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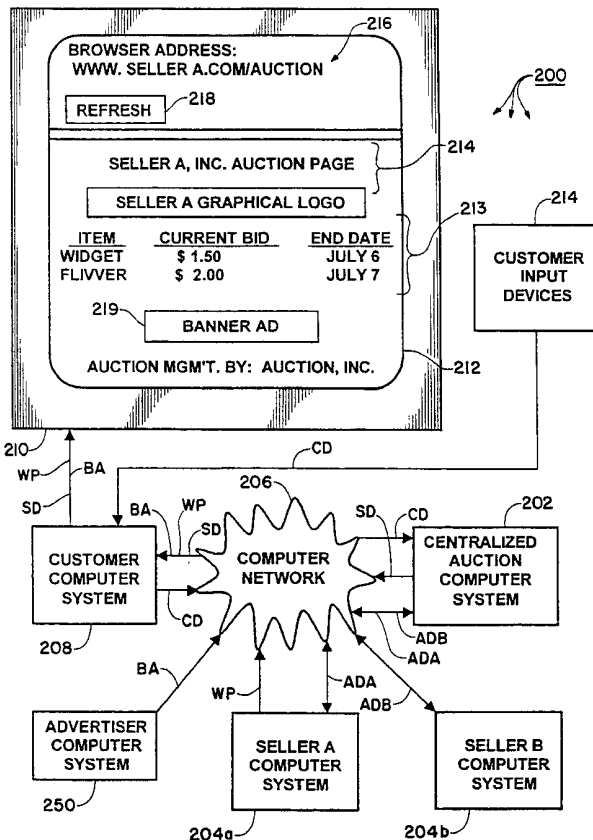
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(54) Title: AUCTION CONDUCTED OVER A COMPUTER NETWORK

(57) Abstract: A computerized auction system (200) that allows one party (202) to control the layout and branding of the web page, while a different party (204a) controls the other mechanics of the auction, such as maintenance and updating of auction databases. Preferably, the auction database provides data to the customer computer system (208) displaying the auction web page by a streaming data connection.



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AUCTION CONDUCTED OVER A COMPUTER NETWORK

TECHNICAL FIELD

The present invention relates to an auction over a computer network.

BACKGROUND OF THE INVENTION

5 It is now conventional to hold auctions over a computer network, especially over the Internet and associated World Wide Web (www). One way that such an auction can be conducted is for a seller to buy or generate: (1) a dynamic auction database; (2) an auction web page; and (3) auction software.

10 The dynamic auction database holds data corresponding to items to be auctioned off, bid price information corresponding to the items, deadlines for bidding on the items and the like. The dynamic auction database would be stored and maintained in the seller's computer system.

15 The auction web page is a web page, written in a scripting language, such as hyper-text mark-up language (HTML), that users of the computer network ("customers") respectively summon to their computers in order to participate in the auction. The auction web page is stored and maintained on the seller's computer system.

20 The auction web page lists items available, current bid information, deadlines for bidding and other items in the auction database. The auction web page receives this kind of information from the auction database. An auction web page can also be used for branding purposes. For example, the seller can achieve branding through its auction web page by causing the logos of the seller to appear prominently, or by choosing the color scheme and page layout of the auction page to match other web pages or packaging of the seller.

25 The auction web page is designed to receive input from customers through the customers computers. One example of this is when a customer places a bid on an item in an attempt to be the high bidder and effectively agree to purchase the auction item. Of course, when the customer places a bid, the seller's computer system should update the auction database to reflect this new, important information. In this way, subsequent customers can have the latest bids communicated to them via the auction web page, thereby facilitating a
30 competitive bidding environment, similar to that achieved in a live auction.

The auction software is a catch-all phrase that refers to the various pieces of software on the seller's computer system that control the auction database and the auction web page. For example, a database program, like ORACLE database software (the word ORACLE may be subject to trademark protection in this context), might be used to control the auction database, and would be considered to be a part of the auction software. As another example, the software that updates the auction web page to reflect changes to the auction database, as products are added to the auction or new bids are received, is another piece of auction software. Yet another example would be "firewall" programs utilized to ensure the confidentiality of information (such as credit card numbers) received from customers.

The prior art recognized a problem inherent in the above-described computerized auction scheme: too many sellers are required to have too much software and database data on their computer systems.

For example, suppose a manufacturer creates a set of web pages (a web site), primarily for advertising and publicity purposes. The manufacturer may want to auction off a limited number of collectible, obsolete or odd-lot items through an auction page. (It is noted that this technique of having an auction page is widely believed to improve the advertising and publicity aspects manufacturer's web site). However, the cost of this interest-inducing auction page is that the manufacturer must provide and maintain an awful lot of auction software and data.

Similarly, many individuals like to participate as sellers in auctions, but these individuals generally do not have a volume of auction sales that would economically justify setting up and maintaining a computerized auction.

One conventional solution to these above-described problems is shown in Fig. 1. In computerized auction system 100 of Fig. 1, fictional entity Auction, Inc., has a computer system set up to generate and maintain auction databases, auction web pages and associated auction software. Many and various users, such as Seller A and Seller B, can register with Auction, Inc. Basically, Seller A and Seller B provide the products, and Auction, Inc., provides the computer support.

More particularly, computerized auction system 100 includes Auction, Inc., computer system 102, Seller A computer system 104a, Seller B computer system 104b, computer network 106, customer computer system 108, customer display device 110 and customer input devices 114. The centralized Auction, Inc., computer system generates and maintains

the auction databases, the auction web pages and the auction software required for computerized auctions of Seller A's and Seller B's (and many other sellers) products.

Seller A preferably sends data relating to the products it has for auction from its computer system 104a as signal ADA through computer network 106 to the Auction, Inc., computer system 102. While Seller A computer system 104a may receive data relating to the auction of its products, such as the final bid for one of its products, from the Auction, Inc., computer system 102 as signal ADA, the Auction, Inc., computer system 102 pretty much runs the computerized auction. Similarly, Seller B communicates data ADB relating to its products over computer network 106, but once again, Auction, Inc., computer system 102 has the software and other resources required to support a computerized auction.

Moving now to the mechanics of the auction bidding process, customer computer system 110, such as the personal computer of an individual auction customer, will request the web page for an auction that is maintained by the Auction, Inc., computer system 102. For example, the customer may input the address corresponding to the auction web page into her browser program, or the customer may follow a link present in another web page, which leads to the requested auction web page. Once requested, the auction web page will come from the Auction, Inc., computer system 102 as signal WP, through computer network 106, to customer computer system 108. Usually, the signal WP is written in a scripting language, such as HTML.

After the requested auction web page is received by customer computer system 108, customer computer system 108 will generate a display signal DP that is sent to customer display device 110 and displayed on display 112. As shown in Fig. 1, substantive auction data 113 makes up a portion of display 112. The customer may respond to this displayed auction by, for example, placing a bid on one of the items. The customer does this by manipulating customer input devices 114 (eg, a mouse and a keyboard). Input device(s) 114 then send(s) customer input signal CI to customer computer system 108, which in turn, sends signal CI through computer network 106 to the Auction, Inc., computer system 102.

When Auction, Inc., computer system 102 receives customer input signal CI, it is equipped to respond by updating its auction database for Seller A and by updating its auction web page that it maintains on behalf of Seller A. If any customer viewing the auction web page desires to see updates to the auction web page that have occurred since it was summoned, then the customer activates browser refresh button 118, and customer computer

system 108 will summon and display the auction web page as it exists in the Auction, Inc., computer system 102 at the time refresh button 118 is activated. In this way, a multitude of customers can continually follow updates to the bid price of seller A's various wares.

5 While the customer is viewing the Seller A auction page, the browser display line 116 displays an address that is under the top level domain name "WWW.AUCTION.COM." This is because the web site is controlled by Auction, Inc. However, the auction items can be readily identified as belonging to Seller A because line 114 of display 112 identifies the seller as Seller A.

