

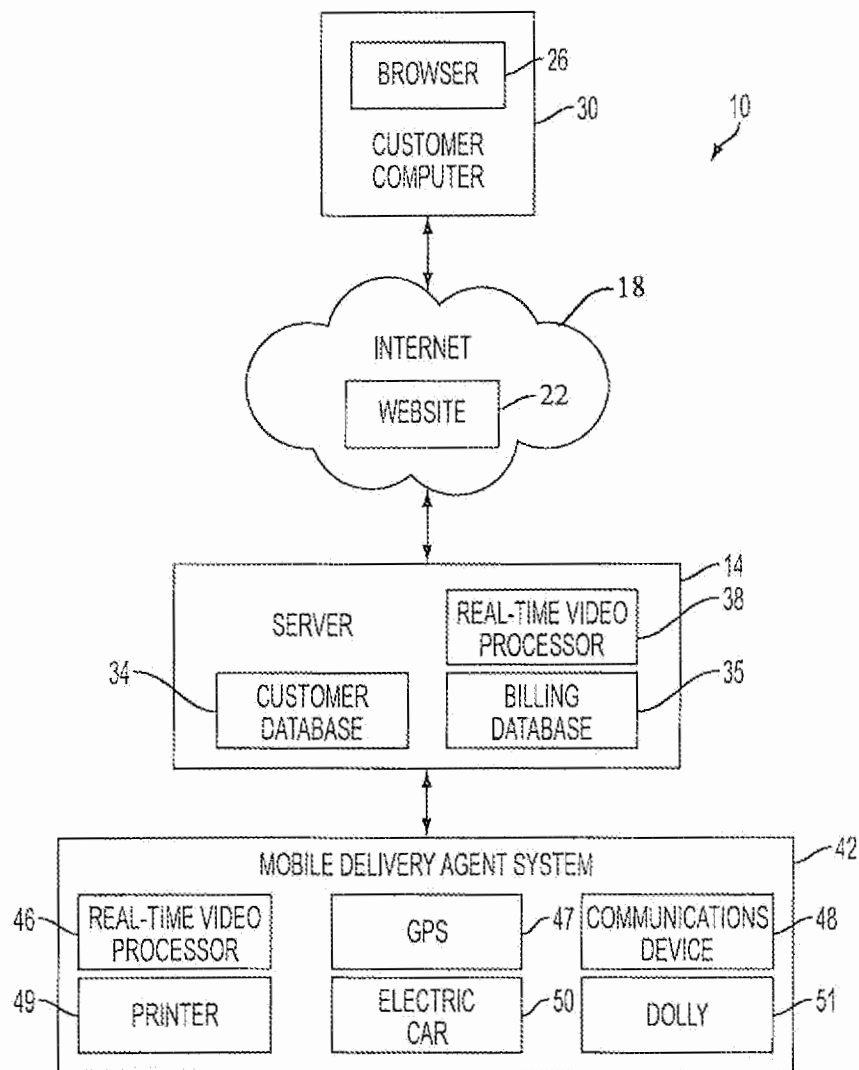


FIGURE 1

SYSTEM AND METHOD FOR REMOTE SHOPPING AND DELIVERY

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention pertains to consumer shopping and, more particularly, to a system and method for remote shopping and delivery.

Discussion of the Prior Art

[0002] Electronic commerce via the internet is rapidly becoming a standard method by which consumers purchase goods remotely for delivery to a location of the consumer's choice. However, there are many potential problems associated with ordering goods over the internet. For example, most internet retailers rely on third-party services, such as UPS and Federal Express, to deliver the products purchased on their web sites. From an environmental standpoint, delivering select goods purchased over the internet to individual consumers using conventional methods creates a large carbon footprint, and is often not cost effective. For example, when various goods are transported from one or more warehouses across the country to individual consumers, rather than to a single store from where the items can be purchased, certain inefficiencies are realized.

