METHOD, SYSTEM AND APPARATUS FOR ELECTRONIC FACE-TO-FACE BUSINESS AND RETAIL BROKERAGE

Abstract: Methods, systems and apparatus allowing anyone, including wholly non computer literate shoppers, to take advantage of the global shopping and price competitiveness offered by the Internet. The shopper approaches a videoconferencing unit and verbally interacts with a remotely located broker that appears on the unit’s monitor. The shopper’s video image may also appear on the broker’s monitor, but a privacy shutter may be engaged to render the shopper’s face unrecognizable. The broker operates from a broker control unit fitted with one or more video monitors and data displays to interact with several shoppers. In a face-to-face dialog, the shopper simply and verbally expresses an interest to purchase a product or a service. The broker then proposes to show the shopper a multimedia advertisement relating to the product or service and to search all available online sources for the most cost competitive price therefor. The broker, being very conversant and agile with the Internet and computer technology, formulates expertly crafted online searches and connects relevant multimedia streams to the shopper’s videoconferencing unit. While the shopper watches the advertising, the broker may formulate electronic queries regarding price and availability to the various online sources for the products or services and may cause the results to be displayed on the shopper’s monitor or may announce the best price by voice. The shopper may then confirm his or her intent to purchase the product or service and proceed with payment via credit card or other payment instrument.
METHOD, SYSTEM AND APPARATUS FOR ELECTRONIC FACE-TO-FACE BUSINESS AND RETAIL BROKERAGE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention generally pertains to the field of electronic commerce and a merging of technology and personal service.

2. Description of the Related Art

Despite its much-heralded and undeniable success, the loosely coupled network of computers commonly known as the Internet remains inaccessible to most of the world’s population, whether residing in highly developed or developing countries. Even in the United States and Europe, the majority of the population has never purchased anything over the Internet, researched a question over the World Wide Web or sent an email. The reasons this are many: the equipment needed to access the Internet is often costly, cumbersome, difficult to install, operate and maintain. The advent of free or inexpensive personal computers has not significantly changed this state of affairs. The Internet, therefore, is not a meaningful factor in most people’s lives, as most people have no experience therewith and no access thereto. Thus, the chasm between the “wired” few and “unwired” masses continues widen. To address this disparity, it is believed necessary to provide something other than merely more sophisticated software and more powerful and reliable hardware.

What are needed are means of bringing the benefits of the Internet to those having little or no technical knowledge and little or no desire to learn the skills
necessary to install, operate and maintain personal computers or other so-called "network appliances". However, even in those cases wherein the equipment used to access the Internet is simple and intuitive to use, navigating the Internet (using a World Wide Web browser or some other graphical user interface, for example) can be a time consuming, slow and often confusing and frustrating experience, even for experienced and technically savvy people. In the context of online shopping, for example, the consumer may care more of about price, availability and the payment options available for the item or services sought than the attractiveness of the merchant's storefront or World Wide Web home page. For most shoppers, whether visiting brick and mortar or online stores, the determinant factor is believed to be the price of the item or service. It is believed that such shoppers, when given a viable alternative, will gladly forego traveling to malls and navigating through a morass of hyper linked pages on the World Wide Web to find the best price. The present invention provides such an alternative.

**SUMMARY OF THE INVENTION**

An object of the present invention, therefore, is to bring the benefits of the Internet to those to whom such benefits have thus far been unavailable. It is another object of the present invention to simplify and personalize the Internet to empower all who would benefit from use thereof and access thereto. It is a still further object of the present invention to facilitate electronic commerce between shoppers and merchants by providing the former with a comfortable, natural and non-threatening environment in which to make purchasing decisions.
Accordingly, the present invention includes methods, systems and apparatus allowing shoppers, including non computer literate shoppers, to take advantage of the global shopping opportunities and the price competitiveness offered by the Internet, including online auctions and online warehouses or stores. According to the present invention, the shopper enters a small private and comfortable booth or approaches an open setting fitted with individual videoconference units. The shopper verbally (and conversationally) interacts with a remotely located live human (or virtual) broker that appears on the monitor in the booth or in the setting. The shopper’s video image may also appear on the broker’s monitor, but the shopper has the ability to engage a privacy shutter that will then blur, obscure or pixilate the image as seen by the broker such that his or her face is not readily recognizable. The broker operates from a broker control unit fitted with one or more video monitors and data displays in order to interact with several shoppers, view selected products multimedia advertisements, and analyze information returned from queries made to various online stores, online warehouses, online auctions and online service providers. A blue screen may be fitted behind the broker such that the background that is seen by the shopper can be made to change electronically. In a face-to-face natural dialog, the shopper simply speaks to the broker and expresses his or her interest to purchase a product or a service. The broker then proposes products or services with which he or she may already be familiar and the price associated with such products or services. Alternatively, the broker may propose to show the shopper a multimedia advertisement relating to the product or service of interest, or similar products or services, and to search for the most cost competitive price. The broker, being very conversant and agile with Internet and computer
technology, expertly formulates electronic searches to the relevant online suppliers of products or services for multimedia information or advertisements, and connects the multimedia stream (or video, audio or text-based stream) to the shopper’s monitor in the shopper’s booth. The broker’s image may be shown as a video insert on the shopper’s screen during the advertising such that the shopper feels in permanent personal contact with the broker. While the shopper watches the advertising, the broker places electronic queries on price and availability to the various online sources for the products or services and presents the results of the queries as data inserts on the shopper’s monitor. Alternatively, the broker may simply announce the best price and the availability of the item and/or service by voice. The shopper may then confirm his or her intent to purchase the product or service and proceed with payment via credit card or any other payment instrument, including cash. In order to obtain high quality video and sound, the brokers and booths are preferably equipped with advanced multimedia equipment and broadband (high bandwidth) Internet access. The present invention provides benefits not only to technically unsophisticated persons, but also to all technically proficient users who would benefit from the ease of use, speed and comfort afforded by the personal human interaction disclosed herein. In effect, the present invention may fairly be characterized as humanizing the Internet in general and electronic commerce in particular.

According to one embodiment thereof, the present invention is a system, comprising at least one first videoconferencing unit accessible to a shopper; at least one broker control unit, the broker control unit including a second videoconferencing unit adapted to be aimed at a broker, the first and second videoconferencing units being
coupled to a network to enable the broker to videoconference with the shopper in real
time, and a plurality of data streams including information on goods and services offered
for sale by respective online electronic commerce vendors, each of the plurality of data
streams being selectively accessible over the network by the broker and transmittable to
the shopper for display on the first videoconferencing unit in response to a real time
face-to-face interaction between the shopper and the broker via the first and second
videoconferencing units.

The first videoconferencing unit may include a plurality of videoconferencing
monitors. The broker control unit may be coupled to the network (including the
Internet, for example) via a broadband communication link. The broker may be human
or may be a software-driven virtual broker. Each of the first videoconferencing unit
may include a privacy shutter to blur, obscure and/or pixilate an image of the shopper to
render his or her face unrecognizable. The first and/or second videoconferencing unit(s)
may include a monitor adapted to display an image of the broker, the shopper and/or the
data stream, in a split-screen or a windowed configuration, for example. The monitors
of the first and second videoconferencing units may also be adapted to display sales
information obtained from online electronic commerce vendors.

A (credit or bank, for example) card reader may be located in or adjacent to the
first videoconferencing unit. One or both of the first and second videoconferencing
units may include a monitor, one or more speakers, a camera and one or more
microphones. The monitor(s) may be of the touch screen type, to enable the shopper to
select between displayed choices by touching appropriate areas of the monitor. The
camera of the first videoconferencing unit may be configured to track, zoom and/or
focus, automatically or under the control of the broker. The microphone(s) of the first videoconferencing unit(s) may be configured to track the location of the shopper to facilitate tracking of the shopper’s head by the camera and to enable automatic aiming of the camera toward a person accompanying the shopper as the accompanying person speaks. The first videoconferencing unit may include a broker call button to summon the broker when the shopper initially approaches the first videoconferencing unit. The first videoconferencing unit may also include a proximity detector, the proximity detector being adapted to automatically notify the broker control unit when the shopper approaches the first videoconferencing unit. The volume of sound generated by the first videoconferencing unit may be remotely controllable by the broker through the second videoconferencing unit.

The first videoconferencing unit may be incorporated within a wireless videophone having broadband access to the network. Alternatively, the first videoconferencing unit may be integrated within a combination of a television and a set top box linked to the network or a television linked to the network. The first videoconferencing unit(s) may be located in a car park, for example, and coupled to a videoconferencing post. In this case, the shopper, after parking his or her vehicle adjacent to the post, may interact with the broker via the videoconference unit coupled to the post. The first videoconferencing unit may be sufficiently compact to allow it to be taken inside the vehicle and attached to the steering wheel or a window of the vehicle, for example. The first videoconferencing unit may include a data cable coupled to the post or may include an integrated wireless transceiver that communicates with a broadband wireless network deployed throughout the car park or other locale. The first
videoconferencing unit(s) may include a printer adapted to print a printout of information relating to the goods or services featured in the data stream transmitted to the shopper.

The broker control unit may be adapted to cause the printer to print a machine readable code on the ticket, the machine readable code including information regarding goods or services featured in the data stream displayed on the first videoconferencing unit. The system may also include a cash register that may be attended by a cashier. In this case, the printer may print a receipt that is taken by the shopper to the cashier for payment of the goods or services coded on the receipt. The cash register may further comprise a code reader adapted to read the machine readable code printed on the receipt. The cash register may be coupled to the broker control unit and/or one or more payment servers that process payments for the respective online electronic commerce vendors.

The first videoconferencing unit(s) may be disposed in an enclosed booth, a freestanding stand in an open space, a cluster of semi-private booths, a pillar, a window of a shop, a flat surface, a waiting area and/or a room, for example. A blue screen may be disposed behind the broker such that the broker may electronically change the background that is seen by the shopper. The network may include a dedicated high data bandwidth communication channel between the broker control unit(s) and the first videoconferencing unit(s). One or more electronic commerce servers may be coupled to the network, the electronic commerce server(s) being configured to process requests for information and data streams from the broker control unit(s) and to send selected data streams back to the broker control unit(s) and the first videoconferencing unit(s). The data stream may include one or more of the following: a multimedia presentation, a
video presentation, an audio presentation, text-based data, a World Wide Web page and/or a ticker-type scrolling data composed by the broker and/or the vendors. The system may further include a database of shopper profiles coupled to the broker control unit(s), the database including shopper information collected from the shopper.

The first videoconferencing unit(s) may include biometric data collecting devices. The first videoconferencing unit(s) may be integrated into a flat surface, such as a wall or a window, for example. Alternatively, the first videoconferencing unit(s) may be integrated into a curved surface, such as a curved wall, a column or a pillar, for example. The display of the first videoconferencing unit(s) may be projected onto a selected surface and the hardware portion of the first videoconferencing unit(s) may be disposed remotely from the selected surface. For example, the selected surface may include a widow of a store, and the first videoconferencing unit(s) may be turned OFF when the store is open and turned ON when the store is closed. In this case, the first videoconferencing unit(s) may include a projector adapted to project the display thereof onto the selected flat surface. The selected surface may be reflective or semi-transparent. For example, the selected surface may include a reflective screen disposed in a private or a semi-private booth.

The present invention is also a method of enabling electronic commerce over a computer network, comprising the steps of providing at least one first videoconferencing unit accessible to a shopper; providing at least one broker control unit, the broker control unit including a second videoconferencing unit, the first and second videoconferencing units being coupled to a network to enable real time videoconferencing with the shopper in real time; interacting face-to-face in real time
with the shopper via the first and second videoconferencing units to determine a nature of goods and/or services offered for sale by online electronic commerce vendors of interest to the shopper; searching the network for at least one selected data stream related to the goods and/or services determined to be of interest to the shopper, and displaying the at least one selected data stream on the first videoconferencing unit.

The broker control unit may be controlled by a (human or software-driven virtual) broker and a real time video image of the broker may appear on the second videoconferencing unit at least during the interacting step. The broker control unit may include a plurality of second videoconferencing units, and the interacting and searching steps may be carried out with and for another shopper during the displaying step. The interacting step is preferably carried out using natural conversational speech. The broker control unit may be coupled to one or more payment servers adapted to process payments for the online electronic vendors and the method may further include a step of processing a payment request on behalf of the shopper for selected goods and/or services by forwarding shopper-provided payment information to the payment server(s). A step of engaging a privacy shutter adapted to blur, obscure and/or pixilate an image of the shopper to render his or her face unrecognizable may also be carried out. The displaying step may display an image of the broker controlling the broker control unit, the shopper and/or the data stream.

A step of displaying advertising on the first videoconferencing unit(s) may also be carried out. Steps of detecting the proximity of a shopper may be carried out, as well as a step of charging the advertising at a first rate when the shopper is not detected near the first videoconferencing unit. A step of charging the advertisement at a second rate
may also be carried out when the shopper is detected to be near the first videoconferencing unit. The second rate may be higher than the first rate, for example. The proximity of the shopper may be detected by a proximity detector integrated with the first videoconferencing unit and/or a camera of the first videoconferencing unit. A step of charging a third rate for the displayed advertising may be carried out when the shopper expresses an interest in purchasing the goods and/or services featured on the displayed advertising. When the shopper is detected to be near the first videoconferencing unit, one or more of the following steps may be carried out: the broker engages the shopper in conversation to determine which products and/or services are of interest to the shopper; displaying a video on the first videoconference unit; initiating a search for a best price and availability for products and/or services featured on the displayed advertisement. The search may be initiated by the broker or initiated automatically by the broker control unit.

The present invention, according to another aspect thereof, is a method of shopping over an electronic network, comprising the steps of conversing in real time with an image of a remotely located broker through respective videoconferencing units to inform the broker of a nature of desired goods and/or services; tasking the broker to carry out searches over the network for information related to the desired goods and/or services; viewing the information related to the desired goods and/or services found by the broker during the searching step; selecting goods and/or services for purchase based upon the viewed information, and instructing the broker to process a payment request for the selected goods and/or services.
The electronic network may include the Internet. The payment request processing step may include a step of swiping a debit, credit and/or charge card through a card reader. The payment request processing step may include the steps of showing a credit card to the broker through one of the respective videoconferencing units and capturing an image of the credit card to extract credit card information therefrom. The payment request processing step may include a step of verbally announcing to the broker an account number from which payment is to be made.

The present invention is also a method of scheduling services to be performed or an appointment with one of a plurality of participating service providers over a computer network, the method comprising the steps of: managing existing schedules and appointments for the plurality of participating service providers; conversing in real time with a remotely located broker through respective videoconferencing units coupled to the computer network to inform the broker of a request for services to be performed or a request for an appointment with a selected participating service provider; requesting that the broker schedule the requested services or appointment; accessing the managed existing schedules and appointments to determine whether the requested services or appointment fit within the existing schedules and appointments of the selected service provider; and scheduling the requested services or appointment with the selected service provider when the requested services or appointment fit within the existing schedules and appointments of the selected service provider.

The broker may propose alternate scheduling for the services to be performed or the appointment when the timing of the requested services or appointment conflicts with the selected service provider’s existing schedules and appointments. A notification of
the scheduled services or appointment may be generated to the person having carried out
the requesting step and/or to the selected service provider. The notification may be
electronic (such as email, for example) and/or include a printed ticket, for example. A
step of adding the scheduled services or appointment to the existing managed schedules
and appointments may also be carried out. The accessing step may be carried out by
accessing a database storing the existing schedules and appointments for the
participating service providers. A step of storing information related to goods offered
for sale by the participating service providers may also be carried out. The person
having requested the services or appointment may be informed of the goods offered for
sale with the selected participating service provider. The informing step may include
the steps of verbally telling the person of the goods and/or the step of causing a
multimedia presentation of the goods to be displayed on one of the respective
videoconferencing units.

The present invention may also be seen as a method of making the Internet
electronic commerce accessible to non-computer literate shoppers, comprising the steps
of providing a plurality of computer-literate brokers; providing each of the brokers with
a broker control unit coupled to the Internet, each broker control unit including a
videoconferencing unit coupled to the Internet; providing a plurality of shopper-
accessible videoconferencing units coupled to the Internet, wherein the computer-literate
brokers, based upon a conversational interaction with the shoppers, carry out Internet
searches to access, retrieve and display commercial messages over the Internet, and
processing, upon a request from the shoppers, a request for goods or services featured on
the displayed commercial messages.
According to still another aspect thereof, the present invention is a method of carrying out electronic commerce, comprising the steps of selecting one of a plurality of remotely-located brokers, an image of the selected broker thereafter appearing in real time on a monitor of a first videoconferencing equipment; initiating a natural and conversational exchange with the selected broker to inform the selected broker of goods and/or services of interest; receiving at least one of a multimedia, audio, video and text-based presentation relating to the goods and/or services of interest, as retrieved by the broker over a computer network, and displaying the received presentation on the monitor of the first videoconferencing equipment.

The selecting step may include a step of selecting one or more desired broker characteristics, including, for example, characteristics such as gender, ethnic origin, age, language, hair color, appearance, build, racial origin, special training and/or technical knowledge, for example. The selecting step may also include a step of previewing a presentation of the broker. An image of each of the plurality of brokers may be displayed as an icon and/or a thumbnail image and wherein the selecting step may include the step of selecting the icon or thumbnail image of the selected broker.

The foregoing and other features of the invention are described in detail below.

**BRIEF DESCRIPTION OF THE DRAWINGS**

For a further understanding of the objects and advantages of the present invention, reference should be made to the following detailed description, taken in conjunction with the accompanying figures, in which:
Fig. 1 is an illustration of the apparatus and method for face-to-face business and retail brokerage from the broker’s point of view, according to an embodiment of the present invention.

Fig. 2 is an illustration of another embodiment of a broker control unit, according to another embodiment of the present invention.

Fig. 3 is an illustration of the system, apparatus and method for face-to-face business and retail brokerage from the shopper’s point of view, according to an embodiment of the present invention.

Fig. 4 is an illustration of a cluster of electronic shopping booths suitable for carrying out the present invention, according to another embodiment thereof.

Fig. 5 is an illustration of electronic shopping stations, according to a still further embodiment of the present invention.

Fig. 6 is a still further illustration of electronic shopping booths, according to a further embodiment of the present invention.

Fig. 7 is a flowchart of a method for face-to-face business and retail brokerage, according to an embodiment of the present invention.

Fig. 8 is a block diagram of the system for face-to-face business and retail brokerage, according to an embodiment of the present invention.

Fig. 9 is a diagram of the apparatus and system for face-to-face business and retail brokerage according to an embodiment of the present invention in which the videoconferencing unit thereof is embedded in a wall or other similar surface.

Fig. 10 is a diagram of the apparatus and system for face-to-face business and retail brokerage according to another embodiment of the present invention in which an
image generated by the videoconferencing unit is projected on a portion of a window of a shop, or other similar surface.

Fig. 11 is a diagram of the apparatus and system for face-to-face business and retail brokerage according to an embodiment of the present invention in which the videoconferencing unit is mounted to and within a curved surface, such as a column or a pillar of a building, for example.

Fig. 12 is a diagram of the apparatus and system for face-to-face business and retail brokerage according to an embodiment of the present invention in which the videoconferencing unit is clipped onto a steering wheel of a vehicle.

**DESCRIPTION OF THE PREFERRED EMBODIMENTS**

The present invention, according to one aspect thereof, includes methods, devices and systems allowing anyone, including non computer literate shoppers, to take advantage of the global shopping opportunities and price competitiveness offered by the Internet (or any computer/communication network). According to the present invention, the shopper may enter a booth, or stand or sit at a location (whether enclosed or not), equipped with high performance personal videoconference equipment. Rather than logging onto the Internet via a browser and formulating search queries to search for the item or services sought, the shopper interacts with a live person whose video image appears on the video monitor. The live person (hereafter, "broker") that appears on the shopper's monitor may be remotely located from the shopper's booth. The shopper's video image may also appear on the broker's monitor, but the shopper has the ability to engage a privacy shutter that blurs, pixilates or otherwise obscures the shopper's image.
to render his or her face unrecognizable. The shopper's own video image may also appear on his/her monitor as a video insert, such that the shopper knows how the broker sees him or her. The live broker may operate from a videoconference control cubicle that may be fitted with multiple video monitors and data displays, to allow the broker to simultaneously or sequentially interact with several shoppers, view selected products multimedia advertings, and to analyze data information returned from queries made to various online stores, online warehouses, online auctions and online service providers.

Rather than staring at a computer monitor and typing cryptic search commands and often ineffectual keywords, the shopper according to the present invention, engages in a face-to-face dialog with the remote broker, and verbally expresses his or her interest to buy a product or a service in a conversational setting, as if talking to a friendly, helpful and knowledgeable clerk in a store. The broker may then propose some products or services with which he or she is already familiar, together with the prices associated therewith. Alternatively, the broker may propose to show the shopper multimedia advertising on the product/service of interest, or similar products/services, and to search selected or all available online sources of the product or service for the most cost competitive price. The broker may also conduct some search online auction sources.

The broker, according to the present invention, is preferably very conversant and agile with the Internet and computer technology. Between the shopper and the broker, therefore, it is the broker that is better suited to formulating and carrying out electronic searches of available online sources of products and services (such as electronic vendors over the World Wide Web, for example) to find suitable electronic commerce sites on the Internet including, for example, multimedia catalogs, presentations, advertising or
detailed information. Having found a suitable match to the shopper’s request, the broker may connect the corresponding multimedia stream to the shopper’s monitor. The broker’s image may be shown as a video insert on the shopper’s screen during the advertising, so the shopper feels in permanent personal contact with the broker. While the shopper watches the advertising, the broker may place electronic queries regarding price and availability to the various online product and service providers, including online auction sources, and present the results of the price and availability search as data inserts on the shopper’s monitor, or alternatively, by announcing the best price to the shopper by voice. In addition, the broker may attend to other active shoppers on his monitors while the multimedia stream is being displayed on the shopper’s own monitor.

The shopper may then confirm his or her intent to purchase the item or service and proceed with payment via credit card and/or any other payment methods, including cash. In order to provide high quality video and sound as good or at least as good as household television, the booths and the broker control units are preferably equipped with advanced multimedia equipment and broadband Internet access.

Fig. 1 is an illustration of the apparatus and method for face-to-face business and retail brokerage from the broker’s point of view, according to an embodiment of the present invention. As shown therein, a live broker 11 sits within a broker control unit 10 that includes a plurality of video monitors 12. Each of the plurality of monitors 12 may be configured to display the image of a shopper, such as shown in the booths referenced by numerals 17 and 18. The monitors 12 may also display an image of the broker 11 together with the shopper, in a split screen configuration, for example. A video camera 13 is disposed within the broker control unit 10, aimed at the broker 11. The video
camera 13 records both high quality audio and video, which is then transmitted to the shopper’s monitor in the shopper’s booth over a high-speed communication channel to a network, such as broadband Internet.

The monitors 12 may also function as data screens, to allow the broker 11 to view sales information (pricing, availability, shipping and payment options, for example) obtained from online electronic commerce vendors or sites 16. This sales information may be presented to the shopper as a data insert on their monitor or simply spoken into a microphone 22, in a conversational manner. Preferably, the videoconferencing equipment provides high quality audio and video, to enhance the realism of the interaction with the broker. A blue screen 15 may be provided behind the broker such that the broker can electronically change the background that is seen by the shopper.

Once the shopper decides that he she wishes to purchase the item or service presented on the monitor in the booth, he or she may so notify the broker 11. The present invention supports most any payment modality, be it cash, credit card, account transfers, Secure Electronic Transaction (SET), smart cards, electronic wallets and/or any form of electronic money. For example, in case wherein the shopper wants to use a credit, charge or debit card to complete the purchase, the shopper may provide the card details, by reading the payment card details to the broker 15, introducing the payment card in a card reader located in or adjacent to the booth or by placing the card in front of the booth camera such that the broker 15 can read the details thereof, for example. For account transfers, the shopper may simply read off the account number and routing numbers of the account from which payment is to be debited. Many shoppers, however,
may prefer to pay by cash for reasons of convenience or privacy, for example. The face-to-face shopping booths according to the present invention may be installed at locations (department stores, banks or malls, for example) where traditional cashiers exist already. Alternatively, face-to-face booths according to the present invention may be clustered together in a sufficiently large number so as to justify the presence of a cash register and cashier. When the shopper completes a purchase with the remote broker 15, a ticket may be printed that the shopper can take to the cashier. The ticket may include a bar code and/or other information detailing the transaction between the shopper and the broker 15, including an identification of the item or service of interest to the shopper, price, availability and shipping information, for example. According to the present invention, the cashier is provided with the necessary equipment to access the remote broker’s server and/or the electronic merchant’s payment server. Upon being presented with the ticket, the cashier reads the code printed on the ticket using a barcode reader or other means, performs an automatic query to get a confirmation of the order placed by the shopper, takes the shopper’s money or processes the shopper’s designated payment instrument. This activates a paid transaction with the remote broker server 22, which in turn triggers the execution of the transaction with the electronic merchant 16, the packaging of the product in question in the merchant’s warehouse 19, the shipping of the product via a shipper 20, for example and the ultimate delivery of the goods to the shopper’s home 21. Alternatively, if the online supplier is a local store or local warehouse, and if the option is offered, the shopper may choose to pick-up the product in person to save transport cost and to obtain immediate possession of the product.
Fig. 2 shows another embodiment of a broker control unit according to the present invention. As shown therein, the control unit 24 may include several banks of monitors 12 and cameras 13, all serviced by one or more brokers 15.

Figure 3 is an illustration of the method, system and apparatus for face-to-face business and retail brokerage from the shopper's point of view, according to an embodiment of the present invention. Fig. 3 shows an embodiment of a shopper's booth including three videoconferencing units 52 disposed along a walkway. Similarly, such videoconference units may be freestanding units in open spaces. Each such unit 52 may include a monitor 41, one or more (stereo, for example) speakers 53, a camera 42 aimed at the shopper 50 and one or more (stereo) microphones 44. The monitor 41 is preferably of the high definition type, so as to enhance the realism of the interaction with the broker 15, the perceived quality of the multimedia presentations and the overall shopping experience. The monitor 41 may also be of the touch screen type, to allow the shopper 50 to select between choices by touching appropriate areas of the screen. The camera 42 is preferably capable of automatic tracking, zooming and focusing (by digital video image processing techniques, for example) such that the shopper's head is always properly centered on the video monitor wherever he or she may be located in the booth, setting or station. The stereo microphones 44 are preferably capable of tracking the precise location (using a sound direction finder technique, for example) of the shopper's mouth in order to help the camera 42 track the shopper's head, and to enable automatic aiming of the camera to another accompanying person in the booth as he/she speaks. The monitor 41, the camera 42 and the microphone 44 allow the shopper 50 to interact with the broker 15 in a natural, conversational manner, in contrast to the rigors of
formulating search queries to a database, Internet portal or search engine. Each videoconferencing unit 52 may also include a card reader 47 configured to read a machine-readable code on a credit, charge, debit or other card-type payment instrument or identification card. For example, the card reader 47 may include a magnetic strip reader to read the information encoded on credit cards and the like. The units 52 may also include a ticket/receipt printer to print a ticket or receipt for the shopper 50. A separate code reader 49 (such as a barcode reader, for example) may also be included in the videoconferencing units 52, thereby allowing the remote broker server 22 (Fig. 1) to access and retrieve the record(s) associated with a particular transaction. A broker call button 45 may also be included in the units 52, to summon a broker 15 when the shopper initially enters the unit 52. A proximity detector may be fitted in the booth such that the broker 15 is automatically notified when a shopper is entering the booth, to allow the broker 15 to greet the shopper 50 or to activate an automatic greeting.

When a shopper 50 is detected watching the advertising and if the broker perceives through his monitor 12 that the shopper 50 is not ready to engage in a dialog, the broker 15 may initiate a search for best price data and current availability for the currently advertised product and send relevant price comparison as data inserts on the shopper’s monitor 41 to further pique the shopper’s interest. Similarly, if the broker 15 is already busy attending another shopper 50 at another booth, a query for best price data and current availability for the shown product may be automatically initiated when a shopper 50 is sensed watching the advertising and the relevant price comparison may be sent as data inserts on the shopper’s monitor 41. The broker 15 may remotely control the sound volume in the booth, setting or station to increase sound volume when the
shopper 50 is far away from the monitor 41 and to reduce volume when the shopper 50 is closer to the monitor 41, to provide optimum auditory comfort and so as not to disturb other shoppers 50 or businesses.

As shown, the image appearing on the monitor 41 may be split between the image of the broker 15 and an image or a multimedia presentation on the product 51 of interest to the shopper 50 (in this case, a camera). Alternatively, the image of the broker 15 and the image of the multimedia presentation may be displayed in separate windows on the monitor 41. Fig. 4 shows yet another embodiment of a cluster 60 of face-to-face shopping booths 61 according to the present invention. As shown therein, each booth 61 includes a videoconferencing unit 52 of the type detailed with reference to Fig. 3. Such a configuration affords the shopper more privacy and a chair 62 on which to sit while conversing with the broker 15 and/or viewing images or multimedia presentations on the products or services of interest. Partitions 63 may be disposed within the cluster 60, to separate each booth 61 from the next adjacent booth 61. Alternatively, the partitions 63 may completely enclose each booth 61 for privacy and/or for sound proofing purposes. Fig. 5 is another illustration of electronic shopping stations 65, according to a still further embodiment of the present invention. Each of the three shopping stations 65 illustrated in Fig. 5 includes a videoconferencing unit 52, as described relative to Fig. 3. Such freestanding stations 65 have a small footprint and may be well suited for inclusion in a bank, shopping mall, waiting room or any other public or private venue. Fig. 6 shows an alternate structure for such stations 65. As shown therein, the shopper stations 65 are also freestanding structures, wherein the
videoconferencing units 52 are integrated into a stand to support the units 52 at a comfortable height.

Fig. 9 shows another embodiment of videoconferencing equipment suitable for carrying out the present invention. As shown therein, the videoconferencing equipment 90 accessible to the shopper is integrated into a flat surface, such as a wall 91. Such a wall 91 may advantageously be located in high traffic areas, such as metro stations, airports or the like. Such videoconferencing equipment 90 may make commercially advantageous use of wall surfaces that would otherwise not be used. Preferably, such videoconferencing equipment 90 should be located in well lighted areas and be relatively waterproof, tamper-proof and vandal-proof. Toward that end, a protective pane of transparent material (such as Plexiglas®, for example) may cover the videoconferencing equipment 90, with slots therein for introducing credit cards and the like. The videoconferencing equipment 90 may include the same features as the videoconferencing equipments shown in Fig. 1; namely, a monitor, a camera, a privacy shutter, a microphone, speakers, a call button, a ticket/receipt printer and a card (credit card, for example) reader for example, among other features.

Fig. 10 is a diagram of the apparatus and system for face-to-face business and retail brokerage according to another embodiment of the present invention in which an image generated by the videoconferencing unit is projected on a portion of a window of a shop, or other similar surface. As shown in Fig. 10, the display 102 of the videoconferencing unit 100 may be projected onto a selected surface 104. The selected surface 104 may include, for example, a window of a store or shop. The shop window 104 may have an unpolished portion onto which the image 102 of the display of the
videoconferencing equipment may be projected. For example, the image 102 may be projected onto the unpolished portion of the shop window 104 using a projector 106 (such as an LCD or other video projector, for example) located inside the store and inconspicuously mounted to the ceiling thereof, for example. Mounting the projector 106 inside the store or shop protects the projector 106 from exposure to the elements, from unauthorized tampering and from vandalism. According to an embodiment of the present invention, the videoconferencing unit may be turned OFF when the store is open and ON when the store is closed, so as not to obstruct the shop’s window during normal operating hours. As shown in Fig. 10, the display 102 may include several display windows 106, 108 that may be dynamically generated during the course of the interaction with the shopper. The windows 106, 108 may display, for example, the image of the broker as shown in the window referenced by numeral 106 and/or an image of the product of interest to the shopper, as shown in the window 108 or a price list, for example. The remainder of the display 102 may be used to show a multimedia presentation to the shopper and/or for any other commercially useful usage. A speaker, camera, a privacy shutter, a microphone, speakers, a call button, a ticket/receipt printer and a card (credit card, for example) reader are preferably be included in the videoconferencing equipment 100, as shown collectively in Fig. 10 as cluster 110. The cluster 110, or selected portions thereof, may be advantageously located so as to capture the shopper’s image and the voice and to allow the shopper to have access to the card reader, privacy shutter and the ticket/receipt printer, for example.

Similarly, such a shopper-to-broker interaction may be conducted via a wireless videophone when suitable wireless broadband communication technology becomes
widely available, in which case the image of the broker 15 appears on the shopper’s wireless videophone screen, and the image and speech of the shopper 50 are captured by the integrated camera and microphone, and are conveyed to the broker’s control unit. When such wireless videophones are fitted in vehicles, a driver may also shop by interacting face-to-face with a broker 15 while the vehicle is parked, or face-to-voice when the vehicle is in motion. Drive-in shopping may be accomplished in car parks fitted with special videoconferencing posts whereby the shopper, after parking his or her vehicle adjacent to the post, interacts with the broker 15 via videoconference equipment fitted in the post. The videoconferencing equipment may also be very compact such that it may be taken inside the vehicle and fitted, for example, onto the steering wheel, as shown in Fig. 12 or one of the vehicle’s windows, for example. The videoconferencing equipment 120 shown in Fig. 12 may include a compact monitor 121, a camera 122, a privacy shutter 125, a microphone 124, speakers 123, a call button 126, a ticket/receipt printer 128 and a card (credit card, for example) reader 127, for example. The videoconferencing equipment 120 may include a data cable attached to the post, or the compact portable videoconference equipment 120 may operate with an antenna 129 and without wires using broadband wireless technology in a broadband wireless network deployed throughout the car park. Such videoconferencing equipment 120 may be conveniently clipped onto the steering wheel 130 of the shopper’s vehicle using a clip, as shown at 131 in Fig. 12. A detection system may be built into the videoconferencing equipment 120 to prevent the shopper leaving the car park without returning the videoconferencing equipment 120. Alternately still, the shopper may interact with the broker 15 via the videoconference equipment fitted to the post and a small private
wireless headset that implements the Bluetooth™ protocol, for example. Such small Bluetooth™-enabled headsets may be used throughout the embodiments illustrated and described herein to afford the shopper a greater degree of privacy, ease of use and comfort. The Bluetooth™ specification, incorporated herein in its entirety, is available from on the Internet at the World Wide Web site www.bluetooth.com. Other configurations of videoconferencing equipment may readily implement the present invention, and all such other configurations are deemed to fall within the scope of the present invention.

Fig. 11 is a diagram of the apparatus and system for face-to-face business and retail brokerage according to an embodiment of the present invention in which the videoconferencing unit 150 is mounted to and within a curved surface 152, such as a column or a pillar of a building, for example. The videoconferencing equipment 150 may be protected by a glare-reducing sheet of transparent material, such as Plexiglas®, for example. Slots and holes may be provided in the sheet of Plexiglas® to allow sound to be transmitted therethrough or bankcards to be inserted therein, for example. Such configurations are especially well suited to public high traffic areas, such as train stations, waiting rooms, and/or other areas with captive audiences, such as hospital rooms, for example.

Alternatively still, the shopper-to-broker interaction described herein may be conducted from home via a TV set fitted with a set top box having a video camera and microphone, all linked to broadband Internet when this high data bandwidth technology becomes widely available and affordable in homes. For example, the home television set-top box may utilize the television’s screen as its display. Alternatively, the
functionality described with reference to Figs. 1-12 may be fully integrated into a home television, to bring true interactive home shopping to the home in a non-intimidating and intuitive manner. In that case, the functionalities and structures described relative to Figs. 1 through 12 may be divided between the television and the television’s remote. For example, a bankcard reader may readily be incorporated into the remote, as may be a microphone and other controls. Preferably, the set top box or television-integrated videoconferencing equipment for the home is coupled to a high bandwidth connection to the Internet (or other relevant network).

Fig. 8 is a high level diagram of the system for face-to-face business and retail brokerage, according to an embodiment of the present invention. As shown therein, a number of face-to-face booths and/or stations 40, 70, 65, 61 (see Figs. 3-6) are coupled to a network 100 (including the Internet, for example) via broadband communication channels. Similarly, a number of broker control units 10, 24 (see Figs. 1 and 2) are also coupled to the network 100. Alternatively, one or more of the broker control units 10, 24 may be directly connected to one or more booths and/or stations 40, 70, 65, 61 via dedicated high data bandwidth communication channels. Also coupled to the network 100 is a plurality of electronic commerce servers 80. The servers 80 process the requests for information and multimedia data streams from the brokers control units 10, 24 and send appropriate data streams back to the broker control units 10, 24. These data streams may be used by the brokers 15 in evaluating products and/or services for the shoppers 50, or may be passed along via the network 100 to the face-to-face booths/stations 40, 70, 65, 61 to be displayed on the monitors 41.
Fig. 7 is a flowchart of the method for face-to-face business and retail brokerage, according to an embodiment of the present invention. The method begins at step S1, wherein the shopper 50 enters a booth or approaches a shopper station, as shown in Figs. 3 through 6. If the shopper 50 does not indicate that he or she requires attention from a broker 15, advertisements or other informational message may be shown on the monitor(s) 41 of the unit(s) 52, as indicated at S3. If, however, the shopper 50 does require attention, the shopper 50 may so indicate by depressing a call button, such as shown at 45 in Fig. 3. If the shopper 50 wishes his or her appearance or identity to remain anonymous, as frequently is the case over the Internet he or she may engage a privacy shutter 43 over the taking lens of the camera 42, to blur or obscure the shopper’s image to the broker 15. This blurring may alternatively be carried out electronically at the touch of a button by digitally blurring, obscuring or pixilating the shopper’s image.

When the image of the broker 15 appears on the monitor 41 of the shopper’s booth, the shopper 50 may engage the broker 15 in conversation, describing the product or services in which he or she is interested, as shown at step S4. Alternatively, the broker 15 may greet the shopper 50 and invite him or her to express an interest for a product or service, or the broker 15 may offer a presentation of the type and breadth of services offered by the system according to the present invention. The shopper 50 may be interested in cameras, for example, as shown at 51 in Fig. 3. In that case, the shopper 50 may describe the features and price range desired, such as 35 mm, telephoto, automatic flash and under $250.00, for example. The shopper may request all locally available products to allow him or her to pick-up the product right away, or for concerns relating to service after the sale. Alternatively, the shopper 50 may request travel
services and tell the broker 15 to research a Jamaican vacation for two in the second week of February, for example. The broker 15 may also refer the shopper 50 to another broker, located close by or far away, that would be more specialized or possess specialized knowledge in the area for the desired product. In that case, the face-to-face interaction may be taken over by the new broker. At step S5, the broker 15 formulates and carries out searches of all or selected electronic merchants’ or service providers’ databases and multimedia catalogs for the products or services meeting the shopper’s stated criteria. The electronic merchant may be an online warehouse, online store or online pizzeria, either locally or remotely located. The broker 15 is highly trained in carrying out such searches and quickly finds the requested information. This information may be in the form of short multimedia (video, for example) data stream(s) advertising the electronic merchant’s products or services or may be in the form of World Wide Web page(s) whose scrolling and “follow link” may be controlled by the broker 15 and/or data in tabular form, or video form, WebPages, tables, or a “ticker tape-type” scrolling data composed by the broker 15. The broker 15 may then send the multimedia presentation to the monitor 41 in the shopper’s booth for the shopper’s evaluation, as shown at S5. The multimedia presentation may be supplemented by a data insert on the shopper’s monitor 41 such as a scrolling information ticker tape and/or may be supplemented by the broker’s own voice speaking to the shopper 50 as the shopper watches the presentation. After viewing or interrupting the material presented on the monitor 41, the shopper may narrow down his or her selection, as indicated at step S6 and request the broker 15 to find the lowest prices for the selected product(s) and/or service(s), as shown at step S8. Alternatively, the shopper may change his or her
mind and tell or indicate to the broker 15 (interactively and in real time) that he or she is interested in different product or service features or may select another product altogether, as shown at S7. In that case, the method may revert to step S4. If the presentation(s) on the monitor 41 for some reason do not motivate the shopper 50 to continue the process, the shopper may leave the booth, as indicated at step S9. At step S10, the broker 15, in response to the shopper's request at step S8, searches all or selected online database, electronic merchant sites and all available electronic commerce sources for the best price and availability on the requested product(s) and/or services. These are communicated to the shopper 50 via the videoconferencing units 52 (i.e., by displaying the price and availability options on the monitor 41 and/or by verbally communicating with the shopper 50 via the speakers 53, for example). The broker 15 may also search for the requested product and/or service on online auction servers and propose bids on the shopper's behalf, after obtaining authorization to do so. Factors other than price and availability may also affect the shopper's decision to purchase the product or service, such as payment options, financing options, shipping charges, the ability to pick-up the product nearby, the availability of local after sale support, immediate delivery (repair contractor, pizzeria, fresh flower shop, heating fuel, for example) etc. All these factors may also be researched by the broker 15 and communicated to the shopper 50. The shopper 50 may then decide not to purchase the product and/or service in question, as shown at step S11. If the shopper 50 decides not to buy the product and/or service, the shopper leaves the booth or station (step S15) unless he or she wants to shop for another product and/or service, at which point the method reverts to step S4 from step S12. If, however, the shopper 50 decides to buy the
product and/or service, the shopper proceeds with the payment in step S13, whereupon
the shopper 50 leaves the booth or station and the broker 15 places the order for the
product and/or service with the electronic merchant selected by the shopper 50 (the
merchant having the lowest price and availability combination, for example), as shown
at step S14.

If the shopper 50 expresses the need to “think-about-it” or to “cool-off”, the
broker 15 may offer the shopper 50 a reference number, printed on a ticket if the booth
is fitted with a ticket printer, or written down by the shopper 50 if no printer is available,
in order to quickly retrieve the product and price selection the next time the shopper 50
enters the booth. Alternatively, the shopper 50 may give the broker his or her postal
address or email such that a follow-up message may be mailed.