10 In this way, Auction, Inc., can efficiently provide auction database facilities, auction web page facilities and other auction software in an efficient manner, utilizing economies of scale afforded by the large number of sellers that Auction, Inc., serves. While each seller pays Auction, Inc., for its services, this payment is substantially less than what would be required for the seller to set up and maintain its own auction page.

DISCLOSURE OF THE INVENTION

15 The inventors of the present invention have recognized a problem inherent in the computerized auction scheme of Fig. 1, which diminishes the utility of this scheme for some computerized auction applications. Specifically, the sellers substantially lose control of the appearance of the auction web page, because the auction web pages are created and maintained by the centralized entity, Auction Inc. As shown in Fig. 1, at reference numeral
20 116, the browser address line displays an address a top level domain name associated more with Auction, Inc., than with Seller A.

25 More importantly, if a customer is at a web page controlled and maintained by Seller A, and they would like to participate in Seller A's auctions, they must leave Seller A's domain (by link or by typing in an address) and enter Auction, Inc.'s, domain. This transfer severely diminishes the customer's identification of Seller A's auction products with Seller A's web site and indeed with Seller A itself. Rather, the customer may develop an identification with Auction, Inc.

30 As shown in Fig. 1, the portion 114 of the display 112, of the auction web page that Auction, Inc., maintains on behalf of Seller A does identify Seller A with a line of text, but this branding is weak. First of all, Auction, Inc.'s, name appears at least as prominently as that of Seller A. An even less tractable problem is that because Seller A does not design and maintain

the auction web page, they do not have maximum freedom to design the look and feel and sound of the auction web page to match their other web pages, their facilities and their product packaging.

5 Even if Auction, Inc., provided a more flexible auction web page design process for its affiliated sellers, it would be difficult, if not impossible, to allow as much flexibility, with as much ease of implementation, as if Seller A designed its auction web page from scratch. In other words, Seller A loses some opportunity to build goodwill with its web page when it delegates this task to a centralized auction site, such as Auction, Inc. While such goodwill can be difficult to precisely evaluate, this asset is thought to be considerable, especially in today's
10 low-barrier-to-entry, venture-capital-financed business climate.

These problems of web page branding and associated goodwill are especially large for businesses that view an auction web site as primarily an advertising or publicity related project. While some auctions are designed primarily as a revenue source, many businesses want to limit their auction sales to non-commodity items, and view the auction web page as a sort of
15 amusement and special-interest portion of their web site, which will act as content to entice customers to view more substantive product information and advertising. This is thought to be a wise strategy, because computerized auctions have indeed been found to be very appealing both in initially attracting viewers and in keeping them around for longer intervals.

Another problem with having a centralized auction site, such as Auction, Inc.,
20 controlling the generation and maintenance of an auction web page on behalf of a seller is that it becomes much more difficult for the seller to control third party advertising (such as banner ads) and other content that will appear on its auction web page. For example, if a seller sells and auctions automobiles, they may find it synergistic and remunerative to allow a manufacturer of motor oil advertise on their auction web page in exchange for a payment. In
25 theory, Auction, Inc., could provide a mechanism for doing this in conjunction with the sellers who have dedicated auction web pages, but the level of communication required between each seller and Auction, Inc., to identify appropriate third party content would always be a large, and perhaps prohibitive, burden.

At least some embodiments of the present invention have one or more of the following
30 advantages, objects and/or benefits:

(1) To provide a computerized auction system where sellers control the design and maintenance of the auction web page, while a centralized auction provider maintains and updates the auction-related data, such as prices, products and closing dates;

(2) To provide a computerized auction system that allows more prominent branding of an auction web page by a seller;

(3) To provide a computerized auction system where a centralized auction services provider can maintain databases with auction data for many sellers;

(4) To provide a computerized auction system utilizing a streaming data connection; and

(5) To provide a computerized auction system where a customer can remain in a seller's domain, or web site, while viewing auction data that does not need to be maintained on the seller's computer system.

Other advantages, objects and benefits will become apparent through a review of the rest of this document.

According to a first aspect of the present invention, a method of managing an auction over a computer network includes the step of generating and maintaining an auction web page on a first computer system, which is controlled by a first party. The method further includes the step of generating and maintaining a database of auction-related data on a second computer system, which is controlled by a second party. The method further includes the step of sending, via the computer network, the auction web page from the first computer system to a third computer system controlled by a customer. The method further includes the step of sending, via the computer network, auction-related data from the database from the second computer system to the third computer system. The method further includes the step of combining the auction web page with the auction-related data to generate a display. The method further includes the step of displaying the display on a display device included in the third computer system.

According to a second aspect of the present invention, a method of managing an auction over a computer network, the method includes the step of generating and maintaining a database of auction-related data on a first computer system. The method further includes the step of sending, via the computer network, auction-related data to a second computer system by a streaming data transfer connection. The method further includes the step of

displaying the auction-related data on a display device included in the second computer system.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will become more fully understood from the detailed description given below, together with the accompanying drawings which are given by way of illustration only, and thus are not to be construed as limiting the scope of the present invention. In the drawings:

Fig. 1 is a block diagram of a prior art computerized auction system;

Fig. 2 is a block diagram of a first embodiment of a computerized auction system according to the present invention;

Fig. 3 is a block diagram of a centralized auction computer system included in the first embodiment computerized auction system;

Fig. 4 is a block diagram of a seller's computer system included in the first embodiment computerized auction system;

Fig. 5 is a flowchart of some exemplary operations of the first embodiment computerized auction system;

Fig. 6 is a block diagram of a first embodiment of a computerized auction system according to the present invention; and

Fig. 7 is a block diagram of a first embodiment of a computerized auction system according to the present invention.

BEST AND OTHER MODES FOR CARRYING OUT THE INVENTION

Before plunging into a description of the Figures, some terms will now be defined.

Auction: includes conventional auctions, as well as reverse auctions, name-your-price auctions, charitable auctions, barter transactions, dicker transactions, auctions where a plurality of disparate individuals are aggregated, and all other variations on conventional auctions.

Web page: is a set of data that controls an audio-visual display to be sent from one computer to another over a computer network. Many web pages are written in scripting languages, but this is not a requirement. Also, "web page," as that term is used herein, is not

limited to current data formatting conventions, and is not limited to any particular display size or amount of data.

Web site: any grouping of web pages. Often the web pages will share a top level domain name, but this is not required.

5 Auction-related data: is any data relevant to a computerized auction, and includes, but is not limited to, customer identity data, seller identity data, product identity data, dynamic pricing information, lot data, shipping data, sale terms data, payment data, minimum price, reserve price, maximum price, minimum quantity, bid increment, quick sale, and fixed price data.

10 Streaming: herein refers to any data connection between a data source and a data destination where changes to data in the data source will be communicated to the data destination automatically (that is, without human intervention) and without unreasonable delay. Streaming data connections may be continuous, executed at time intervals (short enough to avoid unreasonable delay, executed whenever the source data changes, etc.

15 "Unreasonable delay" will depend on the context of the streaming connection, but in the competitive bidding environment of many auctions, changes in the data source will need to be reflected in the data destination in 5 seconds or less to avoid unreasonable delay.

20 Look and feel: is defined with reference to United States Federal Court decisions that employ this phrase. Although these decisions are often rendered in the context of copyright law, no application of copyright law to the present document is intended. Rather, these court decisions are referenced merely to give substance and definiteness to the phrase "look and feel."

Dynamic pricing: takes on its conventional definition, but it is noted that this phrase includes, but is not limited to, pricing in the context of conventional auctions.

25 To the extent that a patentee may act as its own lexicographer under applicable law, it is hereby directed that all words appearing in the claims section, except for the above-defined words and phrases, "auction," "web page," "web site," "auction-related data," "streaming," "look and feel," and "dynamic pricing," shall take on their ordinary, plain and accustomed meanings (as generally evidenced, *inter alia*, by dictionaries and/or technical lexicons), and shall not be considered to be specially defined in this specification.

