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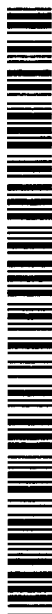


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WO 01/14949 A2

(54) Title: SYSTEM FOR CONDUCTING ELECTRONIC COMMERCE TRANSACTIONS

(57) Abstract: A method for facilitating electronic commerce and providing online credit comprising the following steps: providing access to an end user who desires credit to make a transaction; checking the credit rating of the end user and providing a credit for a pre-determined amount if the end user qualifies for credit based upon certain criteria; providing said individual with credit to purchase a product via a worldwide computer network from a participating vendor; and billing said end user for the amount of the purchase.

SYSTEM FOR CONDUCTING ELECTRONIC COMMERCE TRANSACTIONS

Field of the Invention

The present invention is directed to a system for generating and recording electronic commerce transactions. In particular, the present invention is specifically directed to online systems for facilitating electronic commerce and most particularly the facilitating of instant credit for commercial transactions and most particularly electronic commerce transactions.

Background of the Invention

The Internet or World Wide Web is one of the most critical technological developments of the 1990's. The Internet has provided vast economic opportunities for numerous businesses and industries to vastly expand the number and quality of their services. One of the earliest and fastest emerging areas of Internet activity has been in providing rapid, up-to-the-minute business information. To date, a number of patents have issued on Internet related systems, covering a wide array of business information and electronic commerce applications.

U.S. Patent No. 5,699,528 for example, discloses a bill delivery and payment system in which users access a server computer on a communications network to obtain billing information and to pay bills. Using a computer, the users access a website provided by the server to view the bill information and to instruct the server computer regarding the details of bill payment.

U.S. Patent No. 5,664,115 discloses a method and apparatus of automatically matching sellers of property with potential buyers through a communications network such as the Internet in which a host system communicates with sellers and potential buyers over telephone or dedicated data transmission lines. The central server obtains and stores a first set of records each corresponding to a property to be sold. A set of records can then be searched by a remote data terminal associated with the potential buyer. The results of the search are then provided to the potential buyer who then indicates specific property listings that the potential buyer may be interested in purchasing. The potential buyer provides identifying information which is then provided to the sellers of the property.

U.S. Patent No. 5,671,280 is directed to a system for electronic commercial payment having a customer trusted agent associated with a money module agent that establishes a secure session with the customer and the money module agent. Upon receiving a commercial payment request, the customer agent initiates a transfer of electronic money from the money module.

U.S. Patent No. 5,745,884 is directed to a system and method in which remote users may be billed, on a per connection basis, for universal data grade access to their home office servers. In this patent, a portable device is carried by a transient remote user within wireless range of an access point deployed, for example, at a hotel or airport lounge. A signaling system inside the portable device automatically initiates wireless contact with the access point which is itself connected to a destination server.

U.S. Patent No. 5,732,400 is directed to a system and method for enabling on-line transactional services among sellers and buyers having no previous relationship with each

other. The system includes a financial clearinghouse for receiving a request for goods or services from a buyer and making a real-time determination of a risk classification of the buyer using an on-line repository of credit information. The financial clearinghouse determines a risk-based discount fee as a function of the buyer's risk classification in order to establish a payment amount to the seller from the clearinghouse. If the transaction is authorized by the financial clearinghouse, the financial clearinghouse transmits the payment amount to the seller and transmits an invoice to the buyer for the purchase price of the transaction. The system can also couple a broker to the financial clearinghouse to provide an on-line order acceptance and processing capability between the buyers and sellers.

While there are a number of systems for facilitating e-commerce transaction, no prior art system facilitates the provision of instant credit. It is therefore an object of the present invention to provide a system, accessible via a computer network, for providing credit and electronic commerce via a worldwide computer network.

It is a further object of the present invention to provide a network-based system in which end users access the system via the Internet or World Wide Web and obtain credit for use in electronic transactions.

It is still a further object of the present invention to provide a network based system in which users can access and use the system to obtain credit for consumer or other transactions.

These and other objects of the present invention and features of the present invention will become apparent from the detailed description and from the following

summary detailed description and claims.

Summary of the Invention

In accordance with the present invention, a method for facilitating electronic commerce and providing online credit comprising the following steps: providing access to an end user who desires credit to make a transaction; checking the credit rating of the end user and providing a credit for a pre-determined amount if the end user qualifies for credit based upon certain criteria ;providing said individual with credit to purchase a product via a worldwide computer network from a participating vendor; and billing said end user for the amount of the purchase.

In a further embodiment, the invention is a method for facilitating electronic commerce and provision of online credit comprising the following steps providing access to a dedicated website to an end user who desires credit to make a transaction; checking the credit rating of the end user and providing a credit for a pre-determined amount if the end user qualifies for credit based upon certain criteria ; providing said individual with an amount of credit to purchase a product via a worldwide computer network from a participating vendor said amount being related to the credit worthiness of the end user; providing means for the end user to utilize said credit with a participating vendor; and billing said end user for the amount of the purchase.

In still a further embodiment, the invention is a method for facilitating electronic commerce and provision of online credit comprising the following steps: providing access to a dedicated website to an end user who desires credit to make a transaction; obtaining credit information from the end user; checking the credit rating of the end user and

providing a credit for a pre-determined amount if the end user qualifies for credit based upon predetermined criteria ; providing said end user with an amount of credit to purchase a product via a worldwide computer network from a participating vendor said amount being related to the credit worthiness of the end user; providing means for the end user to utilize said credit with a participating vendor; providing means for the vendor to determine and confirm that the end user has credit; and billing said end user for the amount of the purchase.

