associated memory, the client system being selectively coupleable to the e-tail server system over the communications network. The client system establishes a primary connection to the e-tail server system to conduct a primary purchase transaction in which the client system purchases an item from the e-tail server system, the purchased item being classified in a product category. The e-tail server system is adapted for transmitting a cookie to the client system, the cookie including information about the item purchased in the primary purchase transaction. The client system establishes a subsequent connection to the e-tail server system over the network and, during the subsequent connection, the e-tail server system reads the cookie from the client system and transmits the cookie information to the promotional server system. The promotional server system includes a searching device for searching the database for promotional items in the product category and electronic coupon generating means for

providing, to the client system, an electronic coupon for one of the promotional items in the product category.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects of this invention, the various features thereof, as well as the invention itself may be more fully understood from the following description when read together with the accompanying drawings in which:

FIG. 1 is a diagrammatic view of a system for distributing electronic coupons in accordance with the present invention;

FIG. 2 is a flow diagram of a method of distributing electronic coupons in accordance with the present invention;

FIG. 3 is a more detailed diagrammatic view of the system of FIG. 1;

FIG. 4 is a diagrammatic view of another embodiment of the system for distributing electronic coupons in accordance with the present invention;

FIG. 5 is a flow diagram of another method of distributing electronic coupons in accordance with the present invention;

FIG. 6 is a more detailed diagrammatic view of the system of FIG. 4; and

FIG. 7 is a diagrammatic view of yet another embodiment of the system of FIG. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention is directed to a method of and system for distributing electronic coupons over a network. An electronic coupon is essentially a token, issued by or under the authority of the issuer for the benefit of the recipient. Typically, the recipient receives the electronic coupon and subsequently redeems it for the prescribed benefit at some later point in time. Preferably, the electronic coupon enables or modifies an anticipated transaction such as by providing a discount in the price of

goods or services provided by the issuer or the issuer's agent. According to the invention, the distribution of electronic coupons is determined based on the client's purchasing history. When the client purchases an item from an e-tail server system during a primary connection with the e-tail server, the e-tail server system transmits a cookie including information about the purchased item to the client system. When the client system makes a subsequent connection to the e-tail server, the e-tail server reads the cookie and transmits the cookie information to a promotional server, which transmits an electronic coupon for an item that is related to the purchased item to the client system.

FIG. 1 shows a diagram of a system 100 for distributing electronic coupons in accordance with a preferred embodiment of the present invention. The system 100 includes client system 110, server system 120 and server system 130, all connected to a common communications channel 160. Preferably, the client system 110, server system 120 and server system 130 can each be a personal computer such as an IBM PC or IBM PC compatible system or an APPLE® MacINTOSH® system or a more advanced computer system such as an Alpha-based computer system available from Compaq Computer Corporation or SPARC® Station computer system available from SUN Microsystems Corporation, although a main frame computer system can also be used. Preferably, the communications channel 160 is a TCP/IP-based network such as the Internet or an intranet, although almost any well known LAN, WAN or VPN technology can be used.

In one preferred embodiment of the invention, the client system 110 is an IBM PC compatible system operating a Microsoft Windows® operating system, and server system 120 and server system 130 are configured as web servers providing access to information such as web pages in HTML format via the HyperText Transport Protocol (http). The client system 110 includes software to allow viewing of web pages, commonly referred to as a web browser, thus being capable of accessing web pages located on server system 120 and server system 130. Alternatively, client system 110 can be any wired or wireless device that can be connected to a communications network, such as an interactive television system, such as WEBTV, a personal digital assistant (PDA) or a cellular telephone. In this preferred embodiment, server system 120 is an e-tail server offering a plurality of items for sale over the Internet and server

130 is a promotional server that has a database including a categorized inventory of promotional items offered for sale by the e-tail server 120, promotional terms that define electronic coupons and promotional linking code for linking the items in the inventory to the promotional terms that define the electronic coupons. Promotional server 130 also includes the software necessary to authenticate electronic coupons prior to their redemption. The items offered for sale by the e-tail server 120 can be products and/or services.

In one preferred embodiment, server system 120 includes web server software that is adapted to produce an electronic coupon or a book of electronic coupons that is transferred to the client system 110 in the form of a cookie that is stored in memory at the client system. Preferably, the electronic coupon is a data structure which can include any or all of the following information elements: data representative of an electronic coupon serial number or identification number data representative of a unique key that can be used to validate or authenticate the coupon data representative of the vendor that authorized the coupon and will redeem the coupon data representative of the nature of the discount or access provided by the coupon data representative of the server or entity that issued the coupon. In one preferred embodiment, the electronic coupon can be issued as part of an electronic coupon book. The coupon book can include data representative of a version number for the electronic coupon book and data representative of a serial number or identification number for the electronic coupon book.

In one preferred embodiment, the electronic coupon contains all the information necessary to redeem the coupon. Specifically, the electronic coupon identifies the grantor (i.e., the party or vendor that will redeem the electronic coupon), the nature of the discount or benefit provided and a unique serial number or other data structure that permits the electronic coupon to be authenticated or validated. Thus, a server redeeming this type of electronic coupon can obtain all the information necessary to redeem from the electronic coupon. The server can even include the software necessary to authenticate or validate the electronic coupon.

In an alternative embodiment, the electronic coupon book includes a unique serial number or identification number and data structure useful for authenticating or validating the electronic coupon book. The actual content of the electronic coupon

book can be determined for example, by visiting a website which reads the coupon book serial number and provides the user with listings of the coupons available. A benefit to this configuration is the organization that issues the electronic coupon book can add vendors even after the electronic coupon book has been issued. Thus, if a vendor signs up with the organization that issues electronic coupon books after a particular coupon book has been issued to a client, the vendor can be added to the electronic coupon book at a later date. In order to redeem this type of electronic coupon the server that intends to redeem the electronic coupon must connect to an authentication server which will authenticate or validate the coupon book and indicate the nature of the benefit of the electronic coupon to the server requesting authentication/validation. Another benefit of this configuration is that the coupons are relatively tamper proof due to the authentication and validation facilities. In many prior art systems, coupons could be copied and/or altered by the user with relative ease; in the absence of validation/authentication schemes, few reliable methods for detection of such counterfeits exist.