30 Figs. 2 to 4 illustrate a computer system 200 for conducting a computerized auction. Computer system 200 includes centralized auction computer system 202, Seller A computer

system 204a, Seller B computer system 204b, a computer network 206, a customer computer system 208, a customer display device 212 and various customer input devices 214.

The centralized auction computer system 202 is shown in greater detail in Fig. 3.

Centralized auction computer system 202 includes primary web server 220, backup web server 222, loadbalancing web server 224, primary firewall 226, backup firewall 228, production database server 230, decision support system server 232, backup database server 234 and database 236.

Primary web server 220, backup web server 222 and loadbalancing web server 224 are preferably each implemented as conventional web server computers, such as Stronghold (APACHE) web servers. (The word APACHE may be subject to trademark protection in this context.) These server computers control the timing and formatting of data SD, CI, ADA, ADB that is to be sent out over and received back from computer network 206. Software called RESONATE is preferably used for traffic management among and between these servers. (The word RESONATE may be subject to trademark protection in this context.)

As shown in Fig. 3, these servers are interconnected by failover links FL. There are three servers, instead of just one, for redundancy and loadbalancing reasons. As the centralized auction site serves more sellers and gains more customers, there will be more data input and output, and even more web servers may become appropriate.

The firewall is made up of primary firewall 226 and backup firewall 228, which are connected by failover link FL. Firewalls 226, 228 are preferably computers equipped with CHECK POINT FIREWALL-1 software and STONESOFT STONEBEAT software. (The phrases CHECK POINT FIREWALL-1 and STONESOFT STONEBEAT may be subject to trademark protection in this context.) As is conventional in e-commerce, the firewall helps insure security and integrity of database 236, which is very important in view of the fact that database 236 stores sensitive seller and customer information, like credit card numbers.

Production database server 230, decision support system server 232 and backup database server 234 make up the backend system that is preferably implemented as computers and peripheral equipment, such as disk drives and tape drives. The backend system generates and manages database 236 of auction-related data and effects appropriate changes and additions to database 236 based on incoming seller data ADA, ADB and customer input data CD. The backend system also controls retrieval of data ADA, ADB, SD from the database that is to be output to auction sellers or customers over computer network 206.

The backend system preferably can support streaming data connections, wherein customer input data CD comes in on an on-going basis as it is input by a multitude of customers, and streaming data SD goes out on an on-going basis as it is requested by web pages being viewed by a multitude of customers. Preferably, the backend system includes ORACLE database management software, VERITAS cluster server software, VERITAS volume manager software, VERITAS VxFS software and VERITAS net backup software. (The words VERITAS and ORACLE may be subject to trademark protection in this context.)

Database 236 is a database that stores auction-related data. Database 236 preferably communicates with the backend system 230, 232, 234 via one or more fibre channels (not separately shown). Generally speaking, database 236 stores four categories of information: (1) information related to the identity of auction sellers; (2) information related to the identity of auction customers; (3) information related to the products for sale at the auctions of various sellers; and (4) information related to the economic mechanics of auction sale transactions. Within these four, broad areas of auction-related data there can be many discrete fields of information, as set forth above in the definition of "auction-related data."

One important and distinctive feature of the centralized auction computer system 202, which should not be lost in the discussion of details, is that it can store, maintain, update and output dynamic pricing information (eg, auction bids) as streaming data to a multitude of customers. This is an important difference from auction computer systems that cannot support streaming data connections because: (1) the streaming data connection will automatically update as the customer views it (which really helps in the fluid setting of dynamic pricing); and (2) the auction-related data can be readily fed as streaming data into a web page that is stored and maintained in the seller's computer system (so that a seller can more easily control the auction web page).

Speaking of the seller's control of an auction web page, discussion will now shift to Seller A's computer system 204, which is the means by which Seller A controls its auction web page, such that the auction web page will incorporate auction-related data from the above-described centralized auction computer system 202. As shown in Fig. 4, the Seller A computer system includes Seller A server 238, Seller A personal computer 240 and web page database 242.

Seller A server 238 is a conventional server used for sending out web pages to other computers over a computer network 206 (such as the Internet and associated www). Server 238 may be located on the seller's premises, or alternatively, may be located on the premises of a separate Internet services provider hired by Seller A to maintain its web pages.

5 Seller A personal computer 240 is used by Seller A to create and edit its web pages, to send product information ADA to central auction computer system 202 and to receive auction results ADA from central auction computer system 202. Preferably, personal computer 240 is a conventional personal computer, such as an IBM PC or an APPLE iMAC, but it could be any other sort of a computer, such as a mainframe. (The phrases IBM PC and APPLE iMAC
10 may be subject to trademark protection in this context.)

Preferably, personal computer is equipped with conventional software used to create and edit web pages that incorporate streaming data, such as conventional software used to create web pages in HTML. Even more preferably, the entity that controls the centralized auction computer system can provide the software for allowing the seller to set up a web page.
15 When the entity that provides the centralized auction computer system provides the web page creation software, this can help ensure a nice-looking and well-functioning auction page. For example, specially-tailored templates and "wizards" may be included in the software to guide a seller through the auction web page creation process and to ensure that the auction web page will include all of the information that customers will want to have readily available when they
20 view an auction web page.

As the auction web page is being created by the seller, it is stored and updated on web page database 242, which is a conventional database for storing web pages. Preferably, web page database 242 stores not only the auction web page WP1, but also stores all of the seller's other web pages WP2, WP3, WP4.

25 One advantage of at least some embodiments of the present invention is that the seller has greater control over the design and evolution of its auction web page. This leads to another advantage, which is that a seller can use this freedom to design its auction web page to have a look and feel with its other web pages. For example, the seller's various web pages may employ a consistent color scheme, layout, button size, audio jingle, etc. This consistent
30 look and feel is believed to be a powerful form of branding. This branding will cause customers to strongly associate a pleasurable auction experience and/or satisfactory auction purchases with the seller. These associations build goodwill and are believed to lead to loyal

customers and further sales. In fact, it is believed that these “soft” benefits may be more important to many sellers than the revenue generated by the auction itself.

Alternatively, many individual, as contrasted with business, sellers are not so concerned with branding as they are with having a way to stand out in the crowd and having a creative outlet. Motivated individual sellers may very well appreciate the flexibility of being able to design their own auction page, without the restrictions that seem to inevitably be present when an auction page is designed and maintained through a centralized auction site.

Returning attention to Fig. 2, customer computer system 208 is preferably a conventional personal computer that includes a modem, browser software and Internet connection software. Although only one customer computer system 208 is shown in Fig. 2 for the sake of simplicity, it will be appreciated that auctions and other dynamic pricing marketplaces work better with more customers. When the customer wants to participate in an auction, she has her browser software summon auction web page WP from Seller A computer system 204a via computer network 206. Once auction web page WP arrives at customer computer system 208, it will automatically summon auction-related streaming data SD from centralized auction computer system 202. Based on the web page WP and streaming data SD, customer computer system 208 generates display 212 that it causes to be displayed on display device 210.

Display 212 (shown in Fig. 2) is in some respects similar to above-described prior art display 112 (shown in Fig. 1), and in some respects different therefrom. Like display 112, display 212 generally includes a browser address line 216, a refresh button 218 and auction data 213. However, auction data 213 is based on streaming data SD received via a streaming data connection to centralized auction computer system 202. This means that the auction data will automatically refresh as the dynamic pricing information and other auction-related data changes due to competitive bids by other customers, new products put up for auction by Seller A and the passage of deadlines.

Another difference between display 212 and prior art display 112 is that the browser address line in display reads “WWW.SELLERA.COM/AUCTION.” This is because the web page retrieved by the browser has been placed by Seller A into its dedicated domain “WWW.SELLERA.COM.” Because of the prominence of Seller A’s domain name in the browser address line, customers are believed to more strongly associate the auction with Seller A, which, as explained above, is a good thing.