[0003] Perhaps more important, many consumers are opposed to internet shopping. For instance, consumers who are particular about style, quality or actual function, may wish to further view or otherwise

examine an item before purchasing. Often, a picture may not be available for an item or the picture will be inadequate to accurately depict the item. For this reason, the consumer may simply refuse to purchase over the internet or perhaps may purchase an item and then return the same after the item is later examined. Obviously, this purchasing scenario is also inefficient.

[0004] Based on at least these reasons, there is seen to be a need in the art for a remote shopping and delivery system which provides a consumer with detailed information needed to make an informed purchase, and which provides rapid delivery of the goods without creating a large carbon footprint.

SUMMARY OF THE INVENTION

[0005] The present invention is directed to a system and method for remote shopping and delivery. The system includes a server in communication with customer computers via a website on the internet. The server can store customer information including billing information, and may include a real-time video processor. A mobile delivery agent system in communication with the server includes an energy efficient vehicle, a real-time video device, a global positioning system (GPS), a communication device and a printer.

[0006] In use, a consumer contacts a service provider through the remote shopping and delivery system and registers to use the service. Once registered, the user provides the service provider with information regarding the type of product(s) desired and the location from which the user desires to purchase the product(s). A mobile delivery agent in close proximity to the purchase location will receive the request for purchase

from the system, and the delivery agent will proceed to the location. The GPS can be utilized to track the delivery agent, as well as provide navigational information to the delivery agent. The real-time video device will be utilized to deliver real-time video of the delivery agent on the way to the location, as well as video of the purchase process. The consumer will be allowed to interact with the delivery agent to inspect the product(s) remotely using the real-time video device and the communications device. Once a purchase is approved, the delivery agent will purchase the product(s) on behalf of the consumer and deliver the product(s) to a designated delivery location. The printer will be utilized to produce an invoice and any other transaction documents for delivery to the consumer, or documents may be mailed to the customer by standard mail or electronic mail. The system may include one or more processors for optimizing efficiencies of the system and calculating the most efficient use of delivery agents based on the pick-up location and the delivery site.

[0007] Additional objects, features and advantages of the present invention will become more readily apparent from the following detailed description of preferred embodiments when taken in conjunction with the drawings wherein like reference numerals refer to corresponding parts in the several views.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] Figure 1 is a schematic diagram of the remote shopping and delivery system of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0009] With reference to Figure 1, a remote shopping and delivery system constructed in accordance with the present invention is indicated at 10. A services provider is equipped with at least one server 14 in communication with a wide area network (WAN), such as the internet 18. A user accesses a user interface 22, such as a website or cable television network screen through internet 18 via a customer computer 30. It should be understood that customer computer 30 can be any type of device for communication with user interface 22, such a personal computer including a browser 26, a television or a cell phone. It is contemplated that system 10 may make use of emerging “blended services” technologies including integrated voice, video and data features which are always “on”, giving users the ability to move from one function to another during a communication session. This blended services technology may be in the form of a digital television which allows for software to be utilized for viewing entertainment and internet applications.

[0010] A plurality of databases may be stored within server 14. For example, customer data can be stored in a customer database 34 on server 14, and billing information can be stored in billing database 35. A real-time video processor 38 can also be associated with server 14. Server 14 is in contact with a plurality of mobile delivery agent systems, such as indicated at 42. Each mobile system 42 preferably includes a real-time video device 46, a global positioning system (GPS) 47, a communications system or device 48 and a printer 49. GPS 47 is preferably utilized to track a mobile delivery agent, as well as provide navigational information

to the delivery agent as will be discussed in more detail below.

Communications system 48 preferably includes an on-board computer and transceiver system for wirelessly accessing a wide area network or virtual private network (VPN) and system servers. In the preferred embodiment of the invention, mobile system 42 also includes an energy efficient vehicle, such as an electric or hybrid car or other vehicle 50 as the means for transporting the system. Although each of the devices 46-49 can be separate, it is contemplated that one or more of devices 46-49 can be incorporated into vehicle 50, or may be in the form of one or more portable devices. In one embodiment, delivery agents will carry a battery pack(s) in order to supply power to devices 46-49. Such a battery pack(s) may be incorporated into belts or into the uniform of a delivery agent.