The promotional linking code can be programmed into the promotional server through the e-tail server, thereby enabling the e-tail website to program its own, in-house, promotions such as "in store" coupons. Additionally, the promotional linking code can be programmed into the promotional server by one or more of the producers of the goods or providers of the services that are available for sale on the e-tail website associated with the e-tail server 120, thereby enabling the producers of the goods or providers of the services to promote particular goods or services.

FIG. 2 shows a flow diagram 200 of a method of distributing electronic coupons in accordance with one preferred embodiment of the invention. In primary step 202, the client system 110, FIG. 1, establishes a primary connection with the e-tail server 120 for the purpose of carrying out a purchase transaction. After selecting an item from the e-tail server 120, the client system 110 consummates the purchase transaction by rendering a payment for the selected item, step 204. Upon the consummation of the purchase transaction, the e-tail server 120 transmits a cookie to the client system 110, which is stored in the memory of the client system, step 206. The cookie includes information about the purchased item, including the category into which the item is classified and the e-tail server system at which the item was purchased. Examples of

such categories include health and beauty aids, baby products, automotive products, etc. When the client system 110 establishes a subsequent connection to the e-tail server system 120, step 208, the e-tail server system reads the cookie from the client system 110, step 210. The e-tail server system 120 then transmits the cookie information contained in the cookie to the promotional server 130, step 212. The promotional server system searches its database, within the category in which the purchased item was classified, step 214. The promotional server system then randomly selects one of the promotional items within the pertinent category, and transmits an electronic coupon to the client system 110, based on the promotional data linked to the promotional item, step 216. The client can then either initiate a purchase transaction and redeem the coupon during the subsequent connection, or save the coupon in memory and redeem it during a later connection with the e-tail server system.

The preceding embodiment is shown in greater detail in FIG. 3. First, the e-tail server 110 provides instructions 220 to the promotional server for generating promotional links between a promotional item and a promotion. These instructions include identification information for the promotional item and the promotional data which defines the electronic coupon. The promotional server 130 then constructs the promotional linking code that links the promotional item to the promotional data. As described above, the promotional items are stored in categories in the database 230 of promotional server system 130. Additionally, a producer or provider of items 250 can provide instructions 252 to the promotional server 130, for the purpose of linking promotional items with promotional data for certain of its items, as described above.

A user operating a client system 110 establishes a primary connection 254 to the e-tail server 120 over the communication network 160 for the purpose of initiating a purchase transaction. The user selects one or more of the items offered for sale by the e-tail server 120, typically by placing the items into a "shopping cart" on the e-tail server website. The client system 110 then consummates the purchase transaction by sending payment information to the e-tail server 120. Upon consummation of the purchase transaction, e-tail server 120 transmits a cookie 255 to the client system 110 for storage in the memory of the client system. The client system 110 then establishes a subsequent connection 256 with the e-tail server system 120. The e-tail server system reads the cookie from the client system and transmits the cookie information 258 to the

promotional server system 130. The promotional server system then searches its database 230 and selects a promotional item in the same category as the purchased item and transmits the electronic coupon linked to the promotional item to the client system 110. The electronic coupon is preferably provided to the client system in the form of screen display data. As shown in Fig. 3, the electronic coupon can be provided from the promotional server 130 to the e-tail server 120 via connection 260 and then to the client 110 by the e-tail server 120 via connection 262. Alternatively, the electronic coupon can be transmitted directly to the client 110 by the promotional server 130 via connection 264. The electronic coupon is then either redeemed by the client system in a purchase transaction that takes place during the subsequent connection, or is stored in the memory of the client 110 for use in a later purchase transaction.

In the later purchase transaction, when the client system 110 establishes a connection to the e-tail server 120, the e-tail server 120 detects the electronic coupon stored in the memory of the client system 110. The e-tail system then authenticates the electronic coupon and modifies the purchase transaction accordingly. As discussed above, if the electronic coupon contains the information necessary to authenticate the electronic coupon, the electronic coupon can be authenticated and redeemed by the e-tail server. Alternatively, the e-tail server can access the promotional server that issued the coupon to obtain the information necessary for authenticating the coupon.

As described above, the electronic coupon is issued based the client's purchasing history and is redeemable for an item that is classified in the same category as the item purchased by the client in a previous purchase transaction. For example, if a client purchased diapers in the previous purchase transaction, the cookie transmitted to the client system by the e-tail server system would include information such as the product purchased and the category into which the product is classified. In this example, when the e-tail server system transmits the cookie information to the promotional server, the promotional server searches its database for a promotional item in the baby products category. The promotional server system then randomly selects a promotional item in the category, for example, baby food, generates an electronic coupon based on the promotional data linked to the promotional item in the database, and transmits the electronic coupon to the client system.

In a preferred embodiment of the invention, the client system 110 is a personal computer running browser software which connects to web servers via the Internet or a similar network. Preferably, a book of electronic coupons is transferred to the client system in the form of a cookie which is stored in memory at the client system. The cookie can be detected by any subsequent web server that client system connects to. If the client system attempts to initiate a transaction with a particular web server, the web server detects the cookie which includes electronic coupon and uses the electronic coupon to enable or modify the transaction. In this embodiment, when the client system receives the electronic coupon, the user can be alerted to the presence of the electronic coupon by another browser window or a Java based window that identifies all the electronic coupons in the electronic coupon book, the nature of the benefit provided and provides links to the various web sites where the electronic coupons can be redeemed. Alternatively, the client system can connect to a web server which displays the contents of the electronic coupon book in the form of a web page which describes the nature of the electronic coupon benefit and a link to the web page where the electronic coupon can be redeemed. In yet another embodiment of the invention, when the client system receives the electronic coupon or coupon book, the client system may be programmed to automatically provide the electronic coupon or coupon book to a peripheral printing device such that the user has automatic access to hard-copy versions of the coupons.

As one having ordinary skill in the art will appreciate, the use of the client system will typically be operated or otherwise controlled by a consumer or a customer (in business to business transactions) and the server system or systems will be operated or otherwise controlled by an organization or an agent of an organization authorized to enter into and complete the transaction. In addition, as one having ordinary skill will appreciate the entire process and system can be automated, for example whereby a client system is programmed to periodically visit websites (whether or not known to the source of electronic coupons) or the originating server can be programmed to periodically distribute electronic coupons, such as by electronic mail, and the redeeming server can be programmed to automatically redeem the electronic coupon as part of an automated request to initiate a transaction received from an automated client system. One of ordinary skill in the art will also appreciate that the electronic coupons

can include an expiration date or a window of dates when the electronic coupon is valid or effective.