Yet another difference between display 212 and prior art display 112 is that display lines 214 feature Seller A's name much more prominently and include a graphical logo. Again, this helps Seller A with its branding. This is one exemplary way in which Seller A can utilize its greater control over web page design and maintenance to effectively brand its auction page. As discussed above, Seller A may want to implement display 212 to have a consistent look and feel with its other web pages. Display 212 also includes a banner ad 219. Banner ad 219 is displayed because Seller A's auction web page WP has conventional coding to summon the banner ad signal BA from an advertiser's computer system 250. While conventional auction web pages, generated by conventional centralized auction sites, may likewise incorporate banner advertisements and other third party content, banner ad 219 is different in an important respect. That is, in computer system 200, the web page that summons the banner ad is created and maintained by the seller, rather than by the centralized auction site. This makes it much easier for a seller to select and change which third party advertisements and other content will be present on its auction web site.

Now that the customer can observe display 212 of the auction web page, she may choose to participate by submitting a bid CD on one of the items for auction by using the customer input devices 214. Customer input devices 214 are preferably a convention keyboard and a conventional mouse. The input CD is transmitted to customer computer system 208, then to computer network 206 and on to centralized auction computer system 202, in order to effect an appropriate change in the auction-related data of database 236 (see Fig. 3). Because centralized auction computer system 202 has a streaming data connection with its customers, the multitude of customers viewing the auction will see this bid automatically and with a minimum of delay as the streaming data SD changes to reflect the updated contents of database 236.

Now some exemplary operations of computer system 200 will be discussed in connection with flowchart of Fig. 5 in order to illustrate the respective roles of the party who controls the centralized auction site (that is, fictional entity Auction, Inc.), Seller A and the customers.

As shown in Fig. 5, at Step S1 (for the sake of clarity, the reference numerals for steps will have an "S" prefix), Seller A computer system 204a sends auction-related data to Auction, Inc. computer system. For example, this might be identification and description of a

new product that they wish to add to their auction listings, along with a desired auction closing date.

At Step S2, the customer computer system 208 browser requests the Seller A auction web page WP. This might be done by following a link on some other page (such as one of Seller A's other web pages) or by typing in the URL address into the browser.

At Step S3, Seller A computer system sends Seller A auction web page WP to customer computer system 208. At Step S4, customer computer system 208 automatically requests appropriate auction-related streaming data SD from the Auction Inc. computer system 202. This happens because the auction web page WP includes coding that specifies that streaming data SD from the Auction, Inc. computer system is to be included in the display. In this way, Seller A can take care of its web page and Auction, Inc. can take care of the auction-related data.

At Step S5, customer computer system 208 creates a display using the auction web page WP and the auction-related streaming data SD. At Step 6, customer computer display device 210 displays display 212. Although not susceptible to illustration in a flowchart, display 212 is re-created and re-displayed on an ongoing basis as there are changes in the streaming data SD. For example, if a competing customer places a bid from some other location, the streaming data SD and display will automatically change to reflect this.

At Step S7, the customer inputs customer data CD via customer input devices 214. For example, the customer may be placing a bid on one of the auction items, or entering credit card information to pay for a previous or prospective purchase.

At Step S8, customer computer system 208 sends out customer data CD to computer network 206. At Step S9, Auction, Inc. computer system 202 receives the customer data CD. At Step S10, Auction, Inc., computer system updates its database 236 to reflect the new customer data CD.

At Step S11, customer computer browser leaves Seller A auction web page. At Step S12, the Auction, Inc. computer system 202 determines whether the auction has ended. If the auction has ended (eg, the auction end date / time has passed), then processing proceeds to Step S13. At Step S13, Auction, Inc. computer system 202 sends auction related data to Seller A computer system 204a to let them know the result of the auction, so that Seller A can take appropriate steps to collect payment and to get the appropriate goods out to the high bidder of the auction.

On the other hand, if it is determined at Step S12 that the auction has not ended; then processing will go back to Step S2 so that other customers can place their bids in an attempt to secure the auction goods at an acceptable price.

Fig. 6 shows an auction computer system 300 according to the present invention.

5 Computer system 300 includes computer network 306, customer computer system 308, customer display device 310, customer input devices 3154 and Seller C computer system 352. As in many conventional auction systems, the Seller C computer system sends an auction web page WP to a multitude of customer computer systems (exemplified by customer computer system 308).

10 However, auction web page WP in this embodiment calls for and incorporates streaming auction-related data SD, which is displayed on the customer display device along with the auction web page. In this embodiment, the same entity (a seller called Seller C) controls the web page and the streaming auction data. Nevertheless, the use of streaming auction-related data SD is still an advantage because it will relatively quickly and automatically
15 update customer displays everywhere to reflect changes in the auction database (not separately shown), such as changes in the dynamic pricing information. Alternatively, computer system 352 could be controlled and maintained (to include both web pages and streaming auction-related data) by a centralized auction company, such as the fictional Auction, Inc. Again in this case, the use of streaming auction-related data SD would make the auction experience
20 different and better for the customer.

Fig. 7 shows auction computer system 400 according to the present invention.

Computer system 400 includes centralized auction computer system 402, Seller A computer system 404, computer network 406, customer computer system 408, customer display device 410 and customer input devices 414. This auction computer system is essentially the same as
25 prior art system 100 described above, except for the “low-branding” of the centralized auction entity manifested in display 412.

As shown in Fig. 7, the web page WP that is sent from centralized auction computer system 402 to customer computer system 408 via computer network 406 cause a display that identifies both the seller (Seller A) and the entity that controls the centralized auction
30 computer system (that is, the fictional Auction, Inc.). More particularly, Seller A is identified in display 412 at display lines 414, which are set forth in a large and prominent font and include a graphical logo. Auction, Inc. is identified at display lines 415 in smaller text. The

point is that the seller of the goods is identified more prominently than the separate entity that provides the computer support for the computerized auction. Alternatively, display 412 may provide no identification of Auction, Inc.

5 Although it may not be immediately apparent why this “low-branding,” which flies in the face of conventional practice, is advantageous. To explain, by identifying the seller with substantially more prominence than the computer services provider, customers in the auction will associate the auction with the seller, rather than the services provider to a greater degree. This may not be wise in conventional applications, where the services provider is trying to make a name for itself and its affiliated auctions. However, in applications where the seller is
10 aggressively trying to use the auction as a marketing tool, it is not desirable to have associations with the auction services provider that come at the expense of similar associations that can be made with the seller.

Many variations on the above-described computerized auction systems are possible, such as reverse auctions, name-your-price-auctions, auctions where multiple customers join to
15 buy identical products and the like.

Another variation, wherein a seller generates and maintains an auction web page and another party generates and maintains an auction data database for the auction would employ frames technology. For example, the seller’s web page would be set up as a frame to frame a web page supplied by the fictional Auction, Inc. The web page supplied by Auction, Inc.
20 would reflect the auction-related data in the auction database that Auction, Inc. stores and maintains. This set-up could still allow the seller a somewhat greater amount of control over and identification with the auction web page as a whole (especially if the seller’s frame is large in size relative to the Auction, Inc. web page displayed within). However, this frames embodiment is decidedly less preferable in that the auction-related data might not update
25 automatically. Also, this embodiment may be less preferable in that the use of frames may be apparent to sophisticated web “surfers,” who might associate the auction somewhat less strongly with the seller upon recognizing the frames set-up.

Such variations are not to be regarded as a departure from the spirit and scope of the invention, but rather as modifications intended to be encompassed within the scope of the
30 following claims.

CLAIMS**What is claimed is:**

1 1. A method of managing an auction over a computer network, the method comprising
2 the steps of:

3 generating and maintaining an auction web page on a first computer system, which is
4 controlled by a first party;

5 generating and maintaining a database of auction-related data on a second computer
6 system, which is controlled by a second party;

7 sending, via the computer network, the auction web page from the first computer
8 system to a third computer system controlled by a customer;

9 sending, via the computer network, auction-related data from the database from the
10 second computer system to the third computer system; and

11 combining the auction web page with the auction-related data to generate a display.