Detailed Description of the Figures

Figure 1 is block diagram of the present invention.

Figure 2 is a more detailed block diagram of the present invention.

Figure 3 is a block diagram of the administrative work station of the present invention.

Figure 3A is a block diagram of the database server and subsystem of the present invention.

Figure 4 is a registration form for an end user to access the system.

Figure 5 is an algorithmic flow diagram used to determine if the end user is to be provided credit.

Figure 6 is a confirming message informing the end user of the granting of credit.

Figure 7 is a user screen identifying participating vendors.

Figure 8 is a user screen for a vendor relating to forms of payment.

Figure 9 is an algorithmic representation of the credit transaction between the merchant and the administrator.

Figure 10 is a representation of an e-mail confirmation confirming transaction and detailing remaining available credit.

Detailed Description of the Preferred Embodiment

The present invention is directed to a system for facilitating the instantaneous granting of credit and the facilitating of e-commerce transactions over a network. Over the past fifteen (15) years, personal computers have become relatively powerful and inexpensive and have gained widespread use in a significant number of homes and businesses. With a modem, personal computers can communicate with other computers through communication networks and access many resources on the so-called "Information Super Highway." Companies such as America Online, CompuServe, and Prodigy, which traditionally provided so-called "content" over proprietary networks, have begun to provide access by personal computer users to an expansive international network of networks known as the Internet.

As is well known by those skilled in the art, the World Wide Web is a graphical sub-network of the Internet. With common "Web Browser" software such as Mosaic, NetScape Navigator, or Microsoft Explorer, end users may easily access Internet information and services on the World Wide Web. A web browser handles the functions of locating and targeting information on the Internet and displaying information provided by the Web Server. The World Wide Web utilizes technology called "Hyper-Text" to organize, search and present information on the Internet. Using a browser, the end user can select a word ("Hyper-Text word") from a view document and be linked to another document featuring information related to the word.

Referring to the attached Figures, and in the context of the above operational environment, the present invention is now more fully described. As shown in Figure 1, the present invention is broadly directed to a computer network for facilitating credit and electronic commerce transactions. The present invention is designed, in one embodiment, to be utilized on the World Wide Web or Internet, although the present invention is equally applicable to other network environments.

As shown, the invention initially comprises a central server 10 and a plurality of end user work stations 14. In one embodiment, the end users 14 may comprise end users who desire to utilize the system. A transport medium 15, in one embodiment using Internet Protocols (IP), interfaces the end users 14 to the central server 10. As will be discussed herein, central server 10 is in a preferred embodiment, a website associated with a financial institution. The system further incorporates merchants 17 who will transact business with end users 14 based upon the granting of credit.

The end user workstations 14 can comprise any device that connects to the system via the Internet or other IP transport methods and includes, but is not limited to, such devices as televisions, computers, hand-held electronic devices, wireless electronic devices, or any other device that uses IP's and uses a transport medium. Non-limiting examples of an acceptable transport medium 15 for use in the present invention includes any link such as an ATM link, FDDI link, satellite link, cable, twisted pair, fiber-optic, broadcast wireless network, the Internet, the World Wide Web, Local Area Network (LAN), Wide Area Network (WAN), or intranet environment such as an Ethernet link. In such alternative cases, the end user workstations 14 communicate with the central and local

servers 12, 14 using protocols appropriate for the network to which that client is attached. All such embodiments and equivalents thereof are intended to be within the scope of the present invention.

Thus, it can be seen from the preferred embodiment of Figure 1, that the system as a whole is comprised of a number of inter-connected end user devices 14 that communicate with the central server 10 and local server 12 through a transport medium 15 preferably using an appropriate protocol. In the simplest embodiment, end users 14 access documents, e-mail and calendaring from the control server 10. The local server 12 may handle billing or other local functions and will update the central server 10 with new or revised documents.

Referring to Figure 2, a detailed block diagram of a preferred embodiment of the present invention is shown. As shown, the central server 10 includes two primary servers, Web Server 20 and Database Server 22. The Database Server 22, in one embodiment, may utilize "SQL Server" database management software from Microsoft Corporation. The Database Server 22 couples to a Database Subsystem 30 to be described in greater detail below. The Web Server 20 includes a Web Subsystem 26 which connects to a Web Browser 28 situated in the end user stations 14. Internet Information Server 200 (IIS) by Microsoft Corporation is an exemplary Web Server 20 software package for use in the present invention. The Web Server's 20 operating system may comprise the Windows NT 4.0 Server. IIS includes a high performance web server, an application development environment, integrated full-text searching, multimedia streaming, and site management tools. IIS also includes support for HTTP byte-range browsers to begin receiving data from

any part of a file for enhanced performance. In a preferred embodiment, the Web Server 20 will preferably be configured with a Pentium Pro(P6) 200 Megahertz (MHZ) central processing unit (CPU), up to 256 MB of ECC RAM, a graphics adapter capable of displaying 1024x768 pixels with a depth of 8 bits, a 15 inch monitor, a PCI Fast/Wide SCSI-2 I/O adapter, one PCI 10base2 Ethernet adapter and one PCI 100baseT Ethernet adapter, a keyboard and a mouse.