In another embodiment of the invention, cookies are transferred to, or retrieved from, a client system by a frame spawned within a primary website by JavaScript or other similar software code. This embodiment is compatible with security features included with some web browsers that limit a website to depositing and retrieving cookies only for itself. For example, a user visiting an e-tail website generally receives a cookie from that site, but a user cannot receive a cookie from a site on behalf of another site. This is because a cookie deposited by a particular website is encoded with a signature corresponding to that website, and the browser utilizes that signature to limit cookie transfers to only the website that created the cookie. However, a frame spawned within the e-tail website can deposit a cookie on the client system, and a similar frame spawned within another website can subsequently read that cookie, as long as the frames spawned on different websites look the same (i.e., have the same signature) to the browser running on the client system. As with the other embodiments described herein, the cookie may contain all of the necessary the coupon information, including the complete coupon data structure necessary for benefits identification, validation and authentication, or the cookie may contain only data identifying the client, so that the cookie functions as a pointer to a database on the promotional server. If the cookie contains the complete data structure, the script will include the code necessary to authenticate and validate the coupon. The utility of this embodiment lies in the fact that the issuer and the redeemer of the coupon need not be the same entity. For example, a producer of goods may desire to have coupons distributed to potential purchasers, but may not desire to conduct the electronic commerce necessary to redeem the coupons. In this case, the producer of goods would distribute the JavaScript (or other similar script) for generating coupon-distributing website frames to highly trafficked websites. The producer of goods would also provide the frame-generating script to point-of-sale product retailers so that the coupons could be redeemed where the product is sold.

While the invention has been described as including one e-tail server that accesses a promotional server, a plurality of e-tail servers may be coupled to the promotional server in order to distribute electronic coupons to clients of the e-tail

servers. Such a configuration is illustrated in Fig. 4. In this system 300, in addition to the e-tail server 120, a second e-tail server 140 is coupleable to the promotional server 130 over communications network 160 for the purpose of defining promotional items in the manner described above. Accordingly, the client 110 can access either e-tail server 120 or e-tail server 140 for the purpose of carrying out a purchase transaction over the communication channel 160 and either or both of the e-tail servers can access the promotional server 130. In this embodiment, the client system 110 can be primarily connected to the e-tail server system 120, which transmits the cookie to the client system 110, and subsequently connected to the e-tail server 140, which reads the cookie and sends the cookie information to the promotional server 130. It will be understood that the promotional server can be accessed through any number of e-tail servers.

FIG. 5 shows a flow diagram 400 of a method of distributing electronic coupons in accordance with the preferred embodiment of the invention shown in FIG. 4. In step 402, the client system 110, FIG. 4, establishes a primary connection with the primary e-tail server 120 for the purpose of carrying out a purchase transaction. After selecting an item from the primary e-tail server 120, the client system 110 consummates the purchase transaction by rendering a payment for the selected item, step 404. Upon the consummation of the purchase transaction, the primary e-tail server 120 transmits a cookie to the client system 110, which is stored in the memory of the client system, step 406. When the client system 110 establishes a subsequent connection to the subsequent e-tail server system 120, step 408, the subsequent e-tail server system reads the cookie from the client system 110, step 410. The subsequent e-tail server system 120 then transmits the cookie information contained in the cookie to the promotional server 130, step 412. The promotional server system 214 searches its database, within the category in which the purchased item was classified, step 414. The promotional server system then randomly selects one of the promotional items within the pertinent category, and transmits an electronic coupon to the client system 110, based on the promotional data linked to the promotional item, step 416. The client can then either initiate a purchase transaction and redeem the coupon during the subsequent connection, or save the coupon in memory and redeem it during a later connection with an e-tail server system.

The preceding embodiment of the invention may be implemented by a single service provider, such as the entity responsible for the coupons, promotional server

system 130. In this scenario, illustrated in FIG. 6, the producer of items 250 authorizes 252 the promotional server 130 to generate and distribute electronic coupons related to the relevant goods. The promotional server 130 produces and distributes the necessary frame-generating script 254 to the e-tail server systems 120 and 140. A user operating the client system 110 establishes a primary connection 504 to the e-tail server system 120 and purchases an item, thereby consummating the purchase transaction. Client system 110 then receives a cookie 502 from the frame 506 spawned by the script. The user then establishes a subsequent connection 512 to e-tail server system 140, and the frame 514 spawned by the resident script retrieves the cookie 515 from the client system 110. The e-tail server system 140 establishes a communications link 516 to the promotional server system 130 and transmits the information from the cookie to the promotional server system. The promotional server system 130 then searches its database 230 and selects a promotional item in the same category as the purchased item and transmits the electronic coupon linked to the promotional item to the client system 110. The electronic coupon is preferably provided to the client system in the form of screen display data. As shown in Fig. 6, the electronic coupon can be provided from the promotional server 130 to the e-tail server 140 via connection 520 and then to the client 110 by the e-tail server 140 via connection 522. Alternatively, the electronic coupon can be transmitted directly to the client 110 by the promotional server 130 via connection 524. The electronic coupon is then either redeemed by the client system in a purchase transaction that takes place during the subsequent connection, or is stored in the memory of the client 110 for use in a later purchase transaction.

In another embodiment, the inventory of promotional items and the associated promotional data and promotional linking code are stored in a database server system on the e-tail server. Such a configuration is shown at 600 in FIG. 7. In this embodiment, e-tail server 150 is coupleable to client 110 over communications network 160. E-tail server 150 includes a database server system 152 which, as described above, includes an inventory of promotional items, promotional data defining electronic coupons and promotional linking code for linking the promotional items to the promotional data.

In this embodiment, the e-tail server 150 defines promotions locally within database server system 152. The client system 110 establishes a primary connection

with e-tail server 150 over the communications network 160 for the purpose of initiating a purchase transaction. After the client system 110 selects items to purchase and consummates the purchase transaction, the e-tail server 150 transmits a cookie to the client system. When the client system establishes a subsequent connection with the e-tail server, the e-tail server system searches its database server system 152 and selects a promotional item in the same category as the purchased item. An electronic coupon for the promotional item, as defined by the promotional data linked to the promotional item by the promotional linking code, is transmitted to the client system 110 by the e-tail server 150 over the communications network 160.

