US010628835B2

(12) **United States Patent**
Barron et al.

(10) **Patent No.: US 10,628,835 B2**
(45) **Date of Patent: Apr. 21, 2020**

(54) **SYSTEM AND METHOD FOR REMOTE ACQUISITION AND DELIVER OF GOODS**

(75) Inventors: **Mark B Barron**, Los Angeles, CA (US); **Michael Hays**, Indian Wells, CA (US)

(73) Assignee: **Consumeron, LLC**, Los Angeles, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1602 days.

(21) Appl. No.: **13/270,848**

(22) Filed: **Oct. 11, 2011**

(65) **Prior Publication Data**

US 2013/0091070 A1 Apr. 11, 2013

(51) **Int. Cl.**

G06Q 30/06	(2012.01)
G06Q 30/02	(2012.01)
G06Q 10/00	(2012.01)

(52) **U.S. Cl.**

CPC ***G06Q 30/02*** (2013.01); ***G06Q 10/00*** (2013.01)

(58) **Field of Classification Search**

CPC G06Q 30/0601; G06Q 30/0635; G06Q 30/0633; G06Q 30/0641; G06Q 20/40; G06Q 20/12

USPC 705/26.1, 27.1

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,896,128	A	4/1999	Boyer
5,907,604	A	5/1999	Hsu
6,026,376	A	2/2000	Kenney
6,032,130	A	2/2000	Alloul et al.
6,070,149	A	5/2000	Tavor et al.
6,381,583	B1	4/2002	Kenney
6,587,835	B1	7/2003	Treyz et al.
6,598,027	B1	7/2003	Breen, Jr. et al.
6,604,681	B1	8/2003	Burke et al.

(Continued)

FOREIGN PATENT DOCUMENTS

JP	2002094621	3/2002
JP	2003132278	5/2003

(Continued)

OTHER PUBLICATIONS

Lawrence et al., "*Personalization of Supermarket Product Recommendations*", Data Mining and Knowledge Discovery, vol. 5, pp. 11-21, 2001.

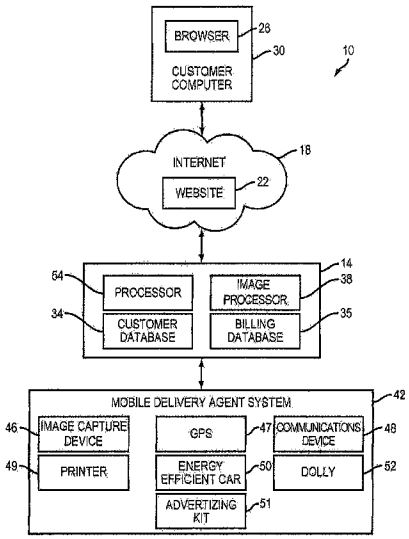
Primary Examiner — Ming Shui

(74) *Attorney, Agent, or Firm* — Diederiks & Whitelaw, PLC

(57) **ABSTRACT**

A system and method for remote acquisition and delivery of goods 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 an image processor. A mobile delivery system in communication with the server includes an energy efficient vehicle, an image capture device, a global positioning system, a communication device and a printer. In use, a customer communicates with a mobile delivery agent via the image capture device and the communication device to remotely acquire a product. Once acquired, the delivery agent delivers the product to a designated delivery location. The image capture device can be utilized during the entire transaction. 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.

27 Claims, 3 Drawing Sheets



Instacart Exhibit 1025

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,646,672	B2	11/2003	Feierbach	
6,837,436	B2	1/2005	Swartz et al.	
6,906,741	B2	6/2005	Canova, Jr. et al.	
6,965,868	B1	11/2005	Bednarek	
7,040,541	B2	5/2006	Swartz et al.	
7,063,263	B2	6/2006	Swartz et al.	
7,096,037	B2	8/2006	Canova, Jr. et al.	
7,124,098	B2	10/2006	Hopson et al.	
7,130,814	B1	10/2006	Szabo et al.	
7,195,157	B2	3/2007	Swartz et al.	
7,206,647	B2	4/2007	Kumar	
7,251,621	B1	7/2007	Weng	
7,309,015	B2	12/2007	Frantz et al.	
7,492,386	B2	2/2009	Nichols et al.	
7,505,929	B2	3/2009	Angert et al.	
7,515,914	B2	4/2009	Herrod et al.	
7,546,254	B2	6/2009	Bednarek	
7,574,365	B2 *	8/2009	Miller et al.	705/1.1
7,599,855	B2	10/2009	Sussman	
7,613,629	B2	11/2009	Antonucci et al.	
7,627,502	B2	12/2009	Cheng et al.	
7,680,694	B2	3/2010	Glazer et al.	
7,710,449	B2	5/2010	Amiel et al.	
7,775,431	B2	8/2010	Skaaksrud et al.	
7,797,204	B2	9/2010	Balent	
7,907,638	B2	3/2011	Norhammar et al.	
7,954,710	B1	6/2011	Lee	
8,224,707	B1	7/2012	Smith et al.	
8,321,298	B2	11/2012	Chou et al.	
2001/0044751	A1	11/2001	Pugliese, III et al.	
2002/0072974	A1	6/2002	Pugliese et al.	
2002/0093531	A1	7/2002	Barile	
2002/0163548	A1	11/2002	Chiu et al.	
2003/0115104	A1	6/2003	Smith et al.	
2003/0125963	A1	7/2003	Haken	
2003/0200152	A1	10/2003	Divekar	
2004/0199435	A1	10/2004	Abrams et al.	
2004/0260618	A1	12/2004	Larson	
2005/0004844	A1	1/2005	Attia	
2005/0015311	A1	1/2005	Frantz et al.	
2005/0228719	A1	10/2005	Roberts et al.	
2006/0020522	A1	1/2006	Pratt	
2006/0041627	A1	2/2006	Tu	
2006/0111955	A1 *	5/2006	Winter et al.	705/8
2006/0173772	A1 *	8/2006	Hayes et al.	705/37
2006/0259369	A1	11/2006	Bongrazio et al.	
2007/0088617	A1	4/2007	Yang	
2007/0100704	A1	5/2007	Liu et al.	
2007/0203791	A1 *	8/2007	Kohl et al.	705/14
2007/0208629	A1	9/2007	Jung et al.	
2007/0226074	A1	9/2007	Haines et al.	
2008/0040240	A1	2/2008	Covington et al.	
2008/0077956	A1	3/2008	Morrison et al.	
2008/0086386	A1 *	4/2008	Bell	705/26
2008/0093460	A1	4/2008	Frantz et al.	
2008/0162305	A1	7/2008	Rousso et al.	
2008/0222009	A1	9/2008	Maranhao	
2008/0235038	A1	9/2008	Szamel	
2008/0313052	A1	12/2008	Otto et al.	
2009/0089211	A1 *	4/2009	Morse	705/41
2009/0094324	A1	4/2009	Le Chevalier	
2009/0099972	A1	4/2009	Angert et al.	
2009/0157486	A1	6/2009	Gross	
2009/0192892	A1	7/2009	Cason	
2009/0222358	A1	9/2009	Bednarek	
2009/0249244	A1	10/2009	Robinson et al.	
2009/0265248	A1	10/2009	Walker	
2010/0094694	A1	4/2010	Shapiro	
2010/0142758	A1	6/2010	Pinhas et al.	
2010/0185514	A1	7/2010	Glazer et al.	
2010/0231556	A1	9/2010	Mines et al.	
2010/0241707	A1	9/2010	Burton et al.	
2010/0280896	A1	11/2010	Postrel	
2010/0280918	A1	11/2010	Balent	
2010/0293106	A1	11/2010	Rhoads et al.	
2011/0010238	A1	1/2011	Postrel	
2011/0022499	A1	1/2011	Hogan	
2011/0029344	A1	2/2011	Weiler et al.	
2011/0035299	A1	2/2011	Casey	
2011/0047162	A1	2/2011	Brindisi et al.	
2011/0055046	A1	3/2011	Bowen et al.	
2011/0145051	A1	6/2011	Paradise et al.	
2011/0145093	A1	6/2011	Paradise et al.	
2011/0202394	A1	8/2011	Borom et al.	
2011/0258086	A1	10/2011	Stein	
2012/0233032	A1	9/2012	Calman et al.	
2012/0265651	A1	10/2012	Ephraim	