[0011] Each vehicle 50 preferably includes an outdoor advertising kit enabling the services provider to selectively advertise for themselves, or others. Additionally, vehicles 50 can be outfitted with other tools or accessories, such as a dolly 51 for delivering large purchases to a customer. In one embodiment, a plurality of different sized vehicles 50 are provided, allowing for more flexibility in delivering oversized or large numbers of products/goods. For example, the customer will have the option of utilizing a delivery agent having a mini-vehicle, a mid-sized van, a large van or an extra large moving van. Optionally, vehicle 50 may be provided with at least one hide-away seat which may be utilized to transport a customer(s), such as when a customer wishes to accompany a delivery agent to view a product(s) in person.

[0012] A method for utilizing system 10 will now be discussed. Initially, if a customer wishes to contact the services provider for system 10, the customer registers with the services provider by first contacting user interface 22. If the customer is a new user, the customer then

registers with the services provider and the customer information is stored in customer database 34. Optionally, the customer can register by other means, such as mailing in an application. Registration may include gathering billing information from the customer, such as a credit card number or other desired billing method, as well as indicating a delivery address. Preferably, a credit check of the customer is conducted prior to the customer being approved as a registered customer, and the customer is pre-approved for a particular credit amount. When a customer requests services, a pre-authorization check is conducted, such as by charging an amount to a customer's designated charge account, in order to verify that funds are available.

[0013] Preferably, a membership card or other information will be sent to the customer upon registration. The customer may then log into system 10 via website 22 utilizing a user name and password generated during registration. The customer will be provided with information regarding the location of a plurality of delivery agents. More specifically, the customer will enter in the area he or she is interested in obtaining services, such as by entering his or her local zip code or the address of a store where a desired product is being sold. Optionally, the customer may first find information on a product and location of a store or conduct cost-comparisons of products utilizing an internet search engine or cost comparison website. A website tool will allow the user to select the delivery services of system 10, wherein system 10 will gather information from the results of the internet search engine or website in order to generate a request for services. In a preferred embodiment, widgets are provided for other websites, such as classified ads or internet retailers, for ease in data transmission to server 14 and individual delivery agents. For example, a consumer will simply click on a widget indicating the service

provider of system 10 in order to view the closest vehicle 50 to the location depicted on the user interface 22 being viewed by the customer. If desired, the pick-up destination and map is automatically captured and transmitted to a selected delivery agent's vehicle with an approximate cost estimate for the consumer. In addition, system 10 will preferably allow a user to rate retailers and/or sellers and post comments. In one embodiment, user interface 22 will provide the consumer with targeted advertising related to the particular geographic region of the consumer delivery and/or pick-up location. Additionally, retail sales alerts and value alerts for locations of interest may be displayed on user interface 22.

[0014] Next, information regarding the location and status of delivery agents in the desired area will be displayed on the user interface 22, and the user will have the option of selecting the delivery agent of his or her choice. For example, a map of the local area where the customer is located may appear showing the location of one or more delivery agents in close proximity to the pickup and/or delivery location. Indicia for the delivery agents may be color coded to indicate the status of the delivery agent. For example, a green dot on the map may indicated a delivery agent who is available, a red dot may indicate a delivery agent who is currently filling an order, and a yellow dot may indicate a delivery agent who is on standby, such as a large delivery van driver who may work from a home base, or a vehicle that is recharging or refueling. In one embodiment, the customer will have access to information regarding the type of vehicle each delivery agent is driving, and may base his or her selection on the type of vehicle desired for the pickup/delivery, or may contact a particular delivery agent based on the customers preference for the particular delivery agent.