Accordingly, the present invention provides a system for distributing electronic coupons over a network prior to the consummation of a purchase transaction. The electronic coupons distributed depend upon the client's purchasing history. When the client purchases an item from an e-tail server system during a primary connection with the e-tail server, the e-tail server system transmits a cookie including information about the purchased item to the client system. When the client system makes a subsequent connection to the e-tail server, the e-tail server reads the cookie and transmits the cookie information to a promotional server, which transmits an electronic coupon for an item that is related to the purchased item to the client system.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiments are therefore to be considered in respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of the equivalency of the claims are therefore intended to be embraced therein.

What is claimed is:

1. A method of distributing electronic coupons over a communications network, the method comprising the steps of:

A. establishing a primary connection over said network between a client system and an e-tail server system, said e-tail server system including items for sale, said items for sale being classified into at least one of a plurality of item categories;

B. said client system consummating a primary purchase transaction by purchasing an item from said e-tail server system,, said purchased item being classified in a particular item category;

C. said e-tail server system transmitting a cookie to said client system, said cookie including information about said purchased item;

D. establishing a subsequent connection over said communications network between said client system and said e-tail server system;

E. said e-tail server system reading said cookie from said client system;

F. said e-tail server transmitting said item information to a promotional server system;

G. said promotional server system transmitting an electronic coupon to said client system, said electronic coupon being redeemable for a promotional item that is classified in said particular item category.

2. The method of distributing electronic coupons over a communications network according to claim 1 wherein said communications network is the internet.

3. The method of distributing electronic coupons over a communications network according to claim 2 wherein said client system initiates a subsequent purchase transaction during said subsequent connection by selecting said related item and redeems said electronic coupon upon consummating said subsequent purchase transaction.

4. The method of distributing electronic coupons over a communications network according to claim 3 wherein said subsequent purchase transaction takes place during said subsequent connection.

5. The method of distributing electronic coupons over a communications network according to claim 3 wherein said subsequent purchase transaction takes place during a connection other than said subsequent connection.

6. The method of distributing electronic coupons over a communications network according to claim 2 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted to said client system directly from said promotional server system over said communications network.

7. The method of distributing electronic coupons over a communications network according to claim 2 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted from said promotional server system to said e-tail server system over said communications network, and from said e-tail server system to said client system over said communications network.

8. The method of distributing electronic coupons over a network in accordance with claim 2 wherein said client system is connected to said network by a wired connection.

9. The method of distributing electronic coupons over a network in accordance with claim 8 wherein said client system is selected from the group consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

10. The method of distributing electronic coupons over a network in accordance with claim 2 wherein said client system is connected to said network by a wireless connection.

11. The method of distributing electronic coupons over a network in accordance with claim 10 wherein said client system is selected from the group consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

12. The method of distributing electronic coupons over a communications network according to claim 2, wherein, prior to step G, said promotional server system searches a database of promotional items within said particular item category.

13. The method of distributing electronic coupons over a communications network according to claim 12, wherein, prior to step G and after searching said database, said promotional server generates said electronic coupon based on promotional data linked to said promotional item.

14. A system for distributing electronic coupons over a communications network comprising:

an e-tail server system having a computer processor and associated memory, said e-tail server system including items for sale;

a promotional server system having a computer processor and associated memory, said promotional server system including a database of promotional data that define electronic coupons; and

a client system having a computer processor and associated memory, said client system being selectively coupleable to said e-tail server system over said communications network;

said client system establishing a primary connection to said e-tail server system to conduct a primary purchase transaction in which said client system purchases an item from said e-tail server system;

said e-tail server system being adapted for transmitting a cookie to said client system, said cookie including information about said item purchased in the primary purchase transaction;

said client system establishing a subsequent connection to said e-tail server system over said network;

wherein, during said subsequent connection, said e-tail server system reads said cookie from said client system and transmits said cookie information to said promotional server system; and

said promotional server system transmits an electronic coupon to said client system, said electronic coupon being redeemable for an item that is related to said purchased item.

15. The system for distributing electronic coupons over a communications network according to claim 14 wherein said communications network is the internet.

16. The system for distributing electronic coupons over a communications network according to claim 15 wherein said client system initiates a subsequent purchase transaction by selecting said related item and redeems said electronic coupon upon consummating said subsequent purchase transaction.

17. The system for distributing electronic coupons over a communications network according to claim 16 wherein said subsequent purchase transaction takes place during said subsequent connection.

18. The system for distributing electronic coupons over a communications network according to claim 16 wherein said subsequent purchase transaction takes place during a connection other than said subsequent connection.

19. The system for distributing electronic coupons over a communications network according to claim 15 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted to said client system directly from said promotional server system over said communications network.

20. The system for distributing electronic coupons over a communications network according to claim 15 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted from said promotional

server system to said e-tail server system over said communications network, and from said e-tail server system to said client system over said communications network.

21. The system of distributing electronic coupons over a network in accordance with claim 15 wherein said client system is connected to said network by a wired connection.

22. The system of distributing electronic coupons over a network in accordance with claim 21 wherein said client system is selected from the group consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

23. The system of distributing electronic coupons over a network in accordance with claim 15 wherein said client system is connected to said network by a wireless connection.

24. The system of distributing electronic coupons over a network in accordance with claim 23 wherein said client system is selected from the group consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

25. The system of distributing electronic coupons over a network in accordance with claim 15 wherein said promotional server system is included in said e-tail server system.

26. A system for distributing electronic coupons over a network comprising:

an e-tail server system having a computer processor and associated memory, said e-tail server system including items for sale;

a promotional server system having a computer processor and associated memory, said promotional server system including a database of promotional data that define electronic coupons; and

a client system having a computer processor and associated memory, said client system being selectively coupleable to said e-tail server system over said network and including a cookie transmitted to said client system by said e-tail server system as the result of a primary purchase transaction consummated during a primary connection between said client system and said e-tail server system, said cookie including information about an item purchased by said client system during said primary purchase transaction;

said e-tail server including means for reading said cookie from said client system during a subsequent connection between said client system and said e-tail server system, and transmitting said cookie information to said promotional server system;

wherein said promotional server system transmits an electronic coupon to said client system based on said cookie information, said electronic coupon being redeemable for an item that is related to said purchased item.

27. The system for distributing electronic coupons over a communications network according to claim 26 wherein said communications network is the internet.

28. The system for distributing electronic coupons over a communications network according to claim 27 wherein said client system initiates a subsequent purchase transaction by selecting said related item and redeems said electronic coupon upon consummating said subsequent purchase transaction.