12 2. The method of claim 1 further comprising the steps of:

13 displaying the display on a display device included in the third computer system;

14 receiving customer input data from an input device included in the third computer
15 system; and

16 sending, via the computer network, the customer input data from the third computer
1 system to the second computer system.

1 3. The method of claim 2 further comprising the step of updating the database in
2 the second computer system based upon the customer input data.

1 4. The method of claim 1 further comprising the steps of:

2 sending, via the computer network, product data, relating to a product to be auctioned
3 off, from the first computer system to the second computer system; and

4 updating the database in the second computer system based upon the product data.

1 5. The method of claim 1 further comprising the step of sending auction-related
2 data, via the computer network, from the second computer network to the first computer
3 network.

1 6. The method of claim 1 wherein:
2 the first party owns products being auctioned off by the computerized auction; and
3 the second party is a centralized auction site that maintains auction-related data for a
4 plurality of other parties.

1 7. The method of claim 1 further comprising the steps of:
2 editing the web page in the first computer system to incorporate content from a fourth
3 computer system (250) controlled by a fourth party; and
4 combining the web page with the content (219) from the fourth party in generating the
5 display.

1 8. The method of claim 7 wherein the fourth party is an advertiser.

1 9. The method of claim 1 wherein the auction-related data is sent from the second
2 computer system to the third computer system by a streaming data connection.

1 10. The method of claim 9 wherein the streaming data connection updates the
2 display on the display device to reflect any changes in the auction-related data on an on-going
3 basis.

1 11. The method of claim 1 wherein the auction web page is written in a scripting
2 language.

1 12. The method of claim 1 wherein the computer network is the Internet.

1 13. The method of claim 1 wherein the auction-related data includes one or more
2 of the following types of data:
3 product identification data;
4 product description data;
5 bid data; and
6 auction date and time data.

1 14. The method of claim 1 further comprising the steps of:
2 generating and maintaining a plurality of other web pages on the first computer system
3 so that the auction web page and the plurality of other web pages have a consistent look and
4 feel; and
5 sending, via the computer network, at least one of the plurality of other web pages
6 from the first computer system to the third computer system.

1 15. A method of managing an auction over a computer network (306), the method
2 comprising the steps of:
3 generating and maintaining a database of auction-related data on a first computer
4 system (352);
5 sending, via the computer network, auction-related data to a second computer system
6 (308) by a streaming data transfer connection; and
7 displaying the auction-related data on a display device (310) included in the second
8 computer system.

1 16. The method of claim 15 further comprising the steps of:
2 generating and maintaining an auction web page on the first computer system, where
3 the auction web page directs the incorporation of the streaming auction-related data from the
4 first computer system;
5 sending, via the computer network, the auction web page from the first computer
6 system to the second computer system;
7 sending, via the computer network, auction-related data from the database from the
8 first computer system to the second computer system; and
9 combining the auction web page with the auction-related data as directed by the
10 auction web page to generate a display; and
11 displaying the display on a display device included in the second computer system.

1 17. The method of claim 15 further comprising the steps of:

2 generating and maintaining an auction web page on a third computer system, where the
3 auction web page directs the incorporation of the streaming auction-related data from the first
4 computer system;

5 sending, via the computer network, the auction web page from the third computer
6 system to the second computer system;

7 sending, via the computer network, auction-related data from the database from the
8 first computer system to the second computer system; and

9 combining the auction web page with the auction-related data as directed by the
10 auction web page to generate a display; and

11 displaying the display on a display device included in the second computer system.

1 18. The method of claim 17 wherein:

2 the first computer system is controlled by a centralized auction entity;

3 the second computer system is controlled by an auction customer; and

4 the third computer system is controlled by a seller of products being auctioned off.

1 19. A method of conducting an auction over a computer network (406) comprising
2 the steps of:

3 providing, by a seller, an item to auction off by computerized auction;

4 generating and maintaining a database of auction-related data, related to the
5 computerized auction of the item, on a centralized auction computer system (402) that is
6 controlled by a centralized auction entity;

7 generating and maintaining an auction web page (WP) that incorporates auction-
8 related data from the data base, where the identity of the seller is displayed (412) with
9 substantially more prominence than the identity of the centralized auction entity.

1 20. A method of managing an auction over a computer network (206), the method
2 comprising the steps of:

3 generating and maintaining a dynamic pricing sales web page (WP) on a first computer
4 system (204a), which is controlled by a first party;

5 generating and maintaining a database (236) of dynamic pricing data on a second
6 computer system (202), which is controlled by a second party;

7 sending, via the computer network, the dynamic pricing sales web page from the first
8 computer system to a third computer system (208) controlled by a customer;
9 sending, via the computer network, dynamic pricing data from the database from the
10 second computer system to the third computer system;
11 combining the dynamic pricing sales web page with the dynamic pricing data to
12 generate a display (212); and
13 displaying the display on a display device (210) included in the third computer system.

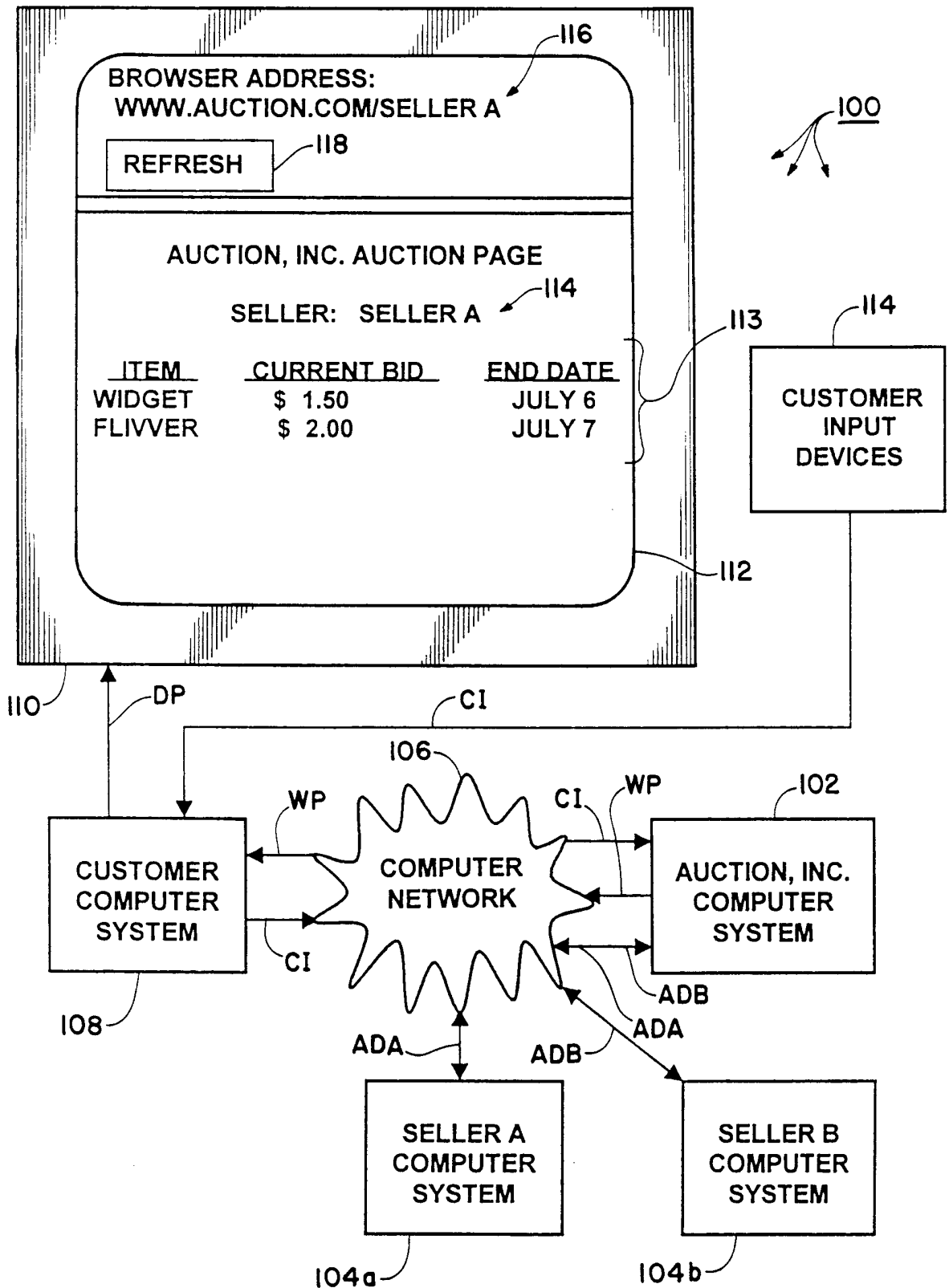


FIG. 1
(PRIOR ART)