The central server 10 also preferably includes an Administrator Workstation 24 that provides administrative capabilities for the entire system. The Administrator Workstation 24 permits administrators or other operators of the system to perform routine operations to effect the system. Such operations may include, but are not limited to adding end users, adding, deleting or editing records, printing reports, updating records, performing backups, and maintaining the programs that comprise the system. The Administrative Workstation 24 is able to communicate directly with the Web Server 20 and the Database Server 22. The Web Server 20 sends information as HTML (Hyper-Text Mark-up Language) through the Web Subsystem 26 to a Web Browser 28 software program based within the end user workstations 14 responsive to queries input by the end users 14. The Database Server 22 operates in concert with the Web Server 20 and maintains all the end users' account information, and other associated transaction data as well as all interactions with the Web Server 20.

The Web Subsystem 26 performs all interactions with the Web Browser 28 in the end user device 14, and serves as the end user interface to the system. The HTML, which is viewed by the end user as search results, is generated by the Web Subsystem 26 and

delivered to the end user device 14 upon demand in response to actions, namely queries in part, by the end users 14. One feature of the present invention is the provision of customized web browser frame pages. Each frame page can be set up to a particular end user 14 and may incorporate business information relating to the local server 12 or other entity.

While the present invention is described, in one embodiment, in the context of HTML format, it will be recognized by those with skill in the art that non-HTML page mark-up languages or evolved future versions of the HTML can be used in accordance with the present invention, thereby eliminating the requirement for end users 14 to purchase special custom software applications.

All of the systems described above preferably communicate via an Ethernet 100BaseT network and a Switching Hub. In addition, a second, isolated, network segment may exist between the Web Server 20 and the external communications hardware (Internet router), which keeps external traffic isolated from the internal network, as well as providing a dedicated connection between the Web Server 20 and the Internet for maximum throughput.

As noted above, Web Server 20 is the point of entry to the system. It determines the identify of the end user 14 and makes appropriate decisions in response to queries from the end user 14. The Web Server 20 sends HTML credit information and communication to the end user workstation 14, validates end user passwords, sends logging and transaction information to the Database Server 22, and performs logical operations, thereby also behaving as a transactional server.

The operators and managers of the system may selectively create, delete, and update relevant information by utilizing the Administration Subsystem 32 housed in Administration Workstation 24. Billing Subsystem 36 is responsible for system billing, and may reside at the local server 12 or Web Server 20 of the central server 10.

The Database Subsystem 30 resides in the Database Server 22. Communication and Billing Subsystems 39,36, respectively, execute essential services for other parts of the system, and have well defined application program interfaces (API). The system is preferably protected for the Internet by a firewall 37.

Referring now to Figure 3, the Administration Subsystem 32 is shown in greater detail. Administration Subsystem 32 provides an interface for operators and managers of the system to modify at the Database Subsystem 30, print reports, view system data, and log user comments and complaints. The Administration Subsystem 32 provides a collection 35 of access forms, queries, reports, and modules to implement the administration interface. The Administration Subsystem 32 interacts with Communications 39, Database 30, and Billing 36 Subsystems.

Referring to Figure 3A, the Database Subsystem 30 stores all information pertaining to client accounts, administrator accounts, as well as the stored documents, e-mail and calendars 45. All interactions with the Database Subsystem 30 are performed through a Database API 40, which defines the interface to the library of stored credit data files. These are used to implement high-level database functions and to shield the details of the database implementation from the other subsystems. The Database Subsystem 30 is preferably implemented using the Database Server 22, and will be backed up on a regular

basis 47.

Communications Subsystem 39 interfaces to a Comm API 44 and functions to transmit credit data and events to end users 14. The Billing Subsystem 36 is used for billing and communicates through the Billing API 42 to the Administration Subsystem 32. As noted above, billing can be accommodated in the present invention at the local server 12.

Database Server 22 implements the Database Subsystem 30 of the present invention. Through the Database Subsystem 30, the Database Server 22 logs client setup and account creation information, stores credit event information and files, maintains account balances, produces and prints reports, hosts backup operations, and performs statistical calculations for the entire system. The Database Server 22 preferably uses an operating system such as the Windows NT 4.0 operating system and the Windows NT SQL Server 6.5. The Database Server 22 is preferably a dual processor computer and includes a processor such as the Pentium Pro microprocessor, and is preferably optimized specifically for the Windows NT threading model. Each connection to the Database Subsystem 22 may be handled by a separate thread within the Database Server 22. Database Server 22 may require additional processors in high volume environments. The dual processor machine of the preferred embodiment is sufficient for the type and number of transactions that it will be performing. It is to be noted that the Database Server 22 can be "striped" to two or more machines to distribute the server load.

As noted above, in the preferred embodiment, at least one Administration Workstation 24 is provided for administering the system. It is to be appreciated that

additional operator workstations 24 may be added with extra computer systems, installing the administration software and connecting them to the LAN.

The operation of the present invention is now more fully described with reference to Figures 4-11. The present invention is specifically directed to a system and method for providing e-commerce transactions and most particularly, the provision of credit for e-commerce transactions. As shown in Figure 4, the present invention operates initially by having a prospective customer sign on to the system, for example, a website associated with a financial institution such as USABancshares, Inc., assignee of the present invention. The individual provides basic information such as his name, address and social security number, day phone and e-mail address.