29. The system for distributing electronic coupons over a communications network according to claim 28 wherein said subsequent purchase transaction takes place during said subsequent connection.

30. The system for distributing electronic coupons over a communications network according to claim 28 wherein said subsequent purchase transaction takes place during a connection other than said subsequent connection.

31. The system for distributing electronic coupons over a communications network according to claim 27 wherein said electronic coupon is provided to said client

system in the form of screen display data that is transmitted to said client system directly from said promotional server system over said communications network.

32. The system for distributing electronic coupons over a communications network according to claim 27 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted from said promotional server system to said e-tail server system over said communications network, and from said e-tail server system to said client system over said communications network.

33. The system of distributing electronic coupons over a network in accordance with claim 27 wherein said client system is connected to said network by a wired connection.

34. The system of distributing electronic coupons over a network in accordance with claim 33 wherein said client system is selected from the group consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

35. The system of distributing electronic coupons over a network in accordance with claim 27 wherein said client system is connected to said network by a wireless connection.

36. The system of distributing electronic coupons over a network in accordance with claim 35 wherein said client system is selected from the group consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

37. The system of distributing electronic coupons over a network in accordance with claim 27 wherein said promotional server system is included in said e-tail server system.

38. A method of distributing electronic coupons over a communications network, the method comprising the steps of:

A. establishing a primary connection over said network between a client system and a first e-tail server system, said first e-tail server system including items for sale;

B. said client system consummating a primary purchase transaction by purchasing an item from said first e-tail server system;

C. said first e-tail server system transmitting a cookie to said client system, said cookie including information about said purchased item;

D. establishing a subsequent connection over said communications network between said client system and a second e-tail server system;

E. said second e-tail server system reading said cookie from said client system;

F. said second e-tail server transmitting said item information to a promotional server system;

G. said promotional server system transmitting an electronic coupon to said client system, said electronic coupon being redeemable for an item that is related to said purchased item.

39. The method of distributing electronic coupons over a communications network according to claim 38 wherein said communications network is the internet.

40. The method of distributing electronic coupons over a communications network according to claim 39 wherein said client system initiates a subsequent purchase transaction during said subsequent connection by selecting said related item and redeems said electronic coupon upon consummating said subsequent purchase transaction.

41. The method of distributing electronic coupons over a communications network according to claim 40 wherein said subsequent purchase transaction takes place during said subsequent connection.

42. The method of distributing electronic coupons over a communications network according to claim 40 wherein said subsequent purchase transaction takes place during a connection other than said subsequent connection.

43. The method of distributing electronic coupons over a communications network according to claim 39 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted to said client system directly from said promotional server system over said communications network.

44. The method of distributing electronic coupons over a communications network according to claim 39 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted from said promotional server system to said second e-tail server system over said communications network, and from said second e-tail server system to said client system over said communications network.

45. The method of distributing electronic coupons over a network in accordance with claim 39 wherein said client system is connected to said network by a wired connection.

46. The method of distributing electronic coupons over a network in accordance with claim 45 wherein said client system is selected from the group consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

47. The method of distributing electronic coupons over a network in accordance with claim 39 wherein said client system is connected to said network by a wireless connection.

48. The method of distributing electronic coupons over a network in accordance with claim 47 wherein said client system is selected from the group

consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

49. A system for distributing electronic coupons over a communications network comprising:

a first e-tail server system having a computer processor and associated memory, said first e-tail server system including items for sale;

a second e-tail server system having a computer processor and associated memory, said second e-tail server system including items for sale;

a promotional server system having a computer processor and associated memory, said promotional server system including a database of promotional data that define electronic coupons; and

a client system having a computer processor and associated memory, said client system being selectively coupleable to said first and second e-tail server systems over said communications network;

said client system establishing a primary connection to said first e-tail server system to conduct a primary purchase transaction in which said client system purchases an item from said first e-tail server system;

said first e-tail server system being adapted for transmitting a cookie to said client system, said cookie including information about said item purchased in the primary purchase transaction;

said client system establishing a subsequent connection to said second e-tail server system over said network;

wherein, during said subsequent connection, said second e-tail server system reads said cookie from said client system and transmits said cookie information to said promotional server system; and

said promotional server system transmits an electronic coupon to said client system, said electronic coupon being redeemable for an item that is related to said purchased item.

50. The system for distributing electronic coupons over a communications network according to claim 49 wherein said communications network is the internet.

51. The system for distributing electronic coupons over a communications network according to claim 50 wherein said client system initiates a subsequent purchase transaction by selecting said related item and redeems said electronic coupon upon consummating said subsequent purchase transaction.

52. The system for distributing electronic coupons over a communications network according to claim 51 wherein said subsequent purchase transaction takes place during said subsequent connection.

53. The system for distributing electronic coupons over a communications network according to claim 51 wherein said subsequent purchase transaction takes place during a connection other than said subsequent connection.

54. The system for distributing electronic coupons over a communications network according to claim 50 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted to said client system directly from said promotional server system over said communications network.

55. The system for distributing electronic coupons over a communications network according to claim 50 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted from said promotional server system to said second e-tail server system over said communications network, and from said second e-tail server system to said client system over said communications network.

56. The system of distributing electronic coupons over a network in accordance with claim 50 wherein said client system is connected to said network by a wired connection.

57. The system of distributing electronic coupons over a network in accordance with claim 56 wherein said client system is selected from the group

consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

58. The system of distributing electronic coupons over a network in accordance with claim 50 wherein said client system is connected to said network by a wireless connection.

59. The system of distributing electronic coupons over a network in accordance with claim 58 wherein said client system is selected from the group consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

60. The system of distributing electronic coupons over a network in accordance with claim 50 wherein said promotional server system is included in said e-tail server system.

61. The system of distributing electronic coupons over a network in accordance with claim 50 wherein said promotional server system is included in said second e-tail server system.