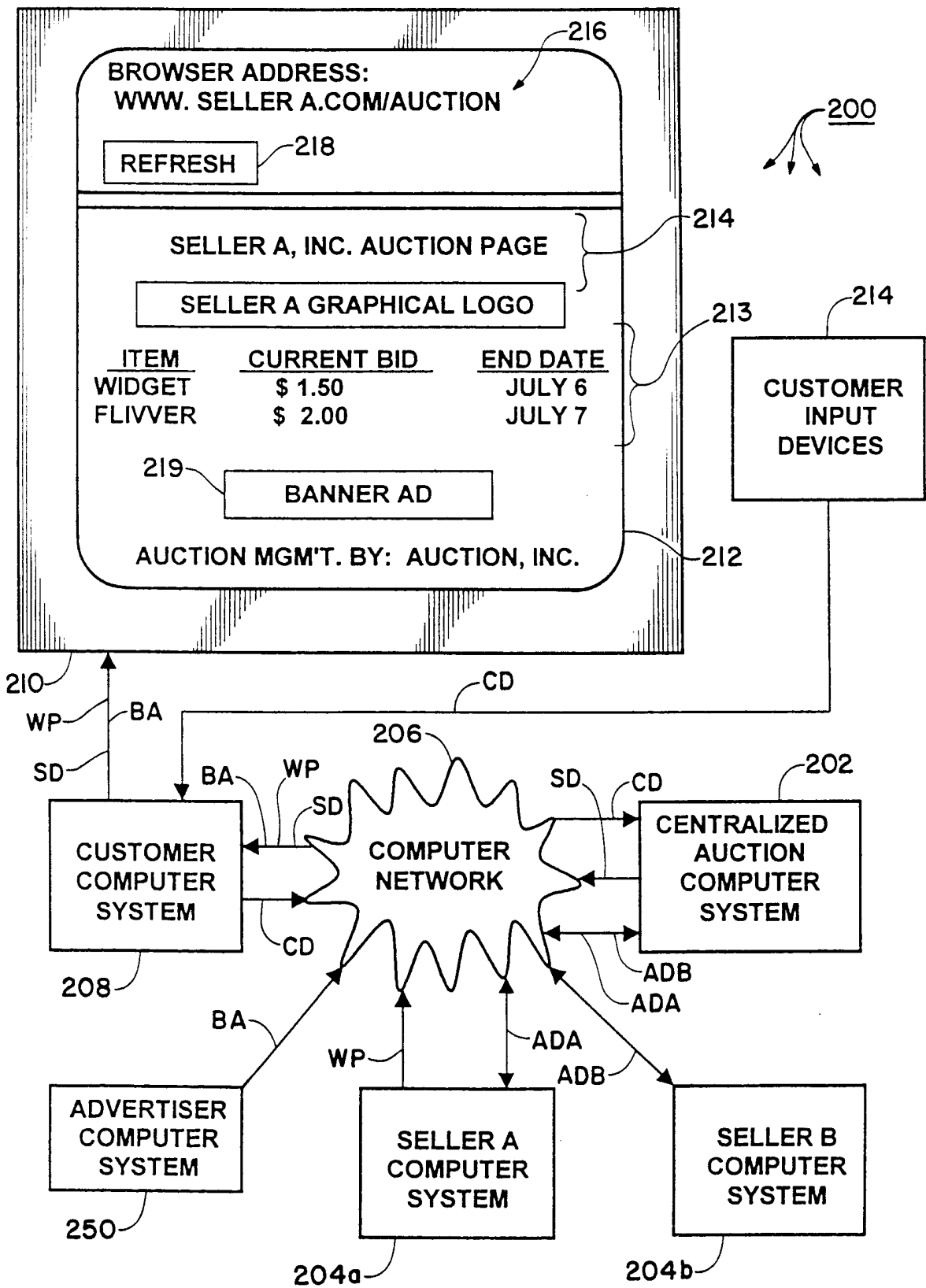


FIG. 2

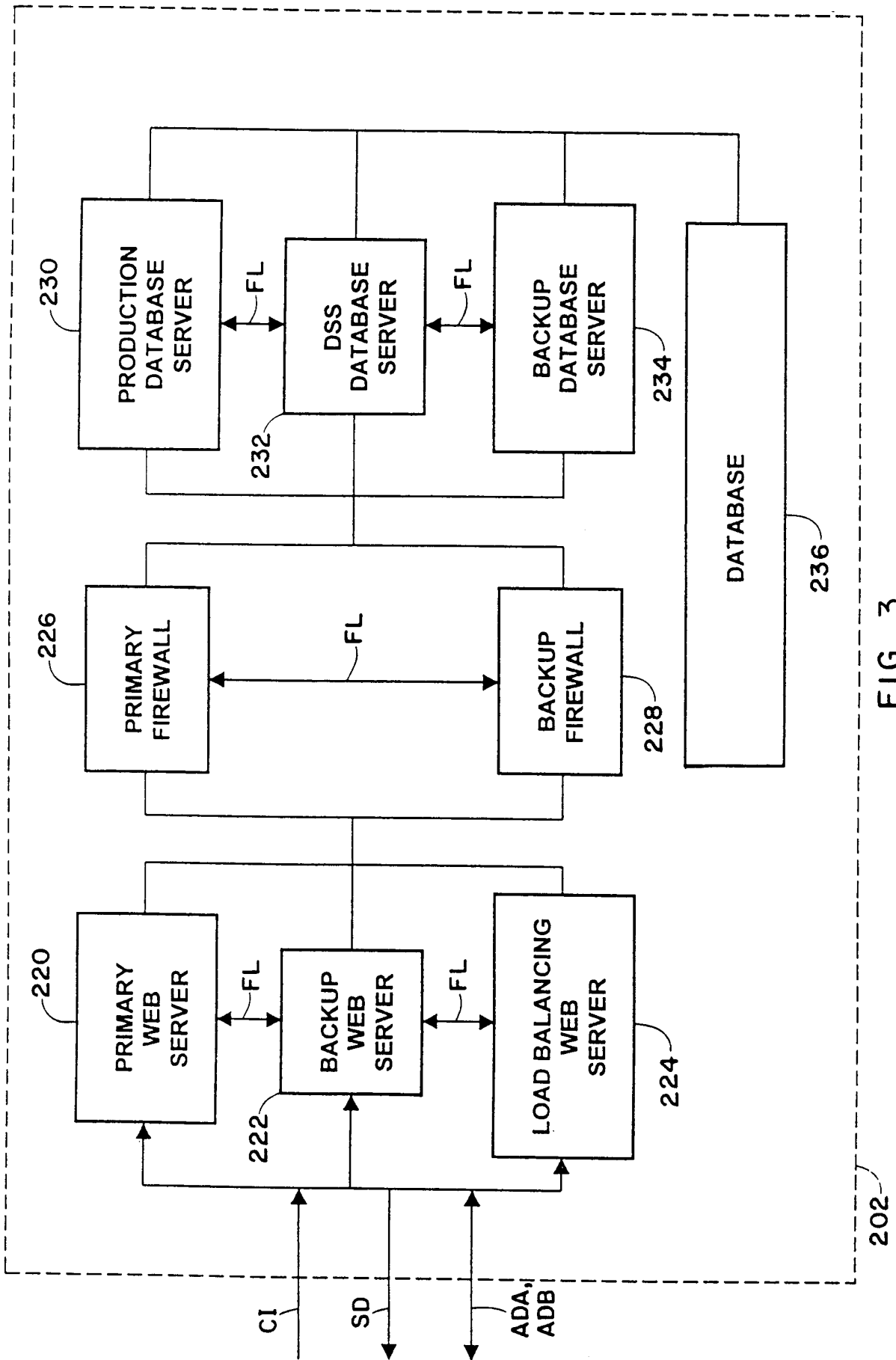


FIG. 3

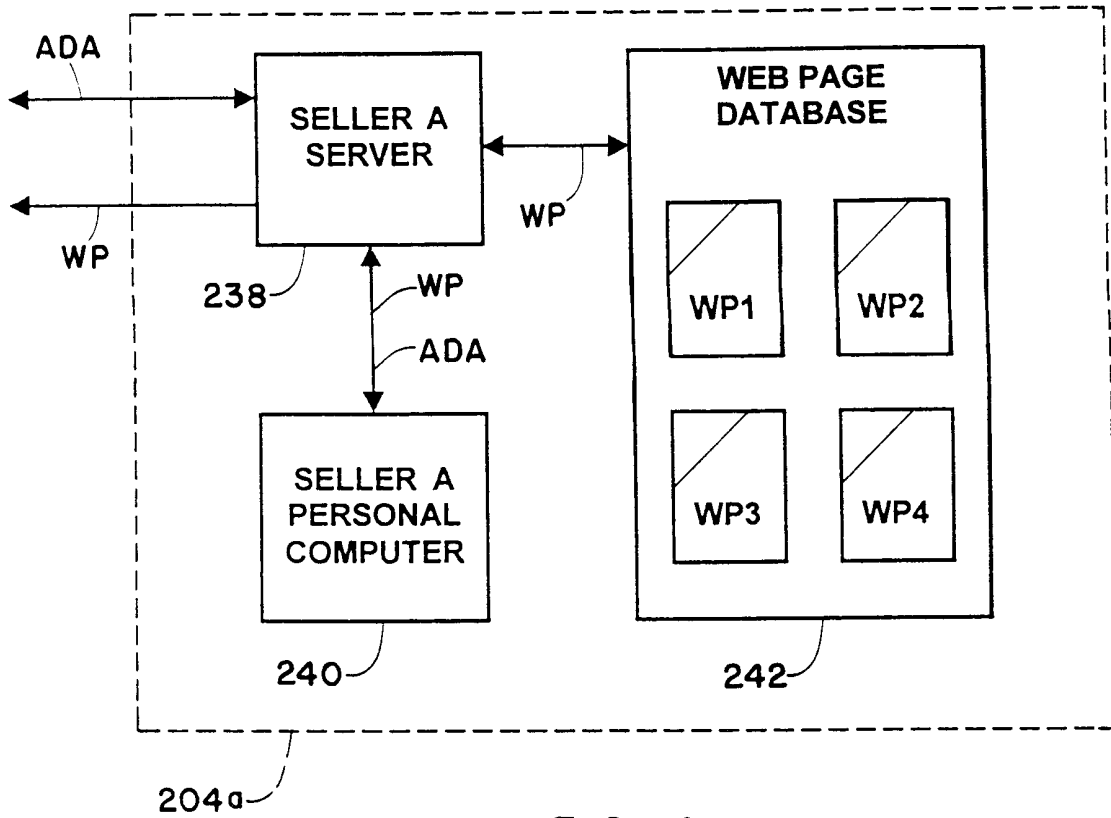


FIG. 4

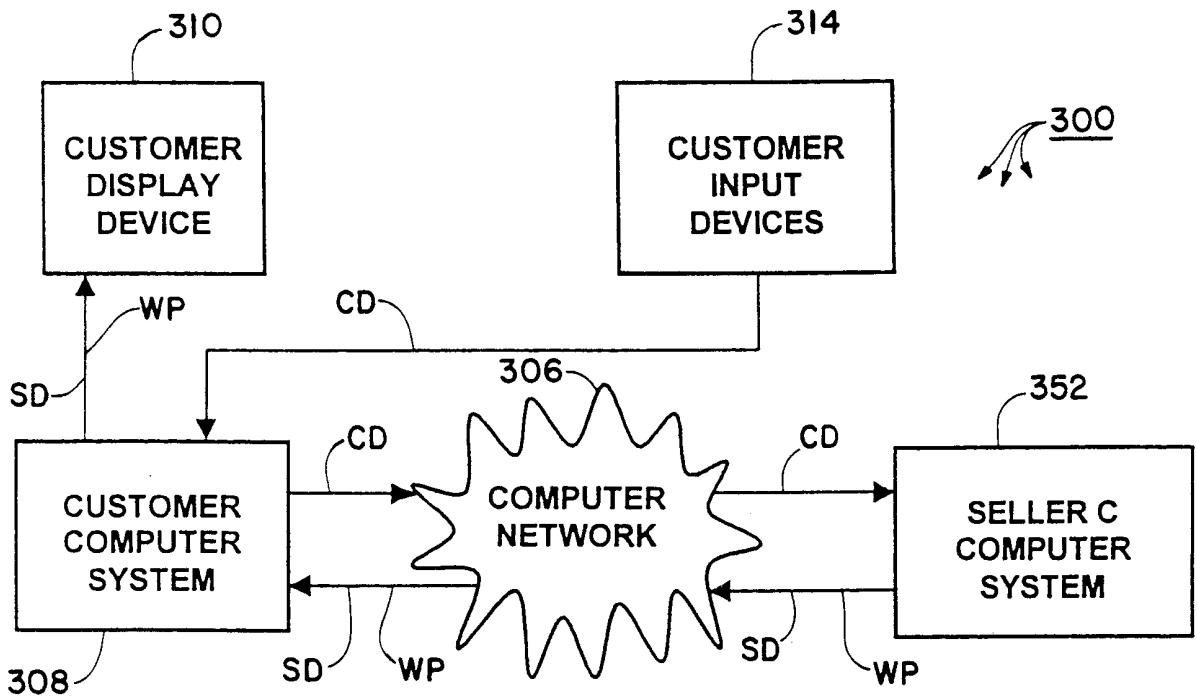


FIG. 6

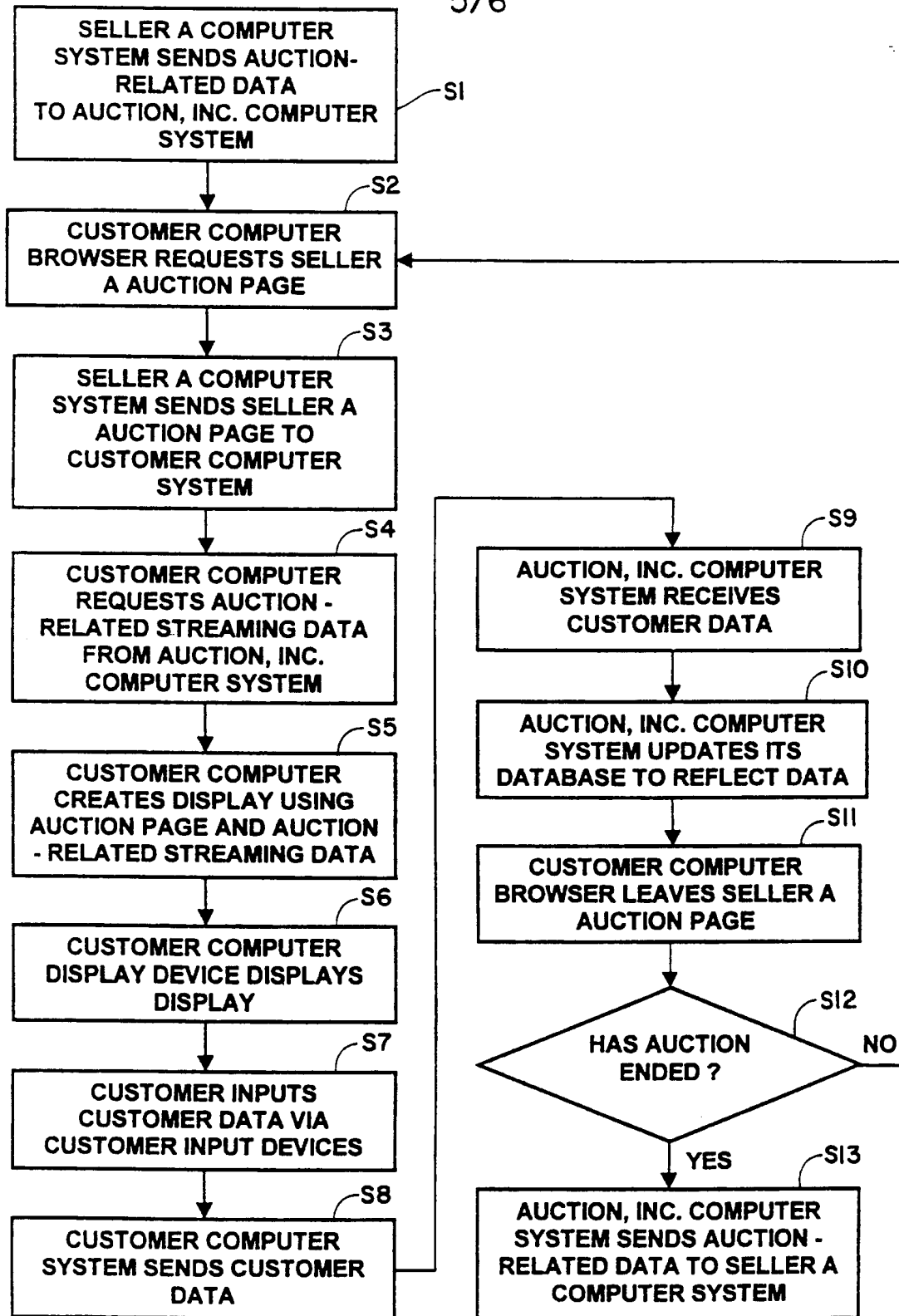


FIG. 5

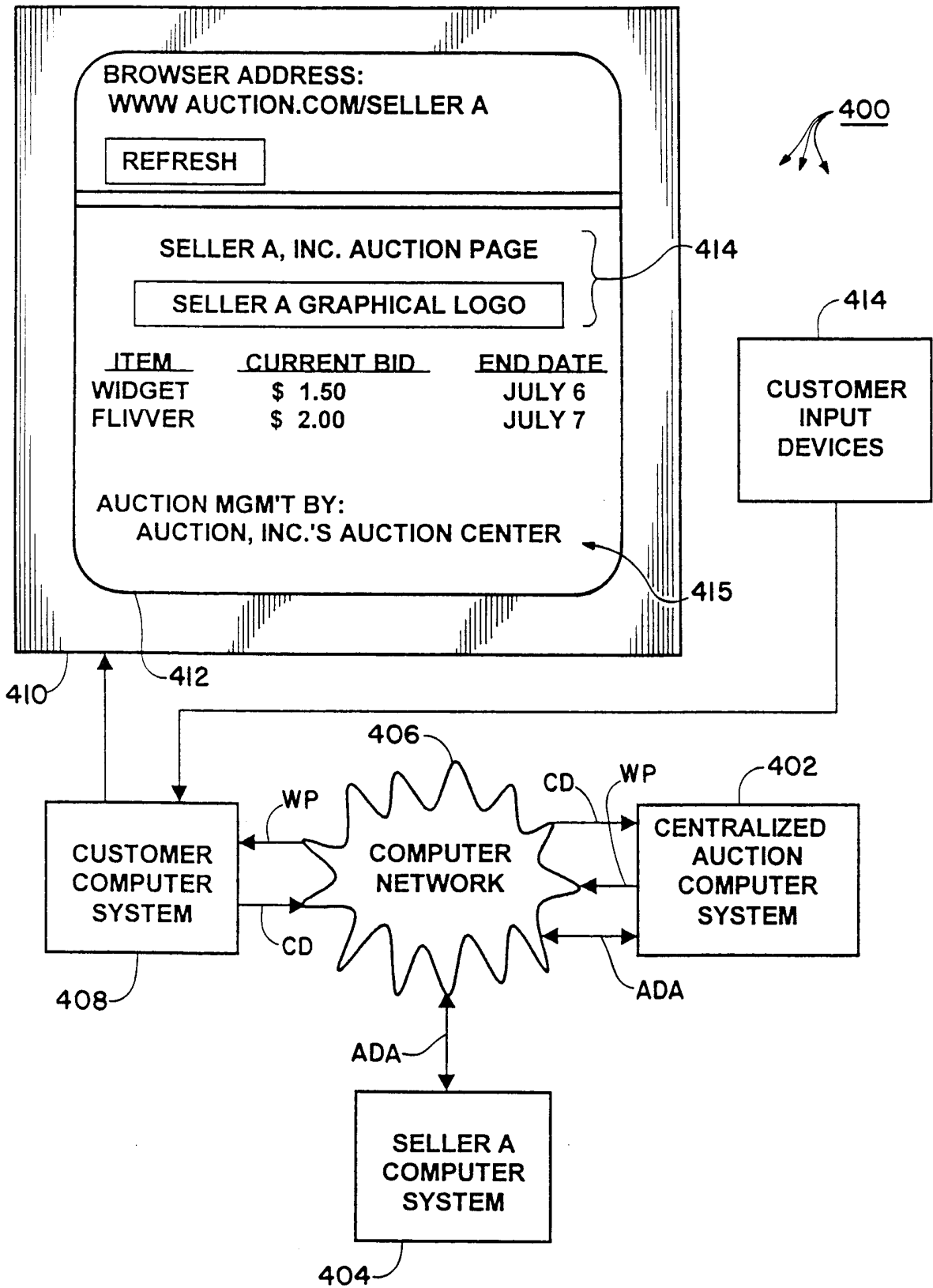


FIG. 7

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/18518

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60
US CL : 705/26; 37

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. : 705/26

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

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

Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,794,207 A (WALKER et al.) 11 August 1998, col. 8, lines 28-67; col. 9, lines 1-67; col. 10, lines 8-22; col. 14, lines 30-52; col. 19, lines 61-67; col. 20, lines 1-67	1-18