FOREIGN PATENT DOCUMENTS

JP	2003533777	11/2003
JP	2006004096	1/2006
JP	2006082981	3/2006
JP	2007304633	11/2007
JP	2008217831	9/2008

* cited by examiner

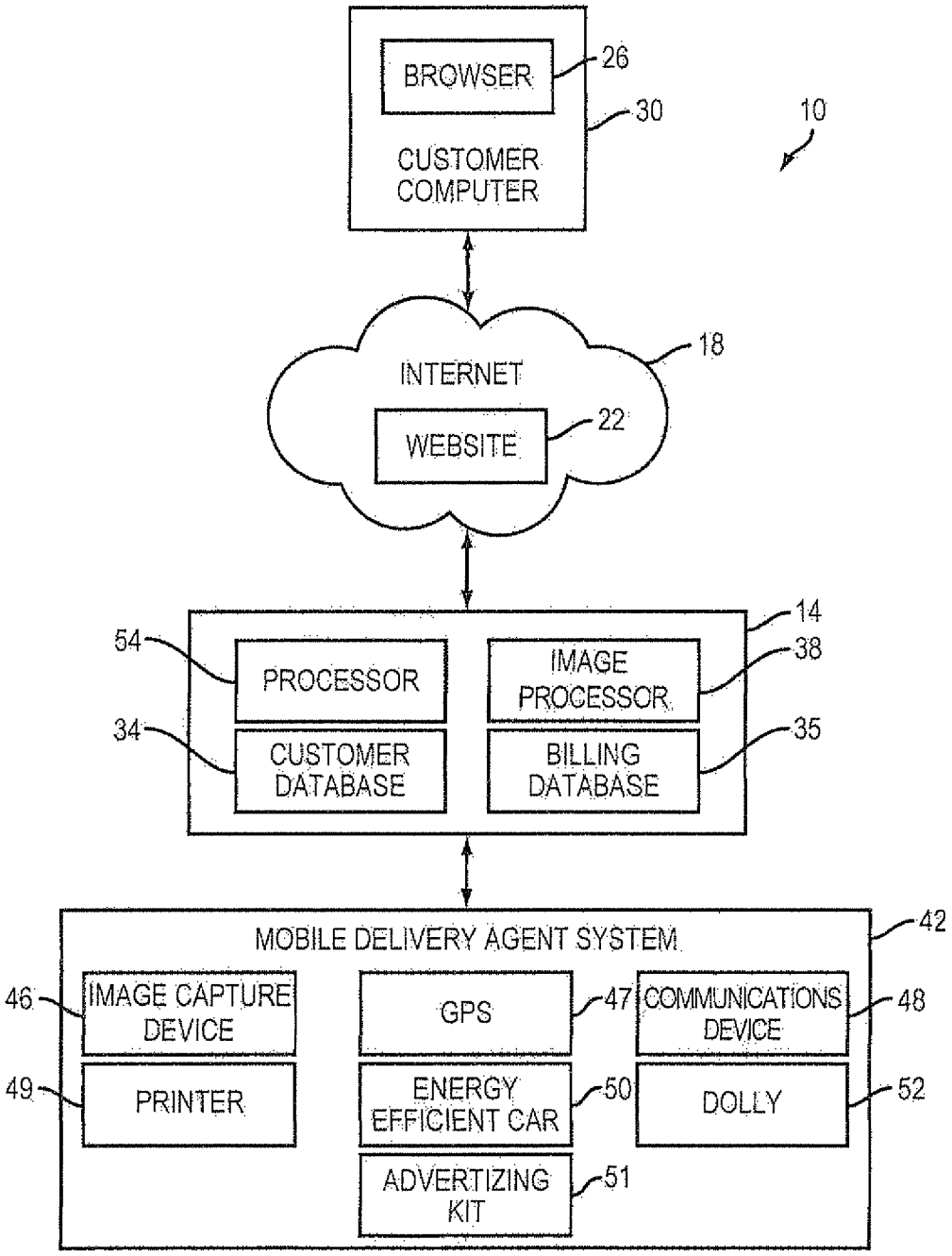

BROWSER
26
30
10
CUSTOMER COMPUTER
INTERNET
18
WEBSITE
22
14
54
PROCESSOR
IMAGE PROCESSOR
38
34
CUSTOMER DATABASE
BILLING DATABASE
35
MOBILE DELIVERY AGENT SYSTEM
42
46
IMAGE CAPTURE DEVICE
GPS
47
COMMUNICATIONS DEVICE
48
49
PRINTER
ENERGY EFFICIENT CAR
50
DOLLY
52
ADVERTIZING KIT
51

FIG. 1

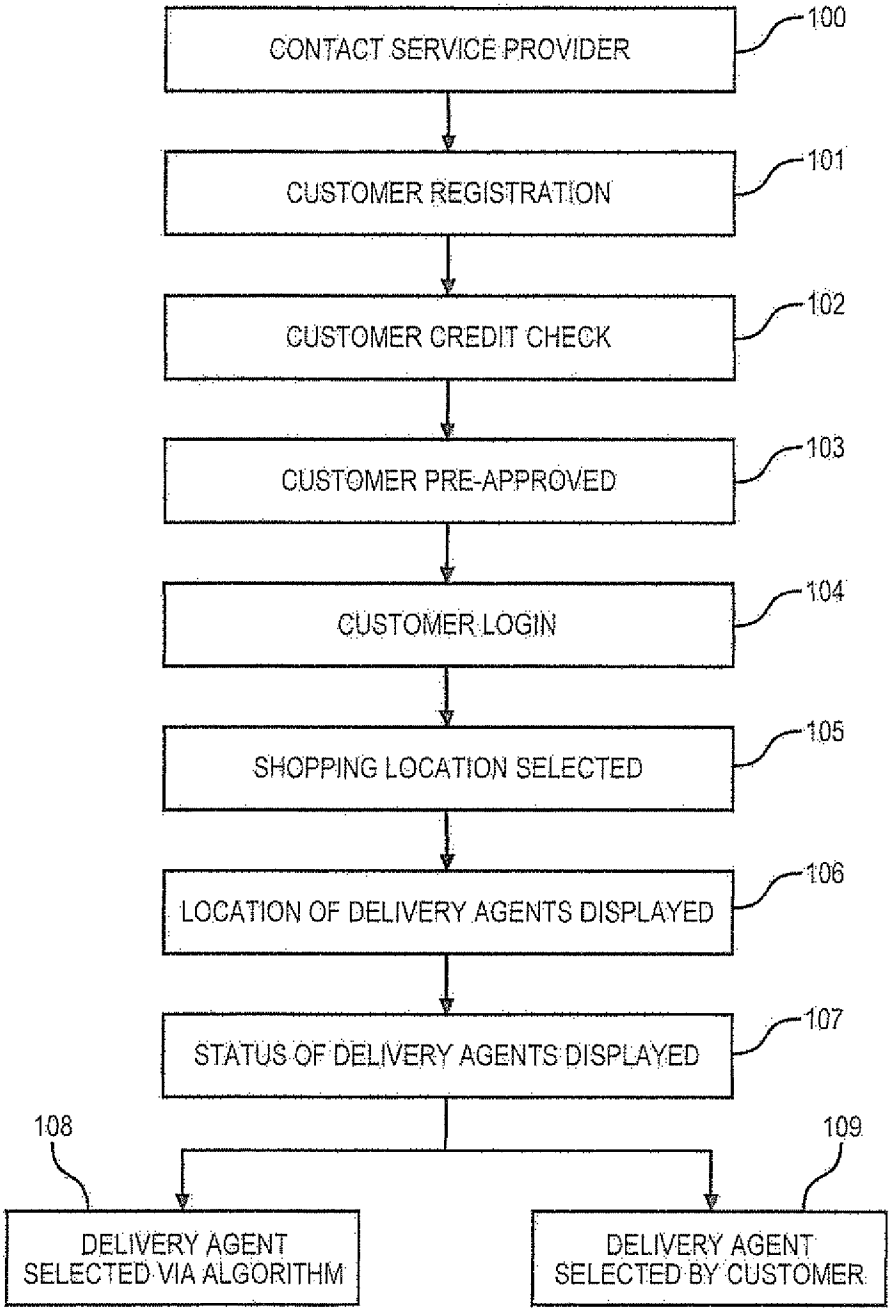

CONTACT SERVICE PROVIDER
100
CUSTOMER REGISTRATION
101
CUSTOMER CREDIT CHECK
102
CUSTOMER PRE-APPROVED
103
CUSTOMER LOGIN
104
SHOPPING LOCATION SELECTED
105
LOCATION OF DELIVERY AGENTS DISPLAYED
106
STATUS OF DELIVERY AGENTS DISPLAYED
107
108
109
DELIVERY AGENT SELECTED VIA ALGORITHM
DELIVERY AGENT SELECTED BY CUSTOMER

FIG. 2

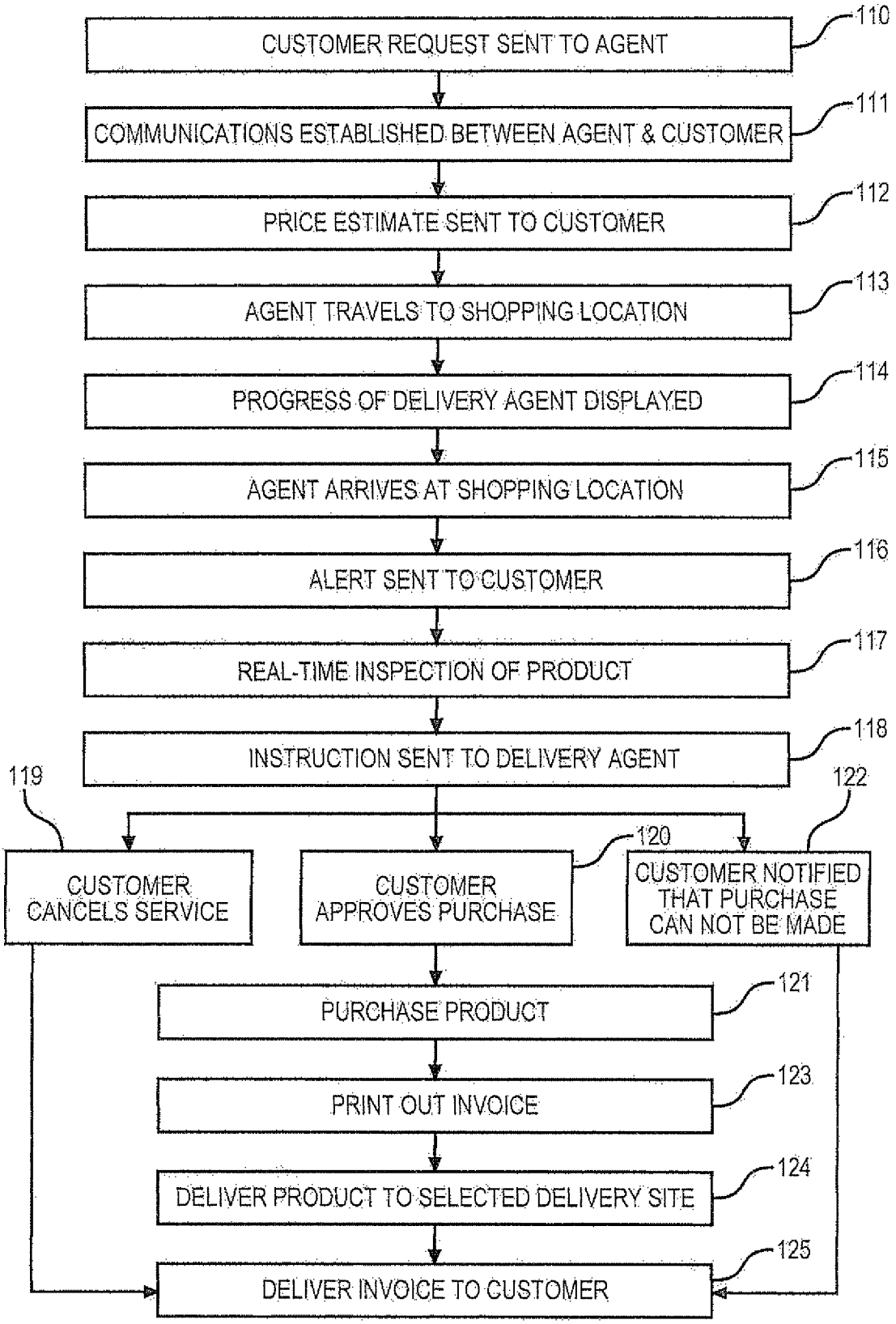

CUSTOMER REQUEST SENT TO AGENT
110
COMMUNICATIONS ESTABLISHED BETWEEN AGENT & CUSTOMER
111
PRICE ESTIMATE SENT TO CUSTOMER
112
AGENT TRAVELS TO SHOPPING LOCATION
113
PROGRESS OF DELIVERY AGENT DISPLAYED
114
AGENT ARRIVES AT SHOPPING LOCATION
115
ALERT SENT TO CUSTOMER
116
REAL-TIME INSPECTION OF PRODUCT
117
INSTRUCTION SENT TO DELIVERY AGENT
118
119
122
CUSTOMER CANCELS SERVICE
CUSTOMER APPROVES PURCHASE
120
CUSTOMER NOTIFIED THAT PURCHASE CAN NOT BE MADE
PURCHASE PRODUCT
121
PRINT OUT INVOICE
123
DELIVER PRODUCT TO SELECTED DELIVERY SITE
124
DELIVER INVOICE TO CUSTOMER
125

FIG. 3

SYSTEM AND METHOD FOR REMOTE ACQUISITION AND DELIVER OF GOODS

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a continuation-in-part of U.S. patent application Ser. No. 12/711,867 entitled "System and Method for Remote Acquisition and Delivery of Goods" filed Feb. 24, 2010, now U.S. Pat. No. 8,244,594, and a continuation-in-part and claims the benefit of International Patent Application No. PCT/US2010/046746 entitled "System and Method for Remote Acquisition and Delivery of Goods" filed Aug. 26, 2010, which also claims the benefit of U.S. patent application Ser. No. 12/711,867, with U.S. patent application Ser. No. 12/711,867 claiming the benefit of U.S. Provisional Patent Application Ser. No. 61/237,128 entitled "System and Method for Remote Shopping and Delivery" filed Aug. 26, 2009, all of which are hereby incorporated by reference in their entirety.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention pertains to customer shopping and, more particularly, to a system and method for remote acquisition and delivery of goods.

Discussion of the Prior Art

Electronic commerce via the internet is rapidly becoming a standard method by which customers purchase goods remotely for delivery to a location of the customer'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 customers 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 customers, rather than to a single store from where the items can be purchased, certain inefficiencies are realized.

Perhaps more important, many customers are opposed to internet shopping. For instance, customers 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 the item or the picture will be inadequate to accurately depict the item. For this reason, the customer 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.

Additionally, although there does exist services which are designed to run errands for individuals and companies, there currently exists no good solution for an individual to receive real-time feedback on the goods to be purchased. More specifically, there does exist internet-based companies who will arrange for errands to be run for a fee. However, if the person running the errand purchases the wrong product, the person placing the order will not know until the item is delivered. This creates the potential for a confrontation or, at the very least, a dissatisfied purchaser who has now also lost significant time in acquiring the desired product. Now this scenario may not be too important for certain items, say milk for instance, but can be particular significant for other items, such as a dress, designer shoes or a painting, for example.

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

SUMMARY OF THE INVENTION

The present invention is directed to a system and method for remote acquisition and delivery of goods. The system includes a server in communication with customer computers or devices via a website on the internet or through a network. The server stores customer information including billing information, and includes a digital image capture processor, such as an optical image or real-time video capture processor. In accordance with a preferred embodiment, a mobile delivery agent system in communication with the server includes an energy efficient vehicle, a digital image capture device such as a digital camera in a cell phone, a global positioning system (GPS), a communication device and a printer.

In use, a customer contacts a service provider through the remote acquisition and delivery system and registers to use the system. Once registered, the user provides the service provider with information regarding the type of product desired and, perhaps, the shopping or acquisition location from which the user desires to purchase or otherwise obtain the product. A mobile delivery agent assigned to the user, familiar with the type of product and/or in close proximity to the shopping location will receive the request for purchase or acquisition from the system, and the delivery agent will proceed to the shopping location. The GPS preferably tracks the delivery agent, and provides navigational information to the delivery agent. The digital image capture device is utilized to deliver real-time digital images of the delivery agent on the way to the location, as well as images captured during execution of a purchase process. The customer is allowed to interact with the delivery agent to inspect the product remotely using the digital image capture device and the communication device. For instance, digital pictures or video can be taken and used to communicate the product to the customer. On the other hand, bar codes, QR (Quick Response) codes, image recognition or near field communication can be used in identifying and communicating information about the product of concern. Once a purchase or acquisition is approved, the delivery agent acquires the product on behalf of the customer and delivers the product to a designated delivery location. The printer is utilized to produce an invoice and any other transaction documents for delivery to the customer, or documents are mailed to the customer by standard mail or electronic mail. The system preferably includes one or more processors for optimizing efficiencies of the system and calculating the most efficient use of delivery agents based on the shopping location and the delivery site.

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 DRAWING

FIG. **1** is a schematic diagram of a preferred embodiment of the remote acquisition and delivery system of the present invention;

Instacart Exhibit 1025

FIG. **2** is a flow chart depicting steps involved in a preferred method of the present invention; and

FIG. **3** is a flow chart depicting additional steps involved in a preferred method of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to FIG. **1**, a remote acquisition 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 WAN or 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 as a personal computer including a browser **26**, a television, a cell phone or other mobile device. For example, the user interface **22** may be installed as an application on the user's mobile device, such as the user's iPhoner™, Blackberry or other PDA. Preferably, system **10** makes use of emerging "blended services" technologies including integrated voice, image 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.

A plurality of databases are stored within server **14**. For example, customer data is stored in a customer database **34** on server **14**, and billing information is stored in billing database **35**. A digital image capture processor **38** is also preferably 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 digital image capture device **46**, such as a cell phone or other similar device incorporating a digital camera for taking still or video images, reading product bar or QR code data, or combinations thereof including a picture in combination with image recognition software as will be detailed more fully below, 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 a 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, in a preferred embodiment one or more of devices **46-49** are incorporated into vehicle **50**, or are in the form of one or more portable devices. In one embodiment, delivery agents will carry a battery pack(s) to supply power to devices **46-49**. Such a battery pack(s) are preferably incorporated into belts or into the uniform of a delivery agent.

Each vehicle **50** preferably includes an outdoor advertising kit **51** 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 **52** 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. Additionally, each vehicle **50** in communication with server **14** is preferably equipped with a kill switch which may be remotely activated by the services provider of system **10**. Optionally, vehicle **50** is provided with at least one hide-away seat which is utilized to transport a customer(s) and/or the customer's pet, such as when a customer wishes to accompany a delivery agent to view a product in person or when a customer needs to take his or her pet to the vet or boarding house. Further, a secure pick-up service for customers with accompanying membership cards may be provided for a fee, similar to an AAA membership for road side assistance.

A method for utilizing system **10** will now be discussed with reference to FIG. **2**. Initially, if a customer wishes to contact the services provider for system **10**, the customer registers with the services provider by first contacting the service provide through user interface **22** and WAN **18**, as indicated at **100**. If the customer is a new user, the customer then registers with the services provider at **101** and the customer information is stored in customer database **34**. Optionally, the customer registers by other means, such as mailing in an application. Registration preferably includes gathering billing information from the customer, such as a credit card number or other desired billing method, as well as indicating one or more delivery addresses. In one embodiment, information on the location of a customer is transmitted from a customer's smart phone or GPS enabled phone or device to system **10**. In this way, the delivery address of a customer can be obtained without the need for the customer or the service provider to physically type in the delivery location information. Preferably, a credit check of the customer is conducted at **102** prior to the customer being approved as a registered customer, and the customer is pre-approved for a particular credit amount at step **103**. 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. In a preferred embodiment, customer database **34** additional stores customer history of use data, which may be utilized in conjunction with a loyalty program similar to a frequent-flyer type program. The customer database **34** may also store a customer's recurring order as set up and managed by the customer. The customer database **34** may also track a customer's previous purchase information which may be helpful in allowing the system to suggest a repeated order or a recurring order to the customer. The customer database **34** may keep such profile information or historical information which may be utilized to suggest purchases to a customer.

Preferably, a membership card or other information is sent to the customer upon registration. The customer then logs into system **10** via website **22** at step **104** utilizing a user name and password generated during registration. The customer is next provided with information regarding the location of a plurality of delivery agents. More specifically, the customer may enter in the area he or she is interested in obtaining services through utilizing a user interface, such as by entering his or her local zip code or the address of a store where a desired product is being sold at step **105**, using an input device (e.g., keyboard) of user interface **22**. Next, information regarding the location and status of delivery agents in the desired area is displayed on a display screen of user interface **22** at step **106**, and the user has 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 appears showing the location of one or more delivery agents in close proximity to the shopping and/or delivery location. A user may be able to zoom in and zoom out on this map. Indicia for the delivery agents are preferably color coded to indicate the status of the delivery agent as indicated at step **107**. For example, a green dot on the map indicates a delivery agent who is available, a red dot indicates a delivery agent who is currently filling an order, and a yellow dot indicates 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 has 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 select a particular delivery agent based on the customer's preference for the particular delivery agent. In one embodiment, delivery agent profiles are available for customers to review. Such profiles may include, for example, a picture of the delivery agent with a short biography, a list of any particular areas of expertise, other customers' remarks, ratings or feedback regarding the delivery agent, or the like.

Preferably, the user specifies the exact location from which the selected delivery agent is to purchase or otherwise acquire the product, such as a retail store location. Alternatively, system **10** calculates the closest location 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**, utilizing processor **54** or through some other means. Preferably, store locations are 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.

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. As set forth above, in a first embodiment, a customer selects the delivery agent based on a variety of factors such as location, availability, or preference for a particular agent, as indicated at step **108**. Alternatively, a processor **54** including a decision algorithm is utilized to select a delivery agent for the customer, as indicated at step **109**. For example, a selection of a delivery agent may be made to enable a delivery agent to obtain goods for more than one customer in a single trip or to minimize the total number of miles traveled by the plurality of delivery agents. Alternatively, a delivery agent manager may select the most appropriate delivery agent for the user, given the desired area and status of delivery agents in the desired area.

As shown in FIG. **3**, once the desired delivery agent is selected at steps **108** or **109**, a customer shopping or acquisition request and profile is sent to the delivery agent at step **110**, and a communications link is established between the customer and the selected delivery agent at step **111**, such as through a telephone or internet connection. Preferably, the customer account information is sent to a communications device **48** in the form of a portable internet device or an onboard display unit located in the agent's vehicle **50**. The portable internet device or onboard display unit may be voice, data and video enabled and utilize internet protocol. The request for a particular product is sent to the selected delivery agent, along with the desired shopping location. The customer profile preferably includes the credit limit available for purchases. The customer's profile may also include information related to a customer's order history.

In one embodiment, the customer first finds information on a product and location of a store or conducts cost-comparisons of products utilizing an internet search engine or cost comparison website. A website tool allows the user to select the delivery services of system **10**, wherein system **10** gathers information from the results of the internet search engine or website in order to generate a request for services or shopping request. 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 customer will simply click on a widget indicating the service provider of system **10** on a website in order to view the closest vehicle **50** to the shopping location depicted on the user interface **22** being viewed by the customer. The pick-up destination and map are automatically captured and transmitted to a selected delivery agent's vehicle, along with an approximate cost estimate for the customer. In addition, system **10** preferably allows a user to rate retailers and/or sellers and post comments. In one embodiment, user interface **22** provides the customer with targeted advertising related to the particular geographic region of the customer delivery and/or pick-up location. Additionally, retail sales alerts and value alerts for locations of interest are preferably displayed on user interface **22**. In one embodiment, system **10** enables customers to post classified ads for used goods, wherein delivery services associated with system **10** can be utilized by customers to shop for the used goods remotely and have the used goods delivered to a desired delivery site as will be explained in more detail below.

A purchase order or acquisition request is scheduled for a particular date and/or time, or is requested as needed by the customer. In a preferred embodiment, once an order is scheduled, a price estimate of services is sent to the customer for approval before proceeding with the transaction as indicated at step **112**. Such an estimate is 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. Optionally, a user may choose to share a trip, in which case multiple customers will utilize the same delivery agent to purchase products at the same location. In this embodiment, the status of the delivery agents posted on user interface **22** includes the shopping location the delivery agent is traveling to, as well as the time the delivery agent will be at the shopping location. With this information, customers within the same geographic region may choose to utilize the same delivery agent. Although the method of the present invention discussed in more detail below only references a single customer, it should be understood that any additional customer that selects the same agent will also send an acquisition request to system **10**, wherein the agent will electronically transfer an image, either in still or video form, of the requested goods using digital image capture device **46**, in the same manner as described with respect to the first customer. The agent may then acquire the second set of goods for the second customer and make a second, delivery trip to a delivery location specified by the second customer. In some situations, an agent may be able to obtain goods for multiple customers from one shopping location in a single trip. In this situation, greater efficiencies are realized and discounts may be offered to customers who participate in the shared pick-up event. In one embodiment, a customer may be able to pay a premium for a faster delivery. In such a scenario, a selection of a delivery agent may be made to

accommodate the customer who has paid the premium instead of to maximize the overall efficiency of the delivery agents for multiple customers.

Once a store location is selected, the selected delivery agent travels to the store location as indicated at step **113**, and finds the desired product to be acquired. Ideally, digital image capture device **46** is utilized to provide a streaming "street view" for the customer's entertainment and to show the progress of the delivery agent as indicated at **114**. Additionally, GPS **47** is utilized with digital mapping technology to dynamically update the customer as to the location of the delivery agent. In one embodiment, once the delivery agent arrives at the selected location as indicated at **115**, the delivery agent activates a wearable real-time digital image capture device **46**, which provides the customer with a real-time view of the selected location as seen by the delivery agent. In one embodiment, system **10** sends short message service (sms) alerts to the customer or initiate voice communication with the customer when a delivery agent is leaving vehicle **50** to enter a location so that the customer can multi-task without worrying about the status of the delivery agent, as indicated at **116**. The delivery agent then enters the shopping location and identifies the product of interest. The delivery agent then communicates to the customer that the product has been identified, and the customer has the option of inspecting the product in real-time at **117**. If the customer chooses to inspect the product, the customer will communicate instructions to the delivery agent at **118**, and the delivery agent will utilize digital image capture device **46** to transmit real-time data to customer computer **30**. This data can be collected and relayed in various forms. For instance, a digital picture could be captured and sent to the customer. Along the same lines, digital video can be employed, perhaps in combination with voice transmissions corresponding to Skype™ communications. In accordance with these preferred embodiments, instructions can 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. On the other hand, the product data can be collected by scanning a bar code associated with the product, or perhaps a QR code. In addition, optical imaging in combination with image recognition software can be used for product identification.

Next, the customer either approves or rejects acquisition of the inspected product. If the product is rejected, the customer has the choice of inspecting another product 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 products or may travel to another location in search of a satisfactory product. Of course, the customer may choose to terminate the acquisition services at any time, as indicated at **119**. If the product is approved at **120**, the delivery agent will purchase or otherwise acquire the product on behalf of the customer at **121** and deliver the product 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 or at some time during a particular shopping request. 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. Further, the location of the customer, and thus the delivery location, may be obtained directly from the customer's GPS enabled device or smart phone as previously discussed. Additionally, the customer request may include a request for product pickup. For example, upon delivery of goods to the customer, the delivery agent may pick up recyclable products (e.g., cans, bottles, consumer electronics, etc.), which the delivery agent will transport to a recycling facility.

If the customer is not qualified for the amount of the desired purchase, or if the delivery agent cannot complete the transaction for any reason, the customer is notified that the acquisition cannot be made as indicated at **122**. 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 obtains 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 debits the customer's credit card for the amount of the purchase price, and upon successfully receiving funds from the customer account, utilizes printer **49** to print out a check as legal tender for the goods to be purchased.

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 and shopping services rendered, as indicated at **123**. The product is then delivered along with the invoice and any other paperwork (e.g., receipts) to the customer or the selected delivery site as indicated at **124** and **125**. Preferably, the invoice is packaged and attached to the purchased product. In one embodiment, the invoice includes a map having the route traveled during the shopping request and delivery highlighted, with an accompanying time history. 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 has his or her own designated checking account and/or credit card which is utilized to purchase the desired goods and the customer is billed for services and product purchased upon delivery of the product to the customer. In one preferred form of the invention, near field communication (NFC), which is available on many smartphones, could be utilized for payments between the agent or grabber and the store, or between the agent and the customer. In fact, near field communication could also be employed in connection with transmitting and displaying product data as well.

Digital image capture device **46** is preferably 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 at the purchase location, and to verify delivery of the product to the customer at the designated delivery location. In certain preferred embodiments, a series of still images or video footage is stored on server **14** and can be accessed for delivery agent evaluation,

for liability and public safety purposes, for delivery agent history or dispute resolution purposes, for example. However, in another embodiment, historic customer information is utilized for rapid request orders. More specifically, a customer can place an order through server **14**, and server **14** will send the order to a deliver agent without the need for the customer to select a delivery agent or communicate with the delivery agent. This feature can be particularly useful when a customer wishes to obtain previously ordered items such as prescription medications or groceries. In this case, the customer may be sent an alert through customer computer **30** when the delivery agent is nearing the delivery location.

Based on the above, it should be understood that the present invention provides a system for remote acquisition and delivery of goods that supplies a customer with the detailed information needed to make an informed purchase or acquisition remotely, and provides rapid same-day delivery of goods without creating a large carbon footprint. In one embodiment, system **10** calculates the reduction in carbon emissions from utilizing the service, or from selecting a particular delivery agent. It is contemplated that various retailers may work in conjunction with the services provider of system **10** to promote the use of the environmentally friendly services of the provider through displays indicating that the retails work with the service provider. In one embodiment, for example, a registered customer may opt-in for liquidation alerts from participating retailers. Additionally, participating retailers may provide in-house gear for staff or delivery agents, such as glasses with an embedded digital image capture processor **46** and a communications device **48** to enable staff or delivery agents entering the retail establishments to communicate with a customer. Alternatively, participating retailers may provide point-of-view (POV) cameras within the retail establishment which are connected to the internet and can be accessed by customers through system **10** so that the customers may view products within a store prior to engaging a mobile delivery agent.

In one exemplary embodiment, a customer generates an e-shopping "wish" list for desired products utilizing system **10**. The e-shopping list can be created manually by a user typing in his or her request into a user interface (e.g., keyboard) of computer **30**. Alternatively, the e-shopping list can be created utilizing an image and data capture device, such as a camera incorporated into a cell phone for taking digital pictures or video, and transferring the data to server **14** for processing. In another scenario, the list could be generated by scanning bar codes on existing products which the customer wants replaced, or taking a visual image in combination with image recognition software, such as Google Goggles™. A customer may travel to a retail establishment and, either utilizing in-house gear provided by the retail establishment or utilizing person equipment, such as a cell phone incorporating a camera, bar code or QR code scanning device, record which products the customer may be interested in obtaining at a future time. For each product on the list, the customer sends information regarding the product such as pictures, bar codes, QR codes, video, instructions, recipes, specifications, ingredients, where manufactured, etc. to server **14**. This e-shopping list is then made available to the customer upon logging into system **10**. Preferably, a selected delivery agent may retrieve the customer's e-shopping list and check items off the list as they are obtained utilizing communications device **48** or some other device communicating with server **14**. In this way, a customer can view the updates to their e-shopping list in real-time through their computer's connection to server **14**. Additionally, data or images captured by digital image capture processor **46**, or the customer's own equipment (e.g., a cell phone), may be utilized by server **14** to generate product reviews on the particular product of interest or to check the internet for digital coupons associated with the product. The product reviews may be accessed by the customer through system **10**, and the digital coupons may be viewed and accessed by the customer or the selected delivery agent and used in the purchase of the desired product. Such coupons may be printed by the selected delivery agent utilizing printer **49**, for example.

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. When referring to real-time imaging and the like, it should be understood that this term encompasses time requires to transmit the data between the customer and delivery agent or grabber, such as the time needed to transmit the information over the internet. Certainly, there are various forms for data transmission and communication disclosed in connection with the most preferred embodiments of the invention, with these data forms including, but not being limited to, still images (either alone or in combination with image recognition software), streaming video (really just a series of still images), bar code data and QR data, all of which are generically encompassed by a digital image capturing device and an associated processing device. Certainly bar code and QR data may be preferable due to associated accuracies, the ability to readily conduct simultaneous price comparisons for the product via internet searching or links, and enabling a host of information related to the product to be presented, e.g., nutritional or health information, product ratings and the like. Still, the image recognition or visual search technology certainly has its advantages, such as enabling a customer to directly convey to an agent a desired product for purchase through just the use a camera-equipped smartphone that can scan a product observed on a television set or simply observed elsewhere, such as at someone else's house. Still, various forms of electronic data could be employed. Additionally, although discussed in the context of a customer who wishes to purchase a product, it should be understood that the system of the invention may be utilized to schedule both pick-ups and delivery of any type of goods, including free goods. In one embodiment, the system 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 customer may utilize a delivery agent in a different country or city in order to shop remotely for a desired product, and the delivery agent may arrange for a third party delivery service to transport the product to the customer. 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. Further, the steps for the methods of remote acquisition and delivery of goods described herein do not necessarily need to be in the order in which they are presented above. In general, the invention is only intended to be limited by the scope of the following claims.