62. A system for distributing electronic coupons over a network comprising:

a first e-tail server system having a computer processor and associated memory, said e-tail server system including items for sale;

a second e-tail server system having a computer processor and associated memory, said e-tail server system including items for sale;

a promotional server system having a computer processor and associated memory, said promotional server system including a database of promotional data that define electronic coupons; and

a client system having a computer processor and associated memory, said client system being selectively coupleable to said first and second e-tail server systems over said network and including a cookie transmitted to said client system by said first e-tail server system as the result of a primary purchase transaction consummated during a

primary connection between said client system and said first e-tail server system, said cookie including information about an item purchased by said client system during said primary purchase transaction;

said second e-tail server including means for reading said cookie from said client system during a subsequent connection between said client system and said second e-tail server system, and transmitting said cookie information to said promotional server system;

wherein said promotional server system transmits an electronic coupon to said client system based on said cookie information, said electronic coupon being redeemable for an item that is related to said purchased item.

63. The system for distributing electronic coupons over a communications network according to claim 62 wherein said communications network is the internet.

64. The system for distributing electronic coupons over a communications network according to claim 63 wherein said client system initiates a subsequent purchase transaction by selecting said related item and redeems said electronic coupon upon consummating said subsequent purchase transaction.

65. The system for distributing electronic coupons over a communications network according to claim 64 wherein said subsequent purchase transaction takes place during said subsequent connection.

66. The system for distributing electronic coupons over a communications network according to claim 64 wherein said subsequent purchase transaction takes place during a connection other than said subsequent connection.

67. The system for distributing electronic coupons over a communications network according to claim 63 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted to said client system directly from said promotional server system over said communications network.

68. The system for distributing electronic coupons over a communications network according to claim 61 wherein said electronic coupon is provided to said client system in the form of screen display data that is transmitted from said promotional server system to said second e-tail server system over said communications network, and from said second e-tail server system to said client system over said communications network.

69. The system of distributing electronic coupons over a network in accordance with claim 63 wherein said client system is connected to said network by a wired connection.

70. The system of distributing electronic coupons over a network in accordance with claim 69 wherein said client system is selected from the group consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

71. The system of distributing electronic coupons over a network in accordance with claim 63 wherein said client system is connected to said network by a wireless connection.

72. The system of distributing electronic coupons over a network in accordance with claim 71 wherein said client system is selected from the group consisting of a personal computer, an interactive television system, a personal digital assistant and a cellular telephone.

73. The system of distributing electronic coupons over a network in accordance with claim 63 wherein said promotional server system is included in said second-tail server system.

74. A system for distributing electronic coupons over a communications network comprising:

an e-tail server system having a computer processor and associated memory, said e-tail server system including items for sale;

a promotional server system having a computer processor and associated memory, said promotional server system including a database of promotional items linked to promotional data that define electronic coupons;

a client system having a computer processor and associated memory, said client system being selectively coupleable to said e-tail server system over said communications network;

said client system establishing a primary connection to said e-tail server system to conduct a primary purchase transaction in which said client system purchases an item from said e-tail server system, said purchased item being classified in a product category;

said e-tail server system being adapted for transmitting a cookie to said client system, said cookie including information about said item purchased in the primary purchase transaction;

said client system establishing a subsequent connection to said e-tail server system over said network;

wherein, during said subsequent connection, said e-tail server system reads said cookie from said client system and transmits said cookie information to said promotional server system;

said promotional server system including a searching device for searching said database for promotional items in said product category and electronic coupon generating means for providing, to said client system, an electronic coupon for one of said promotional items in said product category.