[0015] In one embodiment, if no delivery agent is in the immediate area selected, the map will zoom out to encompass a larger area until one or more delivery agents appear on the map. Optionally, a decision algorithm incorporated in system 10 may be utilized to select a delivery agent for the customer. Once the desired delivery agent is selected, a customer request and profile is sent to the delivery agent, and a communications link is established between the customer and the selected delivery agent. The customer profile preferably includes the credit limit available for purchases. In a preferred embodiment, the customer account information is sent to an onboard display unit located in the agent's vehicle 50. The request for a particular product(s) is sent to the selected delivery agent, along with the desired purchase location. Preferably, the user specifies the exact store location from which the selected delivery agent is to purchase the product(s). Alternatively, the system 10 will calculate the closest store from which to make the purchase based on the selected delivery agent's current location and the location of the customer. Such calculation may be done manually, utilizing GPS 47 or through some other means. Preferably, store locations will be selected in a manner which optimizes efficiencies and reduces vehicle operating costs by selecting store locations that reduce travel time for the selected delivery agent both to the store and during delivery to the customer.

[0016] A purchase order or transaction request may be scheduled for a particular date and/or time, or may be requested as needed by the customer. In a preferred embodiment, once an order is scheduled, a price estimate of services will be sent to the customer for approval before proceeding with the transaction. Such an estimate may be generated, for example, based on the estimated driving time for the delivery agent and a service charge for purchase and delivery of a desired product(s).

Optionally, a user may choose to share a trip, in which case multiple consumers will utilize the same delivery agent to purchase products at the same location. In this embodiment, the location, as well as the time the delivery agent will be at the location, will be posted on user interface 22 and customers within the same geographic region may choose to utilize the same delivery agent. In this situation, greater efficiencies are realized and discounts may be offered to customers who participate in the shared pick-up event.

[0017] Once a store location is selected, the selected delivery agent travels to the store location, and finds the desired product(s) to be purchased. Ideally, real-time video device 46 is utilized to provide a streaming “street view” for the customer’s entertainment and to show the progress of the delivery agent. Additionally, GPS 47 is utilized with digital mapping technology to update the customer as to the location of the delivery agent. In one embodiment, once the delivery agent arrives at the selected location, the delivery agent activates a wearable real-time video device 46, which provides the customer with a real-time view of the selected location as seen by the delivery agent. The delivery agent enters the shopping location and identifies the product(s) of interest. Optionally, system 10 may send short message service (sms) alerts or initiate voice communication when a delivery agent is leaving vehicle 50 to enter a location so that a customer can multi-task without worrying about the status of the delivery agent. The delivery agent then communicates to the customer that the product(s) has been identified, and the customer has the option of inspecting the product(s) in real-time. If the customer chooses to inspect the product(s), the customer will communicate instructions to the delivery agent, and the delivery agent will utilize real-time video device 46 to transmit real-time data to

customer computer 30. In a preferred embodiment, instructions will be in the form of several pre-approved commands. For example, the customer may request that the delivery agent zoom-in on a particular feature, zoom out, pan right or pan left. Such pre-approved commands will minimize miscommunications between the customer and the delivery agent.

[0018] Next, the customer can either approve a purchase or reject the inspected product(s). If the product(s) is rejected, the customer has the choice of inspecting another product(s) or terminating the service. Once the service is terminated, fees for the services provided are calculated as will be discussed in more detail below. If the customer requests further shopping, the delivery agent will move to other similar product(s) or may travel to another location in search of a satisfactory product(s). If the product(s) is approved, the delivery agent will purchase the product(s) on behalf of the customer and deliver the product(s) based on the delivery options specified in the customer's profile, or amended delivery instructions provided by the customer at the beginning of a particular shopping request. If the customer is not qualified for the amount of the desired purchase, the customer will be notified that the purchase cannot be made. It should be understood that this step can be provided at any time during the service period whenever it is established that the purchase price is outside of the pre-approved credit limit. Alternatively, the customer has the option of paying the retailer or seller directly, in which case the customer will only be billed for the pick-up and delivery services provided. For payment by proxy, the delivery agent may utilize printer 49 to produce a pre-authorization purchasing document including billing information which allows the delivery agent to pay at pick-up. If pre-purchased by the customer, the delivery agent can obtain a receipt showing proof of pre-payment by the customer. In