We claim:

1. A method for remote acquisition and delivery of goods comprising:

locating a plurality of agents of a service provider at various geographic locations, each agent having a mobile agent system in communication with at least one remote server, wherein each mobile agent system includes: a digital image capture device and a communication device;

receiving through the at least one remote server a first acquisition request from a first customer for a first set of one or more goods, including receiving product data from the first customer regarding at least one of the one or more goods;

contacting through the communications device one of the plurality of agents for a location having the first set of one or more goods;

electronically transmitting, in real-time, information on the first set of one or more goods to the first customer using the digital image capture device of the agent, including obtaining an image of a particular product of the first set of the one or more goods and sending the image for the first customer to inspect and approve the purchase of the particular product exactly shown in the image;

acquiring the particular product, via the agent; and

providing for delivery of the particular product to a delivery site.

2. The method of claim **1**, wherein each mobile agent system further includes a global positioning system and the method further comprising: sending to the first customer, information on the plurality of agents, including location information based on signals from the global positioning devices.

3. The method of claim **2**, wherein the first acquisition request from the first customer includes a selection of one of the plurality of agents for fulfilling the first acquisition request.

4. The method of claim **2**, wherein the information on the plurality of agents includes an availability status of the plurality of agents.

5. The method of claim **1**, further comprising:

conducting a credit check of the first customer prior to acquiring the first set of one or more goods; and

pre-approving the first customer for a particular purchase amount based on the credit check.

6. The method of claim **1**, further comprising: obtaining consent from the first customer to acquire the first set of one or more goods using the communication device before acquiring the first set one or more goods.

7. The method of claim **1**, further comprising, while delivering the first set of one or more goods, providing the first customer with a real-time street view utilizing the digital image capture device.

8. The method of claim **1**, wherein the each mobile agent system further includes a printer and the method further comprising: printing out an invoice for the first customer utilizing the printer upon delivery of the one or more goods.

9. The method of claim **1**, further comprising:

receiving a second acquisition request from a second customer for a second set of one or more goods;

electronically transferring information on the second set of one or more goods to the second customer using the digital image capture device;

acquiring the second set of one or more goods via the agent; and

delivering the second set of one or more goods to a second delivery site selected by the second customer.

10. The method of claim **1**, further comprising: checking the one or more goods off an electronic shopping list in real-time as each of the one or more goods is acquired.

11. The method of claim **1**, further comprising:

receiving product data from the first customer regarding the one or more goods; and

checking the internet for a digital coupon associated with the product data.

12. The method of claim **11**, wherein the each mobile agent system further includes a printer and the method further comprising:

printing out the digital coupon utilizing the printer; and

applying the coupon to a purchase during the step of acquiring the first set of one or more goods via the agent.

13. The method of claim **1**, further comprising:

generating product reviews associated with the product data which are accessible by the first customer.

14. The method of claim **1**, wherein the information is in the form of streaming real-time video.

15. The method of claim **1**, wherein electronically transmitting the information includes providing the first customer with the agent's real-time view of the first set of one or more goods.

16. The method of claim **1**, further comprising: using both visual and audio communication, in real-time, between the agent and the first customer to enable the first customer to inspect the first set of one or more goods prior to conveying a desire for the agent to acquire the first set of one or more goods for the first customer.

17. The method of claim **16**, wherein the visual and audio communication is performed in real-time using a smartphone.

18. The method of claim **1**, wherein the agent is part of staff at a retail establishment which sells the first set of one or more goods.

19. The method of claim **18**, wherein the first customer obtains electronically transmitting information on the first set of one or more goods from point-of-view cameras located within the retail establishment.

20. The method of claim **18**, wherein the agent utilizes in-house gear of the retail establishment for the mobile agent system.

21. The method of claim **1**, further comprising:

delivering the first set of one or more goods to the delivery site; and

alerting the first customer about delivery.

22. The method of claim **1**, wherein the first acquisition request is established by the first customer in the form of images or video.

23. The method of claim **1**, further comprising: utilizing near field communication for payment by the first customer.

24. A method for remote acquisition and delivery of goods comprising:

locating a plurality of agents of a service provider at various geographic locations, each agent having a mobile agent system in communication with at least one remote server, wherein each mobile agent system includes: a digital image capture device and a communication device;

receiving through the at least one remote server a first acquisition request from a first customer for a first set of one or more goods;

contacting through the communications device one of the plurality of agents for a location having the first set of one or more goods;

electronically transmitting, in real-time, information on the first set of one or more goods to the first customer using the digital image capture device of the agent, including obtaining an image of a particular product of the first set of the one or more goods and sending the image for the first customer to inspect and approve the purchase of the particular product exactly shown in the image;

acquiring the particular product, via the agent; and

providing for delivery of the particular product to a delivery site.

25. The method of claim **24**, wherein the step of electronically transmitting information has the information obtained from one or more of bar codes, QR codes.

26. A method for remote acquisition and delivery of goods comprising:

locating a plurality of agents of a service provider at various geographic locations, each agent having a mobile agent system in communication with at least one remote server, wherein each mobile agent system includes: a digital image capture device, a global positioning system and a communication device;

sending to a first customer, information on at least one of the plurality of agents, including location information based on signals from the global positioning system;

receiving a first acquisition request from a first customer for a first set of one or more goods;

contacting one of the plurality of agents for a location having the first set of one or more goods;

electronically transmitting, in real-time, information on the first set of one or more goods to the first customer using the digital image capture device of the agent, including obtaining an image of a particular product of the first set of the one or more goods and sending the image for the first customer to inspect and approve the purchase of the particular product exactly shown in the image;

acquiring the particular product, via the agent; and

providing for delivery of the particular product to a delivery site.

27. The method of claim **26**, wherein the first acquisition request is established by the first customer by making a list of the first set of one or more goods by scanning bar codes or QR codes of existing products the first customer wants replaced.

* * * * *