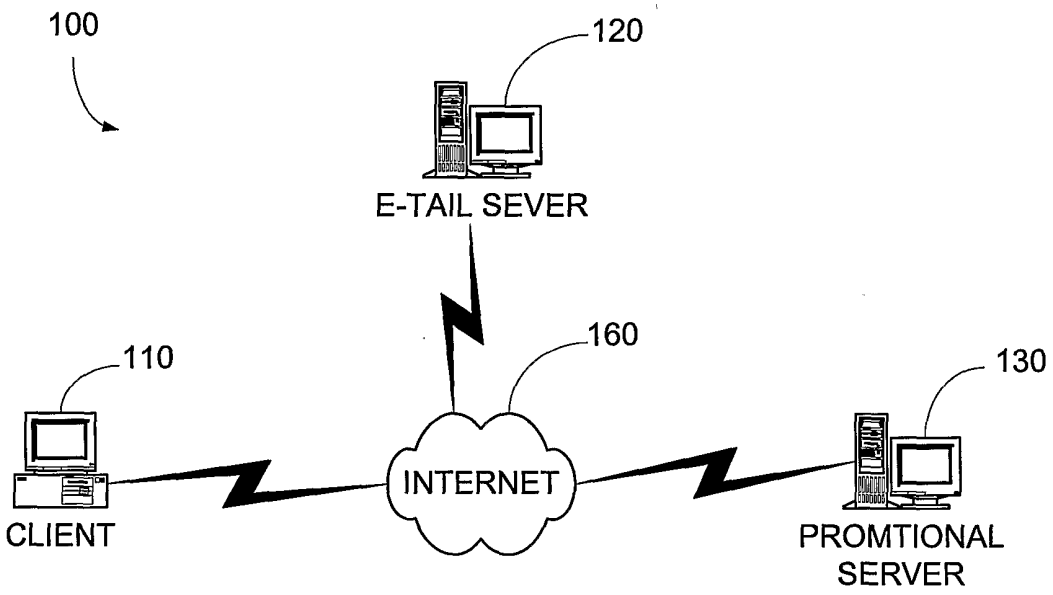
100
120
E-TAIL SEVER
160
110
130
INTERNET
CLIENT
PROMTIONAL
SERVER

FIG. 1

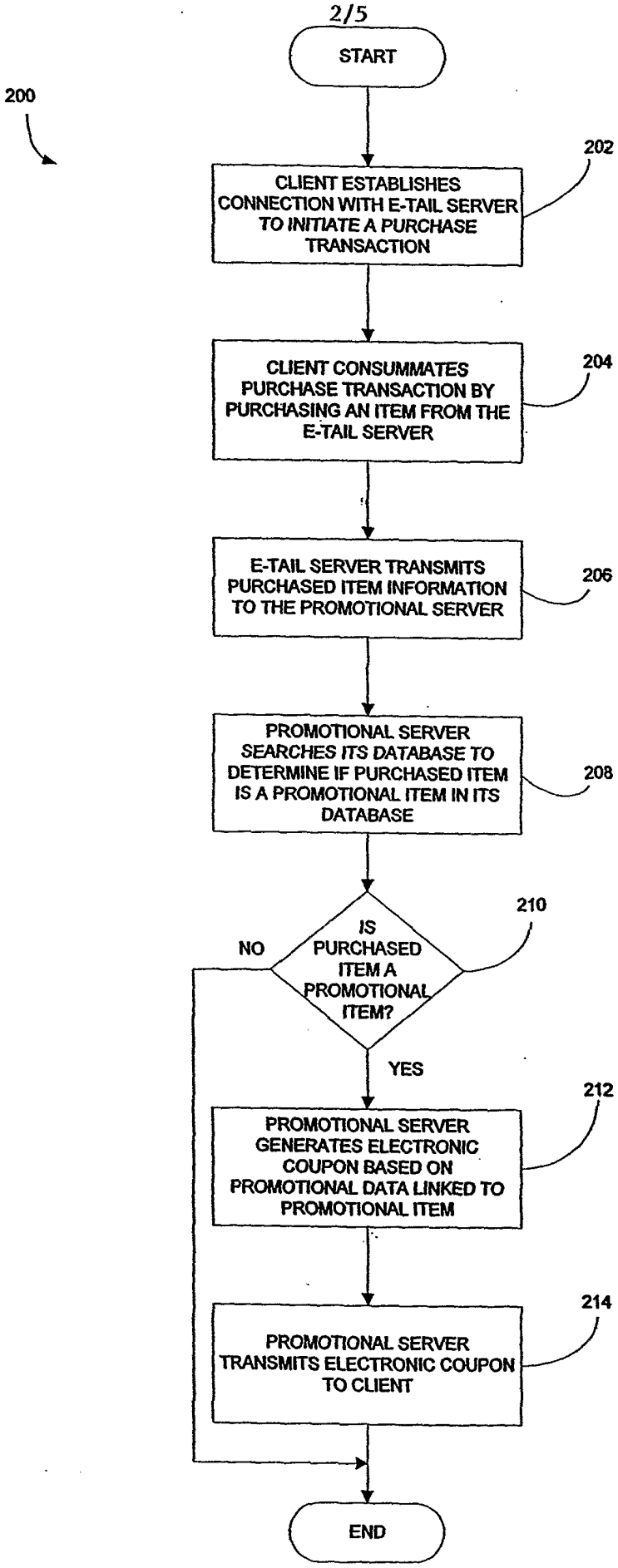
200
START
202
CLIENT ESTABLISHES CONNECTION WITH E-TAIL SERVER TO INITIATE A PURCHASE TRANSACTION
204
CLIENT CONSUMMATES PURCHASE TRANSACTION BY PURCHASING AN ITEM FROM THE E-TAIL SERVER
206
E-TAIL SERVER TRANSMITS PURCHASED ITEM INFORMATION TO THE PROMOTIONAL SERVER
208
PROMOTIONAL SERVER SEARCHES ITS DATABASE TO DETERMINE IF PURCHASED ITEM IS A PROMOTIONAL ITEM IN ITS DATABASE
210
IS PURCHASED ITEM A PROMOTIONAL ITEM?
NO
YES
212
PROMOTIONAL SERVER GENERATES ELECTRONIC COUPON BASED ON PROMOTIONAL DATA LINKED TO PROMOTIONAL ITEM
214
PROMOTIONAL SERVER TRANSMITS ELECTRONIC COUPON TO CLIENT
END

FIG. 2

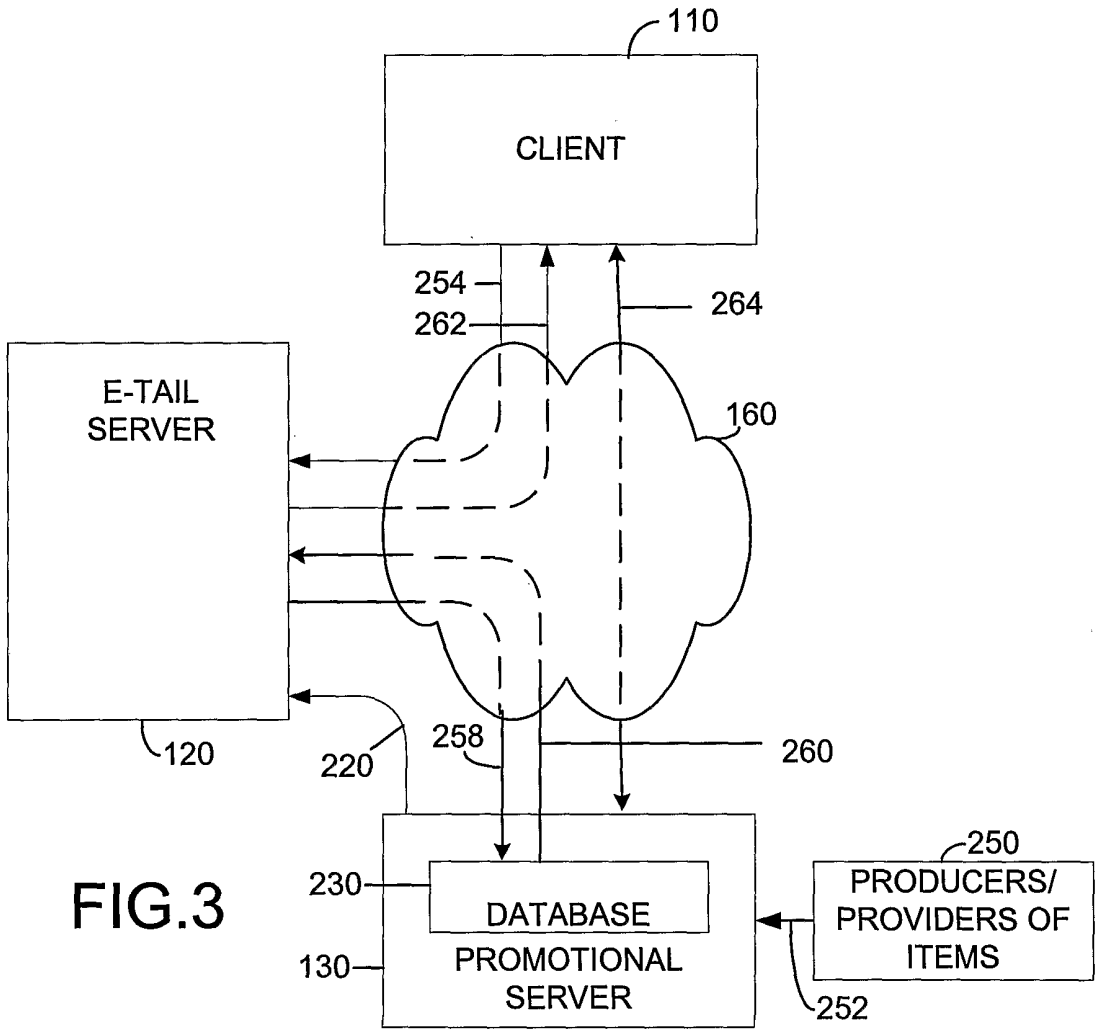
110
CLIENT
254
262
264
E-TAIL SERVER
160
120
220
258
260
230
DATABASE
130
PROMOTIONAL SERVER
250
PRODUCERS/ PROVIDERS OF ITEMS
252