one example, if a customer wishes a delivery agent to pick-up a used good(s), such as from a yard sale, the delivery agent will debit the customer's credit card for the amount of the purchase price, and upon successfully receiving funds from the customer account, will utilize printer 49 to print out a check as legal tender for the goods to be purchased.

[0019] In a preferred embodiment, printer 49 is also utilized to print out an invoice for the amount of time the delivery agent was engaged, distance traveled, purchased product(s) and shopping services rendered. The invoice may then be delivered along with paperwork (e.g., receipts) and the product(s) to the customer. Preferably, the invoice is packaged and attached to the purchased product(s). If no product is purchased and no delivery is made, an invoice for services rendered may be generated utilizing billing database 35 and information provided by the delivery agent, with the invoice being sent to the customer either electronically (e.g., via a designated email address) or through standard mail delivery methods. The services rendered may be charged directly to a designated customer credit card, or utilizing some other designated electronic payment method. In one embodiment of the invention, each delivery agent will have his or her own designated checking account and/or credit card which will be utilized to purchase the desired goods, and the customer will be billed for services and product(s) purchased upon delivery of the product(s) to the customer. Real-time video device 46 may be utilized throughout the transaction to show the location of the delivery agent as the agent is driving to a desired purchase location, to show the product(s) at the purchase location, and to verify delivery of the product(s) to the customer at the designated delivery location. In one embodiment, the customer may select a curbside drop-off of goods, or

may request “white glove” delivery, in which case the delivery agent will deliver the product directly to the customer’s door or desired physical location.

[0020] Based on the above, it should be understood that the present invention provides a system for remote shopping and delivery that supplies a customer with the detailed information needed to make an informed purchase remotely, and provides rapid same-day delivery of goods without creating a large carbon footprint. Although described with reference to preferred embodiments of the invention, it should be readily understood that various changes and/or modifications can be made to the invention without departing from the spirit thereof. For instance, although discussed in the context of a customer who wishes to purchase a product(s), it should be understood that system 10 may be utilized to schedule both pick-ups and delivery of any type of goods. In one embodiment, system 10 will be utilized to arrange for disposal services for a customer, such as trash removal or hazardous materials removal. For example, a customer may wish for a delivery agent to purchase and deliver a new water heater, but may also wish for the delivery agent to carry away the old water heater or arrange for a third-party pickup of the water heater. In this situation, the delivery agent may arrange for a local trash service to perform a one-time pick-up of the old water heater. In another example, a consumer may utilize a delivery agent in a different country or city in order to shop remotely for a desired product(s), and the delivery agent may arrange for a third party delivery service to transport the product(s) to the consumer. In another example, a delivery agent might be engaged to view a real estate listing and provide real-time video remote viewing of the property. Certainly, the pick-up and delivery options are not meant to be limited by the examples demonstrated above.

ABSTRACT OF THE DISCLOSURE

A system and method for remote shopping and delivery includes a server in communication with customer computers, such as through a user interface via the internet. The server can store customer information including billing information, and may include a real-time video processor. A mobile delivery system in communication with the server includes an energy efficient vehicle, real-time video device, global positioning system, communication device and a printer. In use, a consumer communicates with a mobile delivery agent via the real-time video device and the communications device to remotely shop for a product(s). Once purchased, the delivery agent delivers the product(s) to a designated delivery location. The real-time video device can be utilized during the entire transaction to track the location of the delivery agent. The system preferably includes a processor for optimizing system efficiencies, including selecting a delivery agent based on the product, pick-up location and delivery site.