Referring to Figure 5, once the potential end user puts in his personal information, the administration system will make an evaluation of the credit risk presented by the end user based on a number of factors including, for example, the financial condition of the user, his age, consumer credit report and bank references. Alternatively, a credit report obtained from a credit reporting agency such as Dunn & Bradstreet, TRW and Equifax can be utilized. Thus, each end user which registers may be provided an individual risk classification based on that buyer's particular credit information.

In one embodiment, every end user, except with a bankruptcy, will be provided with at least \$25.00 of credit as long as they have a name, address, social security number. Buyers could, however, be provided with up to \$250.00 worth of credit, for example, depending upon their risk classification, as determined by a credit report. As shown in Figure 6, end user will be notified when he is granted credit and be provided with a user

ID number and PIN number.

Once the end user is provided with credit, he will be provided with access to a webpage, as shown in Figure 7, which will facilitate on-line purchases. The administrator, which may be a bank, will provide credit for purchases which then can be used with participating merchants. The individual user will utilize the credits to buy products. For example, the user may purchase CD's, videos, concert tickets, and tickets to sporting events such as the Philadelphia Phillies.

In this example, we are assuming that our prospective end user, John Doe, is going to purchase a CD from CDNOW.com, an on-line retailer of compact disks. As shown in Figures 8 and 8A, the end user desires to purchase the Star Wars "Phantom Menace" soundtrack and utilize the \$50.00 of USABancshares.com provided. As shown in Figure 8, CDNOW, in addition to other payment methods, has provide end users with the availability to use the USABANC.com credit in accordance with the present invention.

After this box is checked, as shown in Figure 8A, the end user is hyperlinked to a second page where he provides his user number and pin number. Referring to Figure 9, the merchant then seeks authorization by transmitting the requested transaction, along with the user's user number and PIN number. The administrator 24 determines the amount of available credit. If the amount of available credit for the transaction is not available, the transaction is declined. If it is, the transaction is approved and CDNOW.com can complete the transaction. In one embodiment, CDNOW is paid directly by the financial institution which then bills the end user. Referring to Figure 10, the end user is then provided with an e-mail confirmation of the transaction.

The present invention thus provides a system for facilitating the granting of online credit and the facilitating of electronic commerce with participating vendors. The true nature and scope of the present invention should be determined with reference to the claims attached hereto

Claims

1. A method for facilitating electronic commerce and providing online credit comprising the following steps:

providing access to an end user who desires credit to make a transaction;

checking the credit rating of the end user and providing a credit for a pre-determined amount if the end user qualifies for credit based upon certain criteria ;

providing said individual with credit to purchase a product via a worldwide computer network from a participating vendor; and

billing said end user for the amount of the purchase.

2. A method for facilitating electronic commerce and provision of online credit comprising the following steps

providing access to a dedicated website to an end user who desires credit to make a transaction;

checking the credit rating of the end user and providing a credit for a pre-determined amount if the end user qualifies for credit based upon certain criteria ;

providing said individual with an amount of credit to purchase a product via a worldwide computer network from a participating vendor said amount being related to the credit worthiness of the end user;

providing means for the end user to utilize said credit with a participating vendor; and

billing said end user for the amount of the purchase.

3. A method for facilitating electronic commerce and provision of online credit comprising the following steps
 - providing access to a dedicated website to an end user who desires credit to make a transaction;
 - obtaining credit information from the end user;
 - checking the credit rating of the end user and providing a credit for a pre-determined amount if the end user qualifies for credit based upon predetermined criteria;
 - providing said end user with an amount of credit to purchase a product via a worldwide computer network from a participating vendor said amount being related to the credit worthiness of the end user;
 - providing means for the end user to utilize said credit with a participating vendor;
 - providing means for the vendor to determine and confirm that the end user has credit;
 - billing said end user for the amount of the purchase.

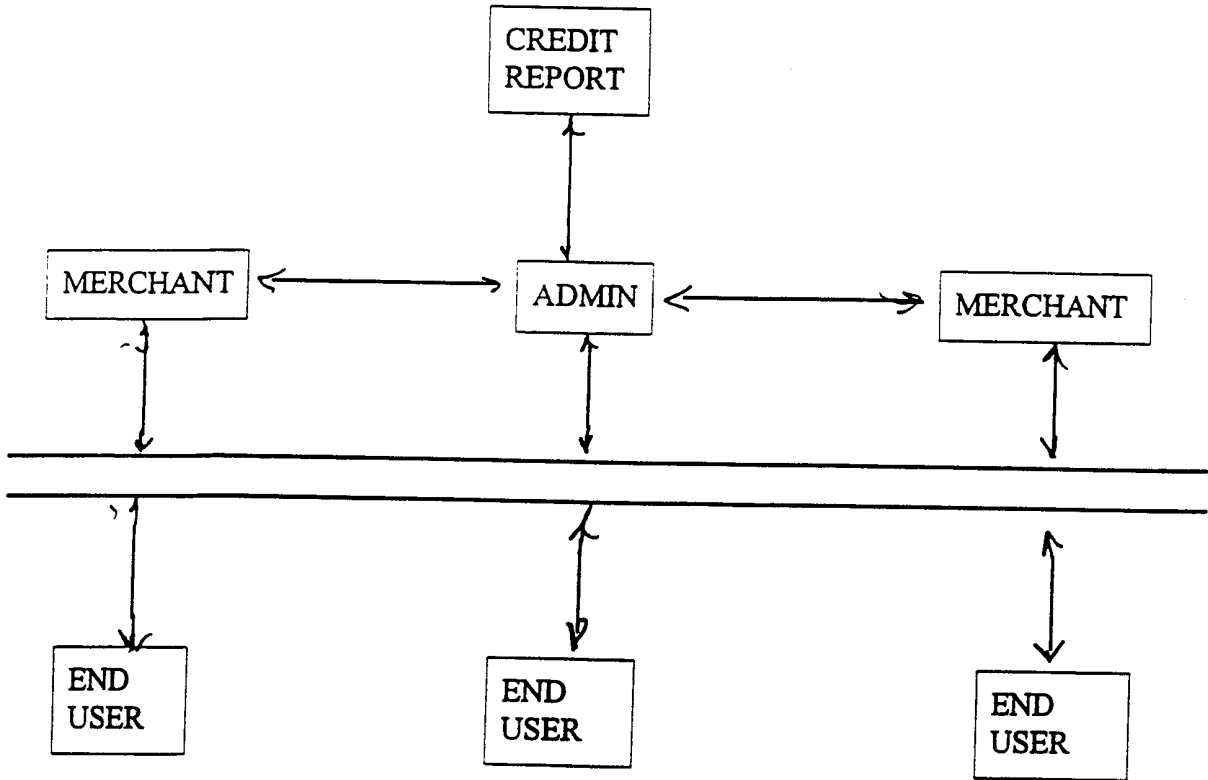


FIG 1

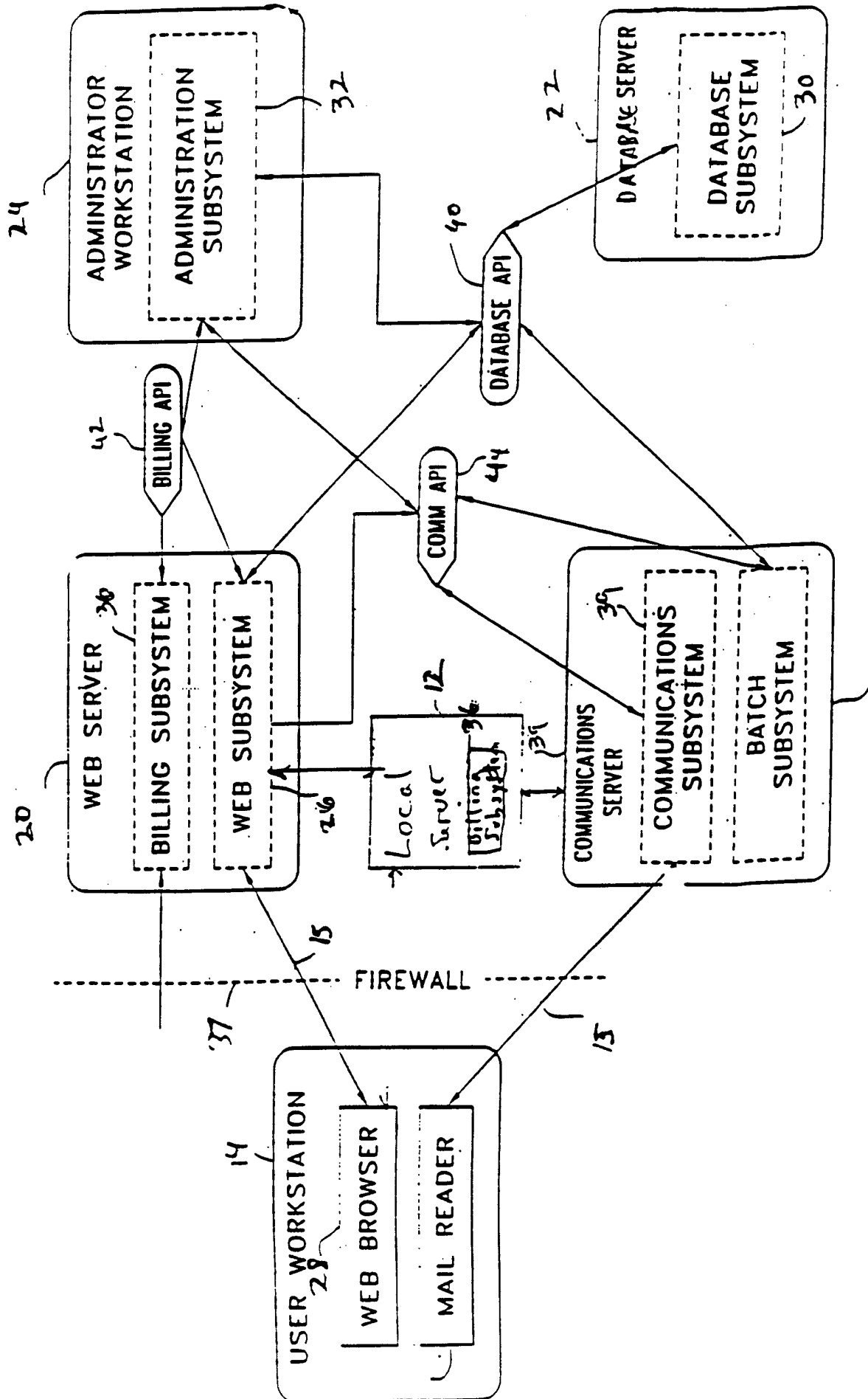
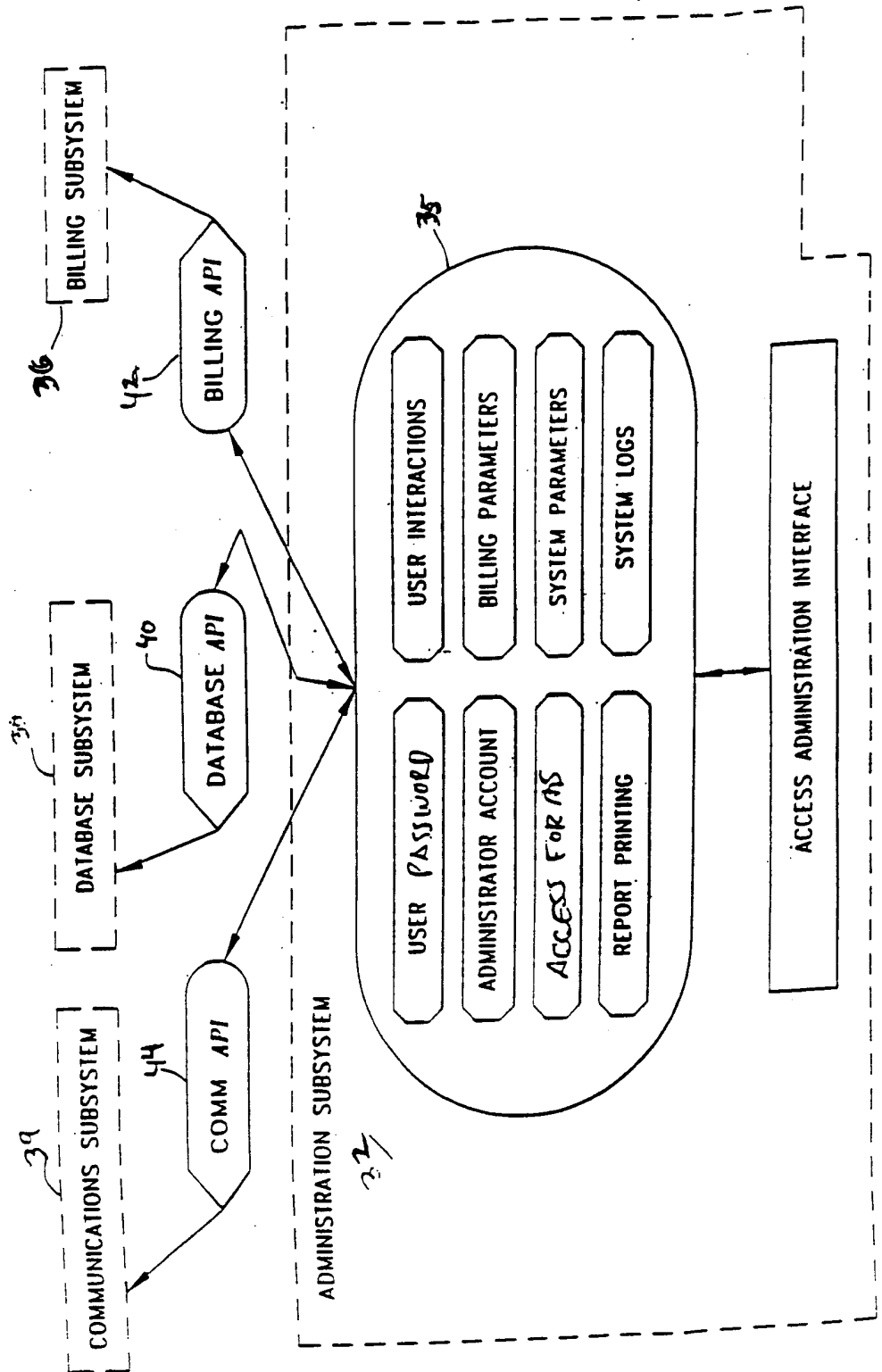


FIG 2

FIG 3



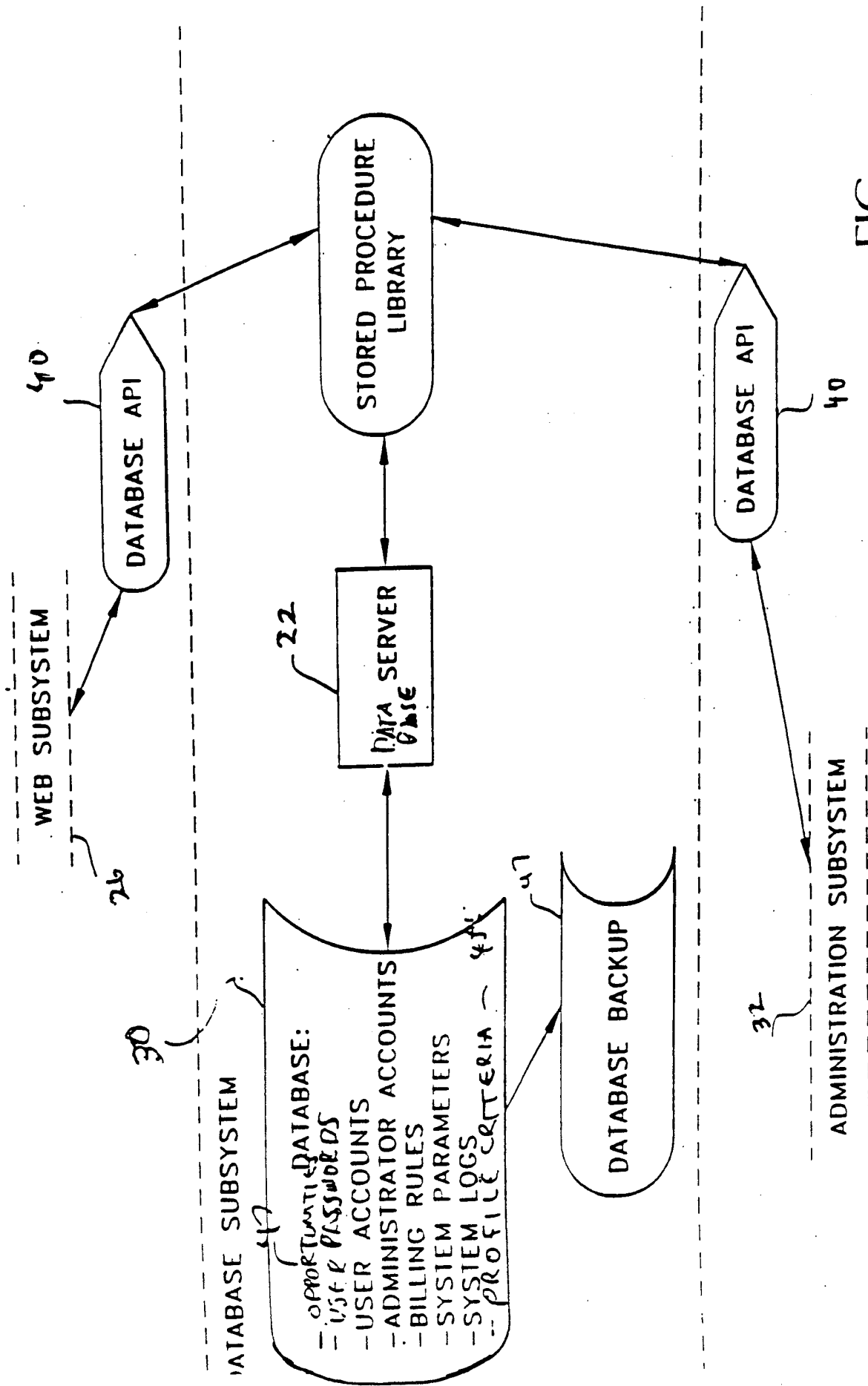


FIG.

USABANC.COM**REGISTRATION**

FIRST NAME	John
LAST NAME	Doe
ADDRESS	163 Main Street
CITY	Philadelphia
STATE	PA
ZIP	19102
COUNTRY	USA
DAY PHONE	(215) 568-6103
Email	JDOE@aol.com
Social Security	190-65-4104
Credit Card	AMEX 999810364121

ENTER

FIG 4

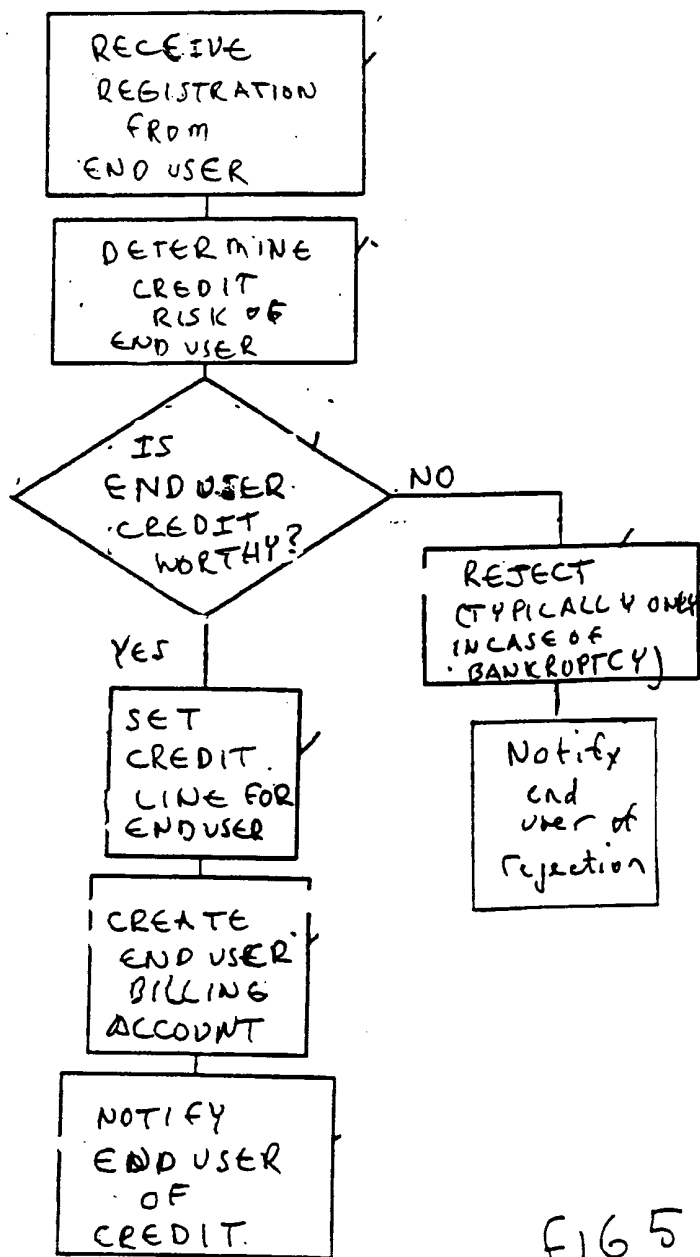


FIG 5

USABANC.COM

CONGRATULATIONS

YOU HAVE \$50.00 TO SPEND WITH A PARTICIPATING VENDOR

YOUR I.D. NUMBER IS

3639654

YOUR PIN NUMBER IS

X65CJX2

CONTINUE

F16
6

USABANC.COM

PARTICIPATING BUSINESSES

CD NOW

REGAL CINEMA

TICKETRON

- - -

PHILLIES

.

FIG
7

→ together with **MUSIC BOULEVARD** we've built a better music store! POWERED BY **Star** **CDNOW**

CDNOW Home News & Reviews Sales & Specials Gifts CDNOW Help

Your Music. Your Store. Artist Find It Search Classical



Prize-a-Day Giveaway
 Phillies CD Players + a mystery concert!

[Switch to Secure Mode](#)

Shopping Cart for John Doe

All of your account information can now be found in [My CDnow](#).
 (Need to [access another account](#)?)

Cart Contents

Ready to continue shopping? Go back to the [CDnow home page](#).

To change item quantities or move items to your Wish List, [click here](#).

[Click here](#) for an explanation of our inventory information.

CDNOW	list	qty	price	price description
1	\$ 13.28 \$ 18.97	1	Star Wars (Soundtrack) : Phantom Menace	CD In stock Shipping Ctr A

Shipping Address

Use your [Address Book](#) to change your primary address or to edit, delete or create another address.

Shipping To: JOHN DOE
 163 MAIN STREET
 PHILADELPHIA, PA 19102

FIG
8

Payment Method

[About credit card safety](#)

Enter a New Credit Card.

CDnow prefers Visa. We also accept American Express, Mastercard, Discover, JCB, and Diner's Club International.



Credit Card Number

Expiration date (MM/YY)

Save this credit card information for future purchases.

Other Payment Methods

Fax/Mail/Phone/PGP your credit card number.

Use Check or Money Order

USABANC.COM CREDIT

Place Order

Please read [important information](#) about your order.

\$13.28 Subtotal (1 item)
 2.99 Shipping To 163 MAIN STREET ...
 1.14 Tax
 \$17.41 Total

When this order is shipped, you will earn an additional 266 Fast Forward points. You earn 10 points for each dollar in your subtotal. Since points are based on the regular CDnow price, your point value may be greater due to store sale items or bonus point promotions.

After you have reviewed your order information, please click the Place Order button.



ENTER I.D.

3639654

ENTER PIN #

X65CJX2

ENTER

FIG. 8A

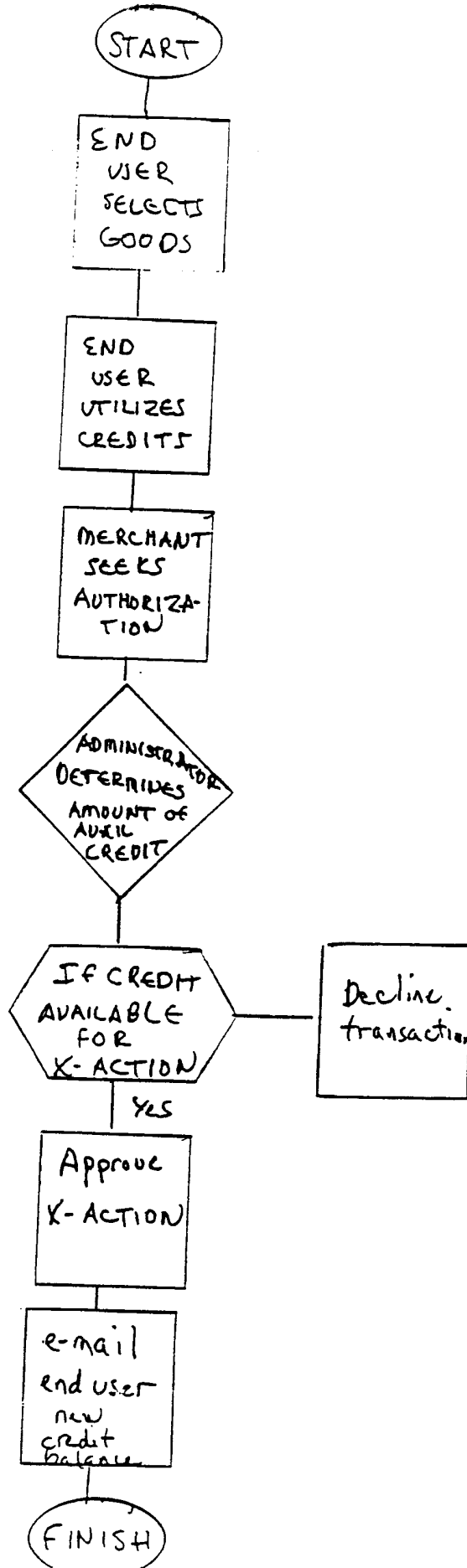


FIG
9

E-mail Confirmation

TO: JDOE@aol.com (3639654)
FR: ADMIN@usabanc.com

THIS IS TO CONFIRM YOUR PURCHASE FROM
CDNOW TALLING \$17.41. YOU HAVE \$32.59 IN
CREDIT REMAINING

FIG 10