FIG.3

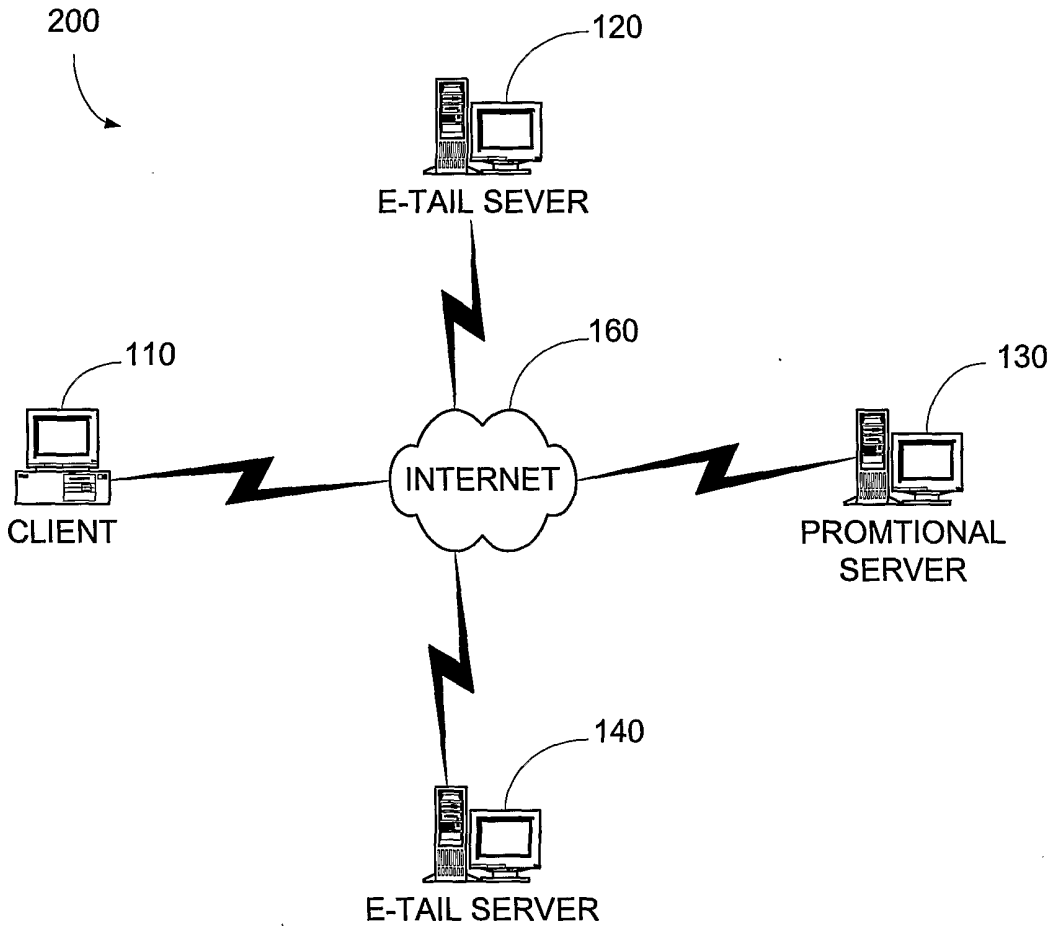
200
120
E-TAIL SEVER
160
110
130
INTERNET
CLIENT
PROMTIONAL
SERVER
140
E-TAIL SERVER

FIG. 4

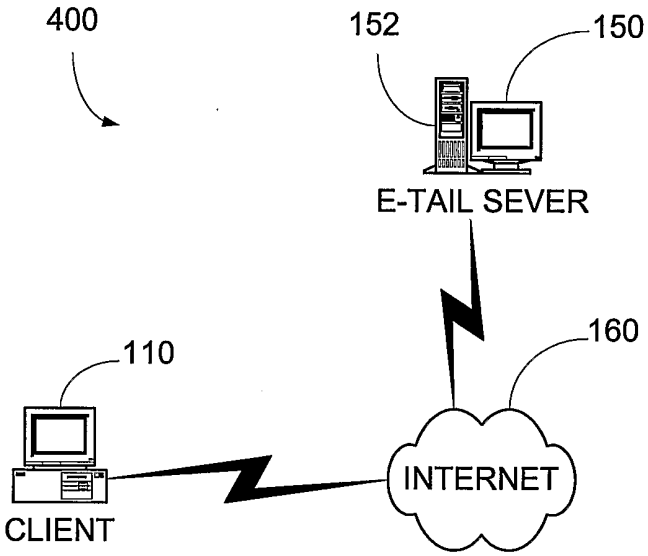

FIG. 5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/19204

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :G06F 17/60
US CL :705/10, 14

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/10, 14

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

EAST
coupons,discounts, cents off, incentives, triggers,database,purchases, category

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 6,266,649 B1 (LINDEN et al) 24 July 2001, entire document.	1-74
A	US 4,833,308 A (HUMBLE) 23 May 1989, entire document.	1-74
A	US 4,674,041 A (LEMON et al) 16 June 1987, entire document.	1-74
A	US 3,959,624 A (KASLOW) 25 May 1976, entire document.	1-74
A	US 6,041,308 (WALKER et al) 21 March 2000, entire document.	1-74
A	US 4,419,573 A (VON GELDERN) 06 December 1983, entire document.	1-74

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

*	Special categories of cited documents:	"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
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; 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
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"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		

Date of the actual completion of the international search 29 JULY 2001	Date of mailing of the international search report 19 SEP 2001
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer ERIC STAMBER James R. Matthews Telephone No. (703) 305-3800

Form PCT/ISA/210 (second sheet) (July 1998)★