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(54) **OFFER DELIVERY SYSTEM**

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(51) **Int. Cl.**
G06Q 30/00 (2012.01)

(52) **U.S. Cl.**
USPC **705/14.35**; 705/14.1; 705/14.25

(58) **Field of Classification Search**
USPC 705/10, 14, 14.1, 14.25, 14.35
See application file for complete search history.

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(57) **ABSTRACT**

An offer delivery system provides a mechanism for coordinating presentation of offers to customers that may originate from multiple different sources and that may be delivered to the customers over different channels. The systems makes use of rules to prioritize, select, and time the delivery of offers to any particular customer, allocate limited resources in the channels to deliver offers to a set of customers, and provide mechanisms for users or their agents to limit the delivery of offers, for example, by their frequency or type.

27 Claims, 7 Drawing Sheets

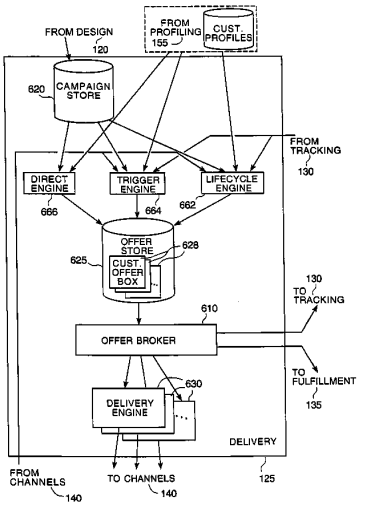

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FIG. 1

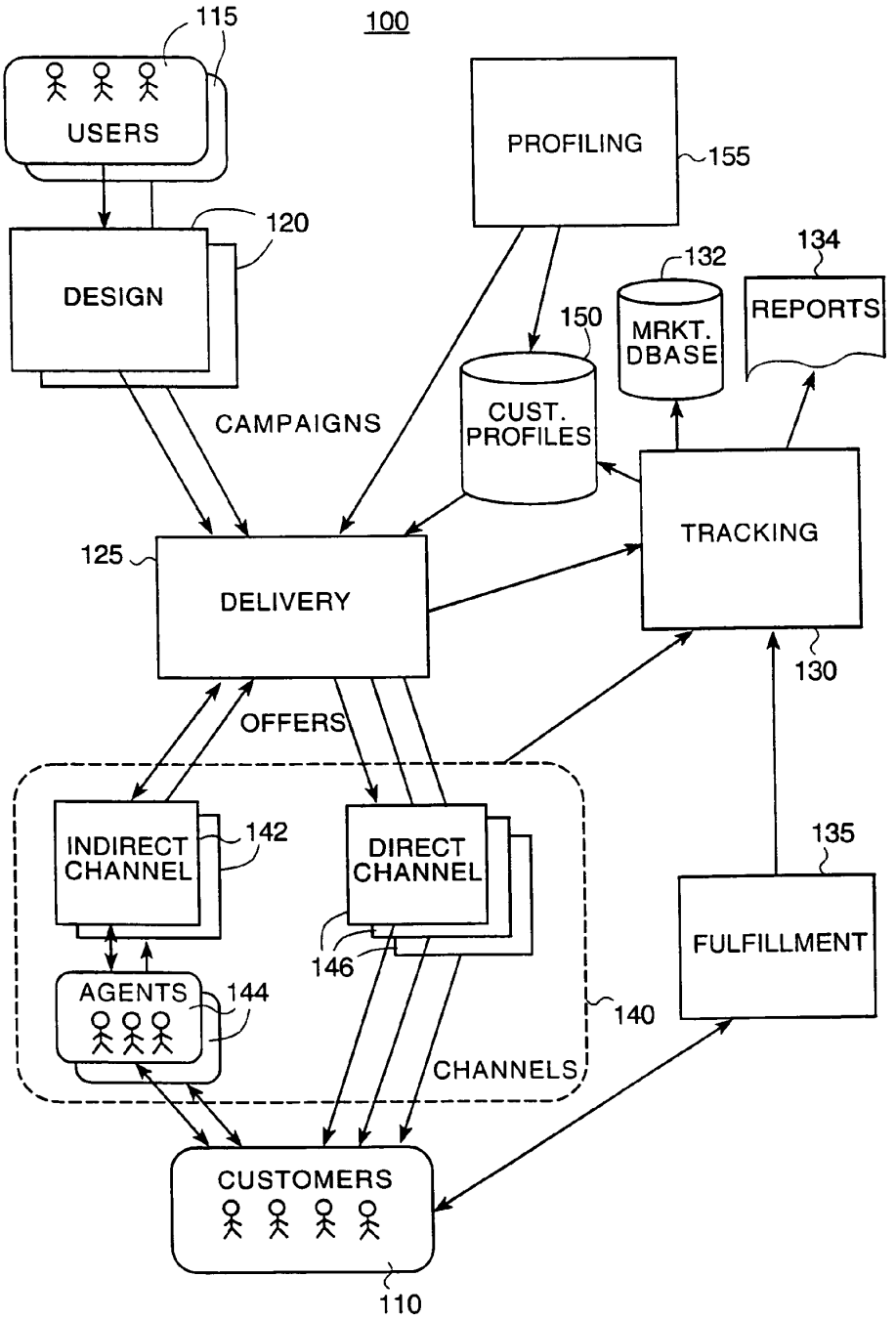

100
115
USERS
PROFILING
155
120
DESIGN
132
134
REPORTS
150
MRKT. DBASE
CUST. PROFILES
CAMPAIGNS
TRACKING
125
DELIVERY
130
OFFERS
INDIRECT CHANNEL
142
DIRECT CHANNEL
135
FULFILLMENT
146
AGENTS
144
140
CHANNELS
CUSTOMERS
110