Y,P	US 6,058,379 A (ODOM et al.) 02 May 2000, Abstract; col. 2, lines 29-67; col. 3, lines 1-12; col. 4, lines 15-67; col. 6, lines 1-63; col. 7, lines 15-31; col. 8, lines 30-61; col. 9, lines 1-63; col. 7, lines 15-31; col. 8, lines 30-61; col. 9, lines 18-67; col. 10, lines 1-35.	1-20
Y	US 5,909,492 A (PAYNE et al.) 01 June 1999, Abstract; col. 2, lines 21-44; col. 4, lines 35-67; col. 5, lines 1-47; col. 7, lines 55-67; col. 8, lines 1-31; col. 9, lines 51-63.	1-20

 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)	*G* 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

22 SEPTEMBER 2000

Date of mailing of the international search report

14 NOV 2000

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/18518

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,835,896 A (FISHER et al.) 10 November 1998, Abstract; col. 4, lines 32-67; col. 5, lines 1-6; col. 6, lines 3-30; col. 8, lines 5-67; col. 9, lines 48-61.	1-20
Y,P	US 6,058,417 A (HESS et al.) 02 May 2000, Abstract; col. 2, lines 10-27; col. 3, lines 3-12; col. 9, lines 9-64; col. 10, lines 8-35.	1-20
X	US 5,799,284 A (BOURQUIN) 25 August 1998, Abstract	1-20

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/18518

B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

DIALOG, STN

terms searched: auction, buyer, seller, customer, consumer, website, web, transmit, transfer, computer, processor, display, information, user, client, retailer, merchandizer, database, central processor, central computer, controller, central PC