Face-to-face shopping booths or stations according to the present invention may
be installed, for example, in financial institutions premises, to allow shoppers
purchasing high-value goods such as vehicles and travel packages to conveniently obtain
financing or credit authorization on the spot. A large number of face-to-face electronic
shopping booths may be deployed in every city, as clustered units installed in specially
built shops or refitted shops, or alternatively as a individual units installed in or scattered
around existing public forums such as shopping malls, train stations, bus stations,
airports, post offices, amusement parks, etc. A large network of brokers 15 may be
created to interact with the shopping booths. The brokers 15 may be physically located
most anywhere, such as at home or in call centers equipped with a large number of
broker control units as shown in Figs. 1 and 2. The face-to-face shopping system
according to the present invention may link-up to a large network of online multimedia catalogs, online stores, online services providers, and online auction sites.

The communication links between the shopping booths and broker control units preferably includes a broadband communication channel, to allow the shopper and broker to instantaneously exchange high quality video image and sound. Likewise, the communication links between the broker control units and the online multimedia catalogs, World Wide Web pages and online databases preferably also includes a high data bandwidth communication channel allowing high quality video image and sound. The communication link between the broker control units and the online stores, online service providers and online auctions sites may also include broadband communication channels and/or may be carried out using standard Internet communication protocols, such as TCP/IP.

Revenue may be generated from several sources. For example, each time an advertisement is shown on a monitor 41 at the shopper’s request, a fee may be charged to the company that offers the advertised product and/or service for sale. Moreover, when the shopping booth is unattended, the broker 15 and/or the server 22 may select from a portfolio of advertisements that may be continuously displayed on the monitor 41 in the booth or station. A reduced fee or no fee may be charged in that case, unless the presence of a shopper watching the advertisement is detected. Proximity or other types of detectors may detect if a shopper 50 is watching the advertising. If a shopper is detected, a higher rate may be charged for that advertising instance. If while watching advertising, a shopper 500 depresses the call button 45 or otherwise signals his or her interest in the product or service that is the subject of the advertising, a further fee may
be charged. When a sale is executed, the broker 15 may receive a commission or other incentive or reward from the supplier of the product and/or service sold, from the call center or from some other source. Likewise, the organization that finances and manages the face-to-face sale brokerage network according to the present invention may receive revenues from advertising with varying rates according to the shopper’s behaviors as detailed above as well as from commissions on sales. As the effect of displayed advertising on the shopping booth screens is immediately known, the broker 15 can rapidly revise the advertising campaign in the shopping booths for which he or she is responsible, in order to adjust for seasonal, time-of-day and local shopping habits.

Similarly, the manager responsible for the management of a group of brokers 15 can launch an advertising campaign and contemporaneously monitor and analyze the results thereof to fine tune the campaign and optimize revenues and profits obtained therefrom.

For the company managing the booths or stations, expenses are minimized as the operation of the booths or stations involves low overheads, no shelf space, no goods in inventory, etc. Great control may be exercised over the broker 15. The broker may be directed to preferentially offer the goods and/or services from partnering electronic merchants or to be wholly impartial in the sources of the goods and services offered to the shopper 50. Most any business objectives may be pursued, whether the maximization of revenue, profit, etc.

Additional revenue may originate from specialty outlets such as banks, post offices, travel agencies, and additional fees may be generated from advertising and/or sales. The goods and/or services sold in any face-to-face booth or station according to the present invention need not compete with the establishment in which the booth or
station is located. For example, the booths located in a department store may offer only travel-related services or only goods not offered by the department store. Likewise, the booths or stations installed in travel agencies may be configured to offer only non-travel related goods or services or travel related goods or services not offered by the hosting travel agency.

The advantage for the shopper 50 include enjoying the benefits of the Internet without needing any technical knowledge whatsoever, a large portfolio of products and services in one place (limited only by the scope of the Internet or any similar computer network), very competitive prices, very rapid viewing of high quality video information on desired product or service, fast and flexible payment options, home delivery, immediate pickup when goods are available locally, local after-sale support, immediate delivery of services and booking for nearby services. The broker 15 may also provide delivery-tracking information by sending email to the shopper 50 if known, or alternatively, the shopper 50 may make a delivery-tracking enquiry at the booth. The broker 15 may offer hosting capabilities for small local businesses such that the broker 15 maintains an Internet accessible database of goods that are rapidly and locally available or with after-sale support. The broker 15 may also maintain one or more Internet accessible databases (that are accessible to the shopper 50 via the broker 15) containing a schedule of services available by appointment such as car repair, dentistry, hairdresser, house quotes, pest control, etc. Therefore, participating merchants may allow the broker 15 to schedule appointments for them, via the Internet. This service is potentially of great value and convenience to the shopper 50, irrespective of whether such shopper is technically knowledgeable or not.
Preferably, the shoppers 50 may be made to feel as comfortable as possible in the shopping booth. For example, it is preferable that the camera 42 be made as unobtrusive as possible, as a protruding or conspicuous camera may intimidate the shopper. Moreover, the shopper 50 need not operate a keyboard. Therefore, if a keyboard is provided, it should also be made as unobtrusive as possible. To place the shopper 50 (who may never have used a computer or network appliance before) at ease, the broker 15 should appear on shopper’s monitor 41 as naturally as possible and strive to be a reassuring presence, like a TV news announcer or a popular TV entertainer. A blue screen may be provided behind the broker 15 so that he or she may electronically change the broker’s background to create a particular atmosphere. Physically attractive persons such as body builders and fashion models may be in high demand to fulfill broker positions for special product lines if they have the necessary expertise for searching the Internet and rapidly performing the necessary operations for electronic commerce. Moreover, nothing prevents talented brokers 15 who are able to captivate audiences to conduct sales simultaneously with several shoppers in several remotely located booths. In that case, a video insert of all or selected shoppers may displayed on each of the shoppers’ monitors. The broker 15 may then be assisted by one or several persons to help conducting data searches and to help process payment transactions.

From the shopper’s point of view, shopping is global, that is, given that the broker 15 has access to the Internet via high data bandwidth communication links and is very conversant and agile with methods of searching the Internet as well as rapidly performing the necessary operations for electronic commerce, the shopper 50 is offered products available around large geographic regions, the entire country, from several
countries or from the entire world, as well as products available in the immediate vicinity of the shopper’s home that have been advertised on the broker’s net. Moreover, the costs of the goods, transportation to the shopper’s home and all applicable taxes (VAT, for example) are presented to the shopper 50 in a clear fashion either by information inserts or scrolling ticker tapes on his monitor or by a voice announcement, together with price comparisons with various suppliers, such that the shopper 50 may quickly confirm his or her intention to purchase.

The face-to-face shopping booths and/or stations according to the present invention may be installed in various locations in various ways. For example, the booths and/or stations may be arranged as individual units, sized to fit into banks, post offices, train stations, at strategic locations in airports, and may be of a streamlined appearance so as not to obstruct passages and overall visibility. Alternatively, the booths and/or stations may be arranged in clusters in airports, department stores or in specialty shops dedicated thereto. The same face-to-face shopping functionality may be obtained within the shopper’s home through his or her home TV set, when fitted with broadband Internet videophone capability (practicable as soon as broadband communication is widely available and affordable).

Therefore, the face-to-face booths according to the present invention may be operated in conjunction with interactive television or interactive computer games and services, to bring highly customized information and entertainment services directly to the shopper’s television or computer monitor in a discrete, private setting. The face-to-face booths of the present invention may be arranged in settings that characterize the type of products sold, i.e., clothing, hobby, kitchenware, luggage, etc. That is, the décor
of the booth itself in which the videoconferencing equipment 52 is located may be
"themed" to place the shopper 50 in the proper frame of mind to make purchasing
decisions. For example, a face-to-face booth located in a travel agency may evoke an
island setting, whereas the décor of a booth selling fine apparel may suggest an elegant
mansion. Toward that end, the blue screen 15 behind the broker 15 may be programmed
to display a background that is complementary to the décor of the booth with which the
broker is currently conversing. The appearance, demeanor and personality of the broker
15 may be matched with particular booths and/or stations and/or with the expected
clientele at the booth or station. In this manner, a formally dressed person may be best
suited to assisting shoppers 50 select caterers for a garden party, whereas, a rugged-
looking person may be better suited to assisting shoppers 50 in the selection of a chain
saw or camping equipment. The shopper 50 may be given his or her choice of broker
15, such as by selecting from a series of photographs, icons, thumbnail images or brief
video presentations. In this manner, the shopper 50 may select a man or a woman, a
young person or a more mature person, as well as any other attributes, such as hair color,
race, ethnic background, accent, languages spoken etc.

Face-to-face shopping booths according to the present invention are preferably
equipped with as little peripheral equipment as possible in order to minimize potential
equipment failures and vandalism. For example, the combination of a monitor 41, a
camera 42, speakers 53 and a microphone 44 should be sufficient for the brokers 15 to
assist the shoppers 50 in completing most purchasing transactions. Non-contact
identification devices and payment cards such as contact-less smart cards are preferred,
as such contact-less card readers have no physically damageable parts in normal use. A
card reader suitable for this purpose is disclosed in commonly assigned US patent 5,973,799, the disclosure of which is hereby incorporated herewith in its entirety. A shopping cart icon or graphic may be displayed as an information insert on the shopper's monitor to show the shopper 50 the goods selected thus far for purchase and/or the price thereof.

Shoppers may prefer to remain anonymous. However, in order to build a database of shopper profiles (demographic data, shopping habits, etc.), incentives may be offered to the shopper such as bonus points, discounts and the like, to obtain the shopper's authorization to collect and store relevant personal information in a database. This database may assist the network of face-to-face brokers to optimize the sales strategy. The shopper 50 may be provided with a Frequent Buyer Card encoded with personal and payment information, for example. The shopper 50 would then instantly become known to the broker 15 as he or she swipes the Frequent Buyer Card in the card reader 47 (Fig. 3) upon approaching any booth or station of the present invention at any booth location served by the broker network. Such Frequent Buyer Card may also provide positive identification of the shopper 50, in order to restrict the sale of restricted goods or services that may be unsuited to minors, such as alcohol or sexually explicit materials, for example. Alternatively or in addition to the use of such cards for identification purposes, biometric data may also collected and analyzed to insure compliance with all local laws and regulations. When printed bar-coded receipts are not available, identification devices may also be used in any booth location to enable the broker 15 to conveniently and rapidly retrieve and display the current product delivery status as soon as the dialog with the shopper 50 begins.
As speech recognition, computer graphics and/or artificial intelligence technologies advance, the broker 15 may be replaced or augmented by a software driven virtual broker that understands shopper’s request and that is realistically represented and animated.

While the foregoing detailed description has described preferred embodiments of the present invention, it is to be understood that the above description is illustrative only and not limiting of the disclosed invention. Modifications may occur to those of skill in this art. For example, the videoconferencing units may be configured in a manner that is different than that disclosed herein or may be deployed in a different setting than is disclosed herein. Still other modifications may occur to those of skill in this art. Thus, the present invention to be limited only by the claims as set forth below.
WHAT IS CLAIMED IS:

1. A system comprising:
   at least one first videoconferencing unit accessible to a shopper;
   at least one broker control unit, the broker control unit including a second videoconferencing unit adapted to be aimed at a broker, the first and second videoconferencing units being coupled to a network to enable the broker to videoconference with the shopper in real time, and a plurality of data streams including information on goods and services offered for sale by respective online electronic commerce vendors, each of the plurality of data streams being selectively accessible over the network by the broker and transmittable to the shopper for display on the first videoconferencing unit in response to a real time face-to-face interaction between the shopper and the broker via the first and second videoconferencing units.

2. The system of Claim 1, wherein the first videoconferencing unit includes a plurality of videoconferencing monitors.

3. The system of Claim 1, wherein the broker control unit is coupled to the network via a broadband communication link.

4. The system of Claim 1, wherein the network includes the Internet.

5. The system of Claim 1, wherein the broker is human.

6. The system of Claim 1, wherein the broker is a software driven virtual broker.
7. The system of Claim 1, wherein the at least one first videoconferencing unit includes a privacy shutter adapted to at least one of blur, obscure and pixilate an image of the shopper to render his or her face unrecognizable.

8. The system of Claim 1, wherein at least one of the first videoconferencing unit and the second videoconferencing unit includes a monitor adapted to display at least one of an image of at least one of the broker, the shopper and the data stream.

9. The system of Claim 1, wherein at least one of the first and second videoconferencing units includes a monitor adapted to display data thereon to allow the at least one of the broker and the shopper to view sales information obtained from online electronic commerce vendors.

10. The system of Claim 1, further including a card reader located in or adjacent to the at least one first videoconferencing unit.

11. The system of Claim 1, wherein at least one of the first and second videoconferencing units comprises a monitor, at least one speaker, a camera and at least one microphone.

12. The system of Claim 11, wherein the monitor is of a touch screen type, to enable the shopper to select between displayed choices by touching appropriate areas of the monitor.

13. The system of Claim 11, wherein the camera of the first videoconferencing unit is configured to track, zoom and focus one of automatically and under a control of the broker.
14. The system of Claim 11, wherein the at least one microphone of the at least one first videoconferencing unit is configured to track a location of the shopper to facilitate tracking of the shopper’s head by the camera and to enable automatic aiming of the camera toward a person accompanying the shopper as the accompanying person speaks.

15. The system of Claim 1, wherein the at least one first videoconferencing unit comprises a broker call button to summon the broker when the shopper initially approaches the at least one first videoconferencing unit.

16. The system of Claim 1, wherein the at least one first videoconferencing unit comprises a proximity detector, the proximity detector being adapted to automatically notify the broker control unit when the shopper approaches the at least one first videoconferencing unit.

17. The system of Claim 1, wherein a volume of sound generated by the at least one first videoconferencing unit is remotely controllable by the broker through the second videoconferencing unit.

18. The system of Claim 1, wherein the first videoconferencing unit is incorporated within a wireless videophone having broadband access to the network.

19. The system of Claim 1, wherein the first videoconferencing unit is integrated within one of:

- a combination of a television and a set top box linked to the network and
- a television linked to the network.

20. The system of Claim 1, wherein the at least one first videoconferencing unit is located in a car park and coupled to a videoconferencing post, whereby the
shopper, after parking his or her vehicle adjacent to the post, interacts with the broker via the videoconference unit coupled to the post.

21. The system of Claim 20, wherein the first videoconferencing unit is sufficiently compact to allow it to be taken inside the vehicle and attached to one of a steering wheel and a window of the vehicle.

22. The system of Claim 20, wherein the at least one first videoconferencing unit includes one of a data cable coupled to the post and an integrated wireless transceiver that communicates with a broadband wireless network deployed throughout the car park.

23. The system of Claim 1, wherein the at least one first videoconferencing unit includes a printer adapted to print a printout of information relating to the goods or services featured in the data stream transmitted to the shopper.

24. The system of Claim 23, wherein the broker control unit is adapted to cause the printer to print a machine readable code on the ticket, the machine readable code including information regarding goods or services featured in the data stream displayed on the first videoconferencing unit.

25. The system of Claim 24, further comprising a cash register adapted to be attended by a cashier and wherein the printer prints a receipt that is taken by the shopper to the cashier for payment of the goods or services coded on the receipt.

26. The system of Claim 25, wherein the cash register comprises a code reader adapted to read the machine readable code printed on the receipt.
27. The system of Claim 25, wherein the cash register is coupled to at least one of the broker control unit and at least one payment server that processes payments for the respective online electronic commerce vendors.

28. The system of Claim 1, wherein the at least one first videoconferencing unit is disposed in one of an enclosed booth, a freestanding stand in an open space, a cluster of semi-private booths, a pillar, a window of a shop, a flat surface, a waiting area and a room.

29. The system of Claim 1, further comprising a blue screen disposed behind the broker such that the broker can electronically change a background that is seen by the shopper.

30. The system of Claim 1, wherein the network includes a dedicated high data bandwidth communication channel between the at least one broker control unit and the at least one first videoconferencing unit.

31. The system of Claim 1, further comprising at least one electronic commerce server coupled to the network, the at least one electronic commerce server being configured to process requests for information and data streams from the at least one broker control unit and to send selected data streams back to at least one of the broker control unit and the first videoconferencing unit.

32. The system of Claim 1, wherein the data stream includes at least one of a multimedia presentation, a video presentation, an audio presentation, text-based data, a World Wide Web page and a ticker-type scrolling data composed by one of the broker and the vendors.
33. The system of Claim 1, further comprising a database of shopper profiles coupled to the at least one broker control unit, the database including shopper information collected from the shopper.

34. The system of Claim 1, wherein the at least one first videoconferencing unit includes biometric data collecting devices.

35. The system of Claim 1, wherein the at least one first videoconferencing unit is integrated into a flat surface.

36. The system of Claim 35, wherein the flat surface is one of a wall and a window.

37. The system of Claim 1, wherein the at least one first videoconferencing unit is integrated into a curved surface.

38. The system of Claim 1, wherein a display of the at least one first videoconferencing unit is projected onto a selected surface and wherein a hardware portion of the at least one first videoconferencing unit is disposed remotely from the selected surface.

39. The system of Claim 38, wherein the selected surface includes a window of a store, whereby the at least one first videoconferencing unit is OFF when the store is open and ON when the store is closed.

40. The system of Claim 38, wherein the at least one first videoconferencing unit includes a projector adapted to project the display thereof onto the selected flat surface.

41. The system of Claim 38, wherein the selected surface is reflective or semi-transparent.
42. The system of Claim 38, wherein the selected surface includes a reflective screen disposed in one of a private and semi-private booth.

43. A method of enabling electronic commerce over a computer network, comprising the steps of:

5 providing at least one first videoconferencing unit accessible to a shopper;

providing at least one broker control unit, the broker control unit including a second videoconferencing unit, the first and second videoconferencing units being coupled to a network to enable real time videoconferencing with the shopper in real time;

10 interacting face-to-face in real time with the shopper via the first and second videoconferencing units to determine a nature of goods and/or services offered for sale by online electronic commerce vendors of interest to the shopper;

searching the network for at least one selected data stream related to the goods and/or services determined to be of interest to the shopper, and

15 displaying the at least one selected data stream on the first videoconferencing unit.

44. The method of Claim 43, wherein the broker control unit is controlled by a broker and wherein a real time video image of the broker appears on the second videoconferencing unit at least during the interacting step.

45. The method of Claim 44, wherein the broker is one of a human broker and a software driven virtual broker.
46. The method of Claim 43, wherein the broker control unit includes a plurality of second videoconferencing units, and wherein the interacting and searching steps is carried out with and for another shopper during the displaying step.

47. The method of Claim 43, wherein the interacting step is carried out using natural conversational speech.

48. The method of Claim 43, wherein the broker control unit is coupled to at least one payment server adapted to process payments for the online electronic vendors and wherein the method further comprises the step of processing a payment request on behalf of the shopper for selected goods and/or services by forwarding shopper-provided payment information to the at least one payment server.

49. The method of Claim 43, further comprising the step of engaging a privacy shutter adapted to at least one of blur, obscure and pixilate an image of the shopper to render his or her face unrecognizable.

50. The method of Claim 43, wherein the displaying step displays an image of at least one of a broker controlling the broker control unit, the shopper and the data stream.

51. The method of Claim 43, further comprising the step of displaying advertising on the at least one first videoconferencing unit.

52. The method of Claim 51, further comprising the steps of detecting a proximity of the shopper and charging the advertising at a first rate when the shopper is not detected to be near the first videoconferencing unit.
53. The method of Claim 52, further comprising the step of charging the advertisement at a second rate when the shopper is detected to be near the first videoconferencing unit, the second rate being higher than the first rate.

54. The method of Claim 52, wherein the proximity of the shopper is detected by one of a proximity detector integrated with the first videoconferencing unit and a camera of the first videoconferencing unit.

55. The method of Claim 53, further comprising the step of charging a third rate for the displayed advertising when the shopper expresses an interest in purchasing the goods and/or services featured on the displayed advertising.

56. The method of Claim 52, wherein when the shopper is detected to be near the first videoconferencing unit, at least one of the following steps are carried out:

- the broker engages the shopper in conversation to determine which products and/or services are of interest to the shopper;
- displaying a video on the first videoconference unit;
- initiating a search for a best price and availability for products and/or services featured on the displayed advertisement.

57. The method of Claim 56, wherein the search is one of initiated by the broker and initiated automatically by the broker control unit.

58. A method of shopping over an electronic network, comprising the steps of:

- conversing in real time with an image of a remotely located broker through respective videoconferencing units to inform the broker of a nature of desired goods and/or services;
tasking the broker to carry out searches over the network for information related to the desired goods and/or services;

viewing the information related to the desired goods and/or services found by the broker during the searching step;

selecting goods and/or services for purchase based upon the viewed information, and

instructing the broker to process a payment request for the selected goods and/or services.

59. The method of Claim 58, wherein the electronic network includes the Internet.

60. The method of Claim 58, wherein the payment request processing step includes a step of swiping one of a debit, credit and charge card through a card reader.

61. The method of Claim 58, wherein the payment request processing step includes the steps of:

showing a credit card to the broker through one of the respective videoconferencing units and

capturing an image of the credit card to extract credit card information therefrom.

62. The method of Claim 58, wherein the payment request processing step includes a step of verbally announcing to the broker an account number from which payment is to be made.
63. A method of scheduling services to be performed or an appointment with one of a plurality of participating service providers over a computer network, the method comprising the steps of:

managing existing schedules and appointments for the plurality of participating service providers;

conversing in real time with a remotely located broker through respective videoconferencing units coupled to the computer network to inform the broker of a request for services to be performed or a request for an appointment with a selected participating service provider;

requesting that the broker schedule the requested services or appointment;

accessing the managed existing schedules and appointments to determine whether the requested services or appointment fit within the existing schedules and appointments of the selected service provider; and

scheduling the requested services or appointment with the selected service provider when the requested services or appointment fit within the existing schedules and appointments of the selected service provider.

64. The method of Claim 63, further comprising the step of the broker proposing alternate scheduling for the services to be performed or the appointment when a timing of the requested services or appointment conflicts with the existing schedules and appointments of the selected service provider.

65. The method of Claim 63, further comprising the step of generating a notification of the scheduled services or appointment to a person having carried out the requesting step and to the selected service provider.
66. The method of Claim 65, wherein the notification is generated at least one of electronically and via a printed ticket.

67. The method of Claim 63, further comprising the step of adding the scheduled services or appointment to the existing managed schedules and appointments.

68. The method of Claim 63, wherein the accessing step is carried out by accessing a database storing the existing schedules and appointments for the participating service providers.

69. The method of Claim 68, further comprising the step of storing information related to goods offered for sale by the participating service providers.

70. The method of Claim 69, further comprising the step of informing a person having requested the services or appointment of the goods offered for sale with the selected participating service provider.

71. The method of Claim 70, wherein the informing step includes at least one of the steps of verbally telling the person of the goods and the step of causing a multimedia presentation of the goods to be displayed on one of the respective videoconferencing units.

72. A method of making the Internet electronic commerce accessible to non-computer literate shoppers, comprising the steps of:

- providing a plurality of computer-literate brokers;
- providing each of the brokers with a broker control unit coupled to the Internet, each broker control unit including a videoconferencing unit coupled to the Internet;
- providing a plurality of shopper-accessible videoconferencing units coupled to the Internet, wherein the computer-literate brokers, based upon a conversational
interaction with the shoppers, carry out Internet searches to access, retrieve and display commercial messages over the Internet, and

processing, upon a request from the shoppers, a request for goods or services featured on the displayed commercial messages.

73. An electronic commerce method, comprising the steps of:

selecting one of a plurality of remotely-located brokers, an image of the selected broker thereafter appearing in real time on a monitor of a first videoconferencing equipment;

initiating a natural and conversational exchange with the selected broker to inform the selected broker of goods and/or services of interest;

receiving at least one of a multimedia, audio, video and text-based presentation relating to the goods and/or services of interest, as retrieved by the broker over a computer network, and

displaying the received presentation on the monitor of the first videoconferencing equipment.

74. The method of Claim 73, wherein the selecting step includes a step of selecting at least one desired broker characteristic, the at least one desired broker characteristic being selected from a group including gender, ethnic origin, age, language, hair color, appearance, build, racial origin, special training and technical knowledge.

75. The method of Claim 73, wherein the selecting step includes a step of previewing a presentation of the broker.
76. The method of Claim 73, wherein an image of each of the plurality of brokers is displayed as one of an icon and a thumbnail image and wherein the selecting step includes the step of selecting the icon or thumbnail image of the selected broker.
**Shopper enters booth**

S1

- **S2** Shopper needs attention
  - NO Show advertisements on shopper's booth monitor
  - YES

- **S4** Shopper speaks: "Show me this product"

- **S5** Broker searches all electronic merchants' multimedia catalogs that sell product and sends advertising video stream(s) to monitor in shopper's booth

- **S6** Shopper speaks: "I am interested in a particular product."
  - NO
  - YES

- **S7** Does shopper want to see another product?
  - NO Shopper leaves the booth/station
  - YES

- **S8** Shopper speaks: "Find me the lowest price for this product."

- **S10** Broker searches all electronic databases for selected product and classifies by price and by availability

- **S11** Shopper tells broker: "I'll buy it" or "I won't buy it"
  - "I will buy it"

- **S13** Shopper proceeds with payment

- **S14** Shopper leaves the booth, Broker places order with electronic merchant

- **S12** "I won't buy it"

- **S15** Shopper leaves the shop

**FIG.-7**

*SUBSTITUTE SHEET (RULE 26)*