FIG. 2

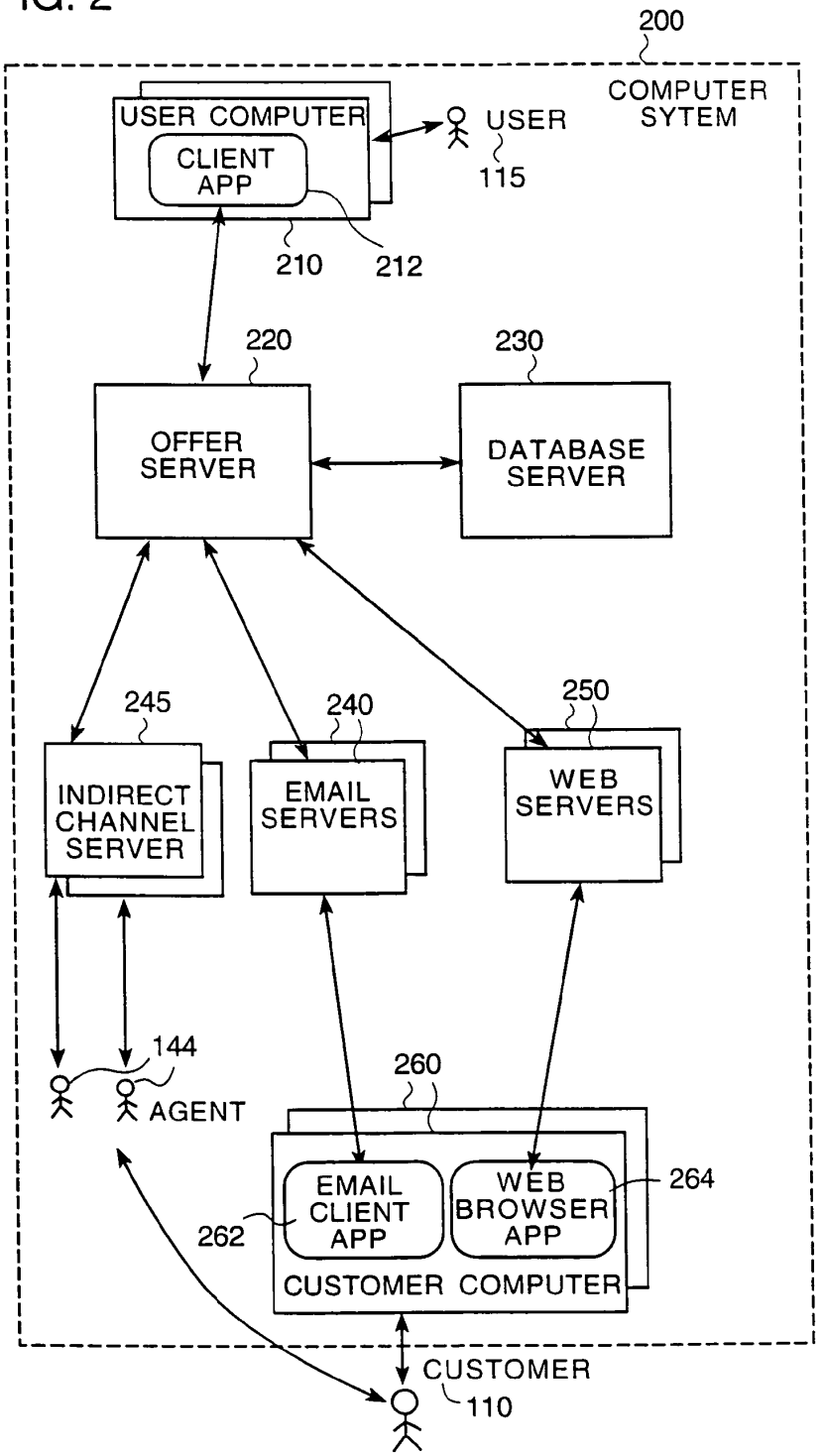

200
COMPUTER SYTEM
USER COMPUTER
CLIENT APP
USER
115
210
212
220
230
OFFER SERVER
DATABASE SERVER
245
240
250
INDIRECT CHANNEL SERVER
EMAIL SERVERS
WEB SERVERS
144
AGENT
260
EMAIL CLIENT APP
WEB BROWSER APP
264
262
CUSTOMER COMPUTER
CUSTOMER
110

FIG. 3

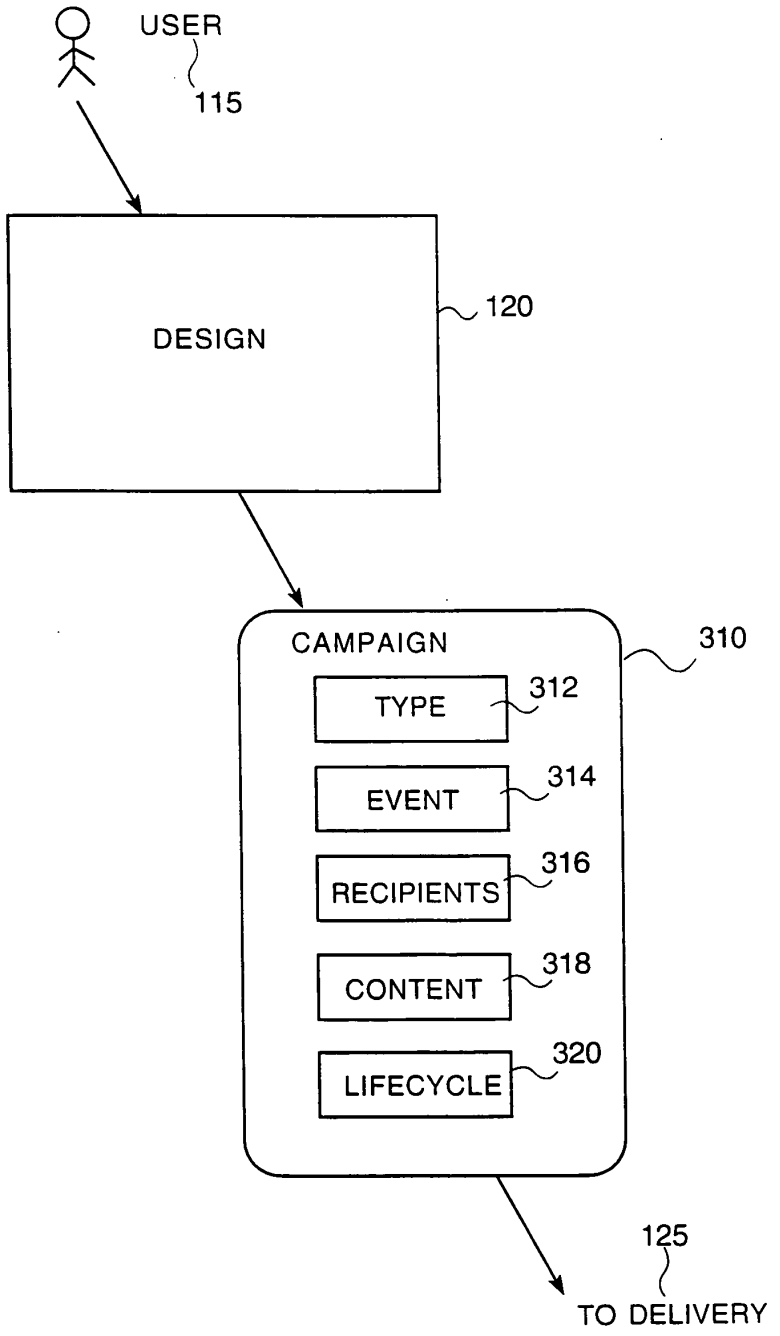

USER
115
DESIGN
120
CAMPAIGN
310
TYPE
312
EVENT
314
RECIPIENTS
316
CONTENT
318
LIFECYCLE
320
125
TO DELIVERY

FIG. 4

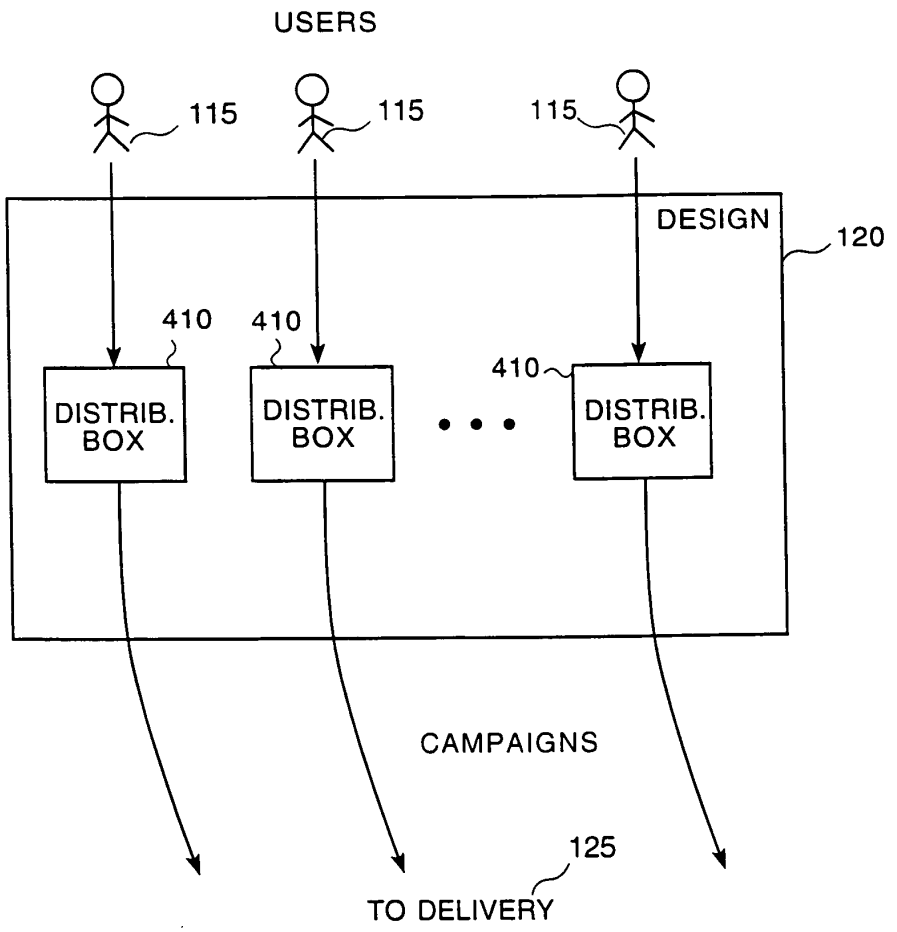

USERS
115
115
115
DESIGN
120
410
410
410
DISTRIB. BOX
DISTRIB. BOX
DISTRIB. BOX
CAMPAIGNS
125
TO DELIVERY

FIG. 5

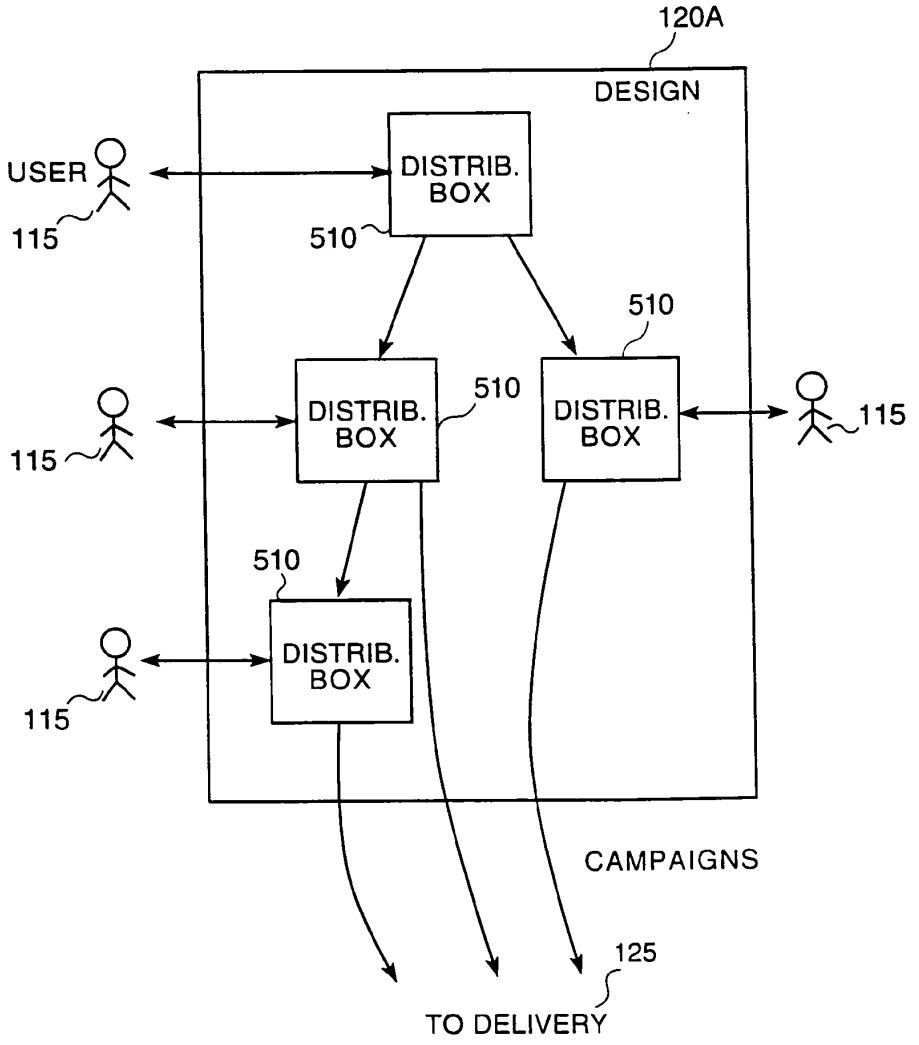

120A
DESIGN
USER
115
DISTRIB. BOX
510
510
DISTRIB. BOX
510
DISTRIB. BOX
115
115
510
DISTRIB. BOX
115
CAMPAIGNS
125
TO DELIVERY

FIG. 6

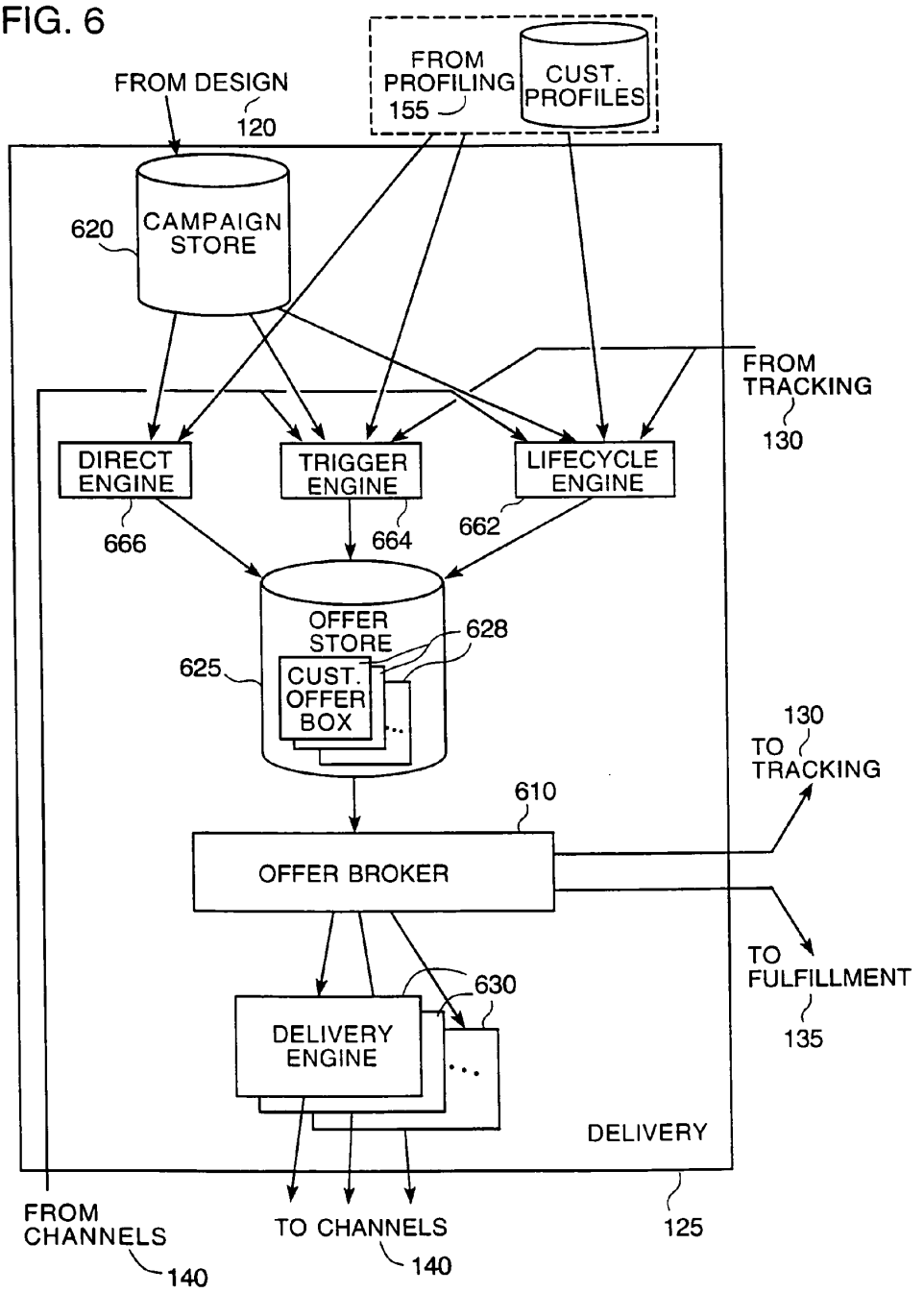
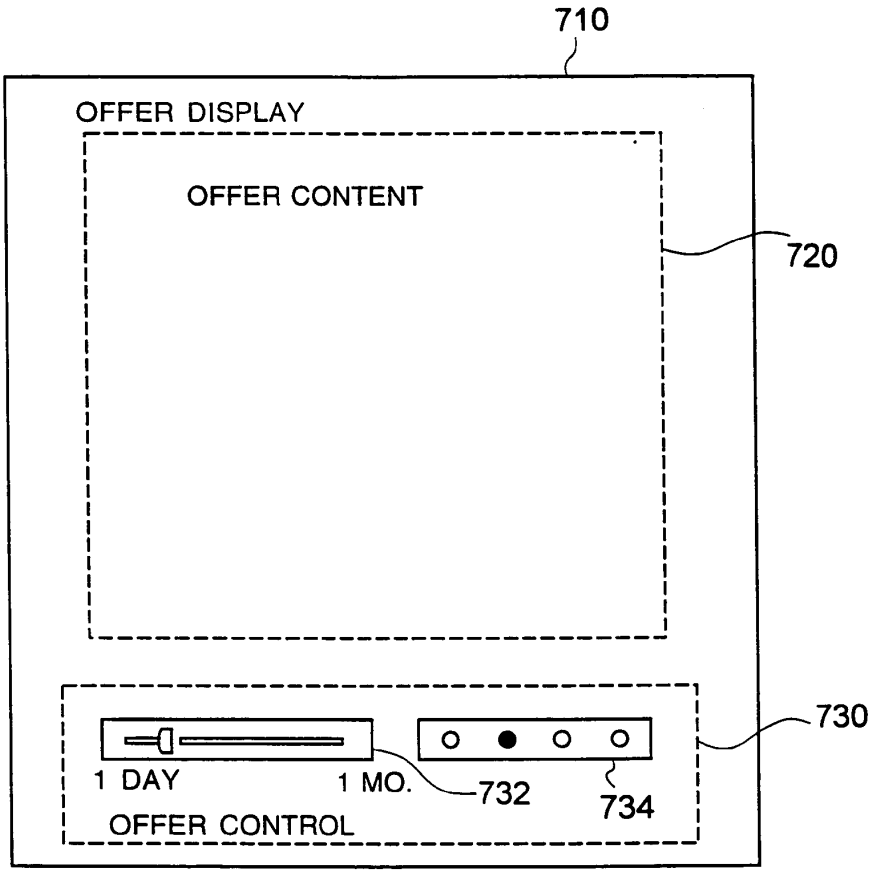

FROM DESIGN
120
FROM PROFILING
155
CUST. PROFILES
620
CAMPAIGN STORE
FROM TRACKING
130
DIRECT ENGINE
TRIGGER ENGINE
LIFECYCLE ENGINE
666
664
662
OFFER STORE
628
625
CUST. OFFER BOX
130
TO TRACKING
610
OFFER BROKER
TO FULFILLMENT
135
630
DELIVERY ENGINE
DELIVERY
125
FROM CHANNELS
140
TO CHANNELS
140

FIG. 7


710
OFFER DISPLAY
OFFER CONTENT
720
730
1 DAY
1 MO.
732
734
OFFER CONTROL

OFFER DELIVERY SYSTEM

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation-in-part of U.S. application Ser. No. 09/575,283, "Customer Lead Management System," filed May 22, 2000, which claimed the benefit of U.S. Provisional Application No. 60/135,521, filed May 21, 1999, both of which are incorporated herein by reference. This application also claims the benefit of U.S. Provisional Application No. 60/180,254, filed Feb. 4, 2000, which is also incorporated herein by reference.

BACKGROUND

This invention relates to a system for managing and distributing offers.

Many organizations currently use traditional marketing channels, such as direct mailings, and increasingly electronic delivery, such as electronic mail (email) or the World Wide Web, for delivery of advertising and sales offers to its customers or potential customers. In large organizations, offers to a particular customer may originate from different parts of the organization. There is the potential that offers to that customer from these different parts of the organization or through different channels may conflict in some way, thereby reducing the effectiveness of the communication with that customer.

Many customers may prefer to receive fewer offers from a particular organization or over a particular channel, or to receive no offers at all. For electronic channels, such as email, an organization may provide a mechanism to "unsubscribe" from all future offers. The customer may also configure his or her client software to discard future offers, for example, by discarding email from a particular address. Web-based advertising on web sites is often targeted to particular classes of users, for example by keeping a record of individual user's previous activities on those web sites.

SUMMARY

As the number of electronic, as well as traditional, methods of interacting with customers increase, it becomes increasingly difficult to coordinate interactions using these various methods. In a general aspect, the invention provides a mechanism for coordinating presentation of offers to customers that may originate from multiple different sources and that may be delivered to the customers over different channels. This coordination makes use of rules to prioritize, select, and time the delivery of offers to any particular customer, allocate limited resources in the channels to deliver offers to a set of customers, and provide mechanisms for users or their agents to limit the delivery of offers, for example, by their frequency or type.

In one aspect, in general, the invention is a computer-controlled method for managing and distributing offers. The method includes preparing data characterizing a set of offers, each offer being associated with a targeted individual and one multiple channels for presenting offers. These individuals can be, for example, actual or potential customers of products or services associated with the offers. A number of offers are selected for presenting to the individuals associated with those offers, including for at least some individuals, selecting from multiple offers associated with each of those individuals. The selected offers are presented to the associated individuals over the associated channels.

The invention can include one or more of the following features:

Selecting from the offers includes prioritizing offers for particular individuals, and selecting offers according to their priorities.

Selecting from the offers includes allocating capacity of the channels to the selected offers, thereby not exceeding a capacity associated with each of the channels.

Presenting the selected offers includes accepting information from individuals and limiting presentation of the offers to said individuals according to said accepted information. The accepted information can characterize acceptable timing of presentation of offers to the individuals, and limiting presentation of offers then includes scheduling presentation of offers to the individuals according to the acceptable timing. For example, acceptable timing can relate to a frequency control by which an acceptable frequency of offers is specified by the individual. Other types of timing can relate, for example, to acceptable periods of the day during which presenting offers is acceptable to the individual.

The data characterizing the offers includes one or more of: data characterizing conditions under which said offers are to be presented, data characterizing the target groups associated with said offers, and data characterizing information to be presented with the offers.

The method further includes tracking activities of the individuals to whom the offers were presented. Statistics related to an effectiveness of the offers can be reported. A sequence of related offers can be presented to those individuals based on their tracked activities.

Preparing the data characterizing the offers includes, for at least some of the offers, a first user preparing data characterizing a class of offers, passing the data characterizing the class of offers to a second user, and the second user preparing additional data characterizing the offer.

The method further includes storing the prepared offers in a shared storage. The step of selecting from the offers is performed in a distributed manner in which separate computers access the shared storage.

In another aspect, in general, the invention is an offer management system. The system includes an offer design component for preparing data characterizing a set of offers. Each offer is associated with a corresponding target group of individuals. The system also includes a delivery component for selecting and presenting the offers to the individuals in the corresponding target groups, including a broker for prioritizing offers to particular individuals, for allocating capacity on a plurality of channels for presenting the offers, and for limiting presentation of the offers to individuals in the corresponding targets groups.

Other features and advantages of the invention are apparent from the following description, and from the claims.

DESCRIPTION OF THE DRAWINGS

FIG. **1** is a logical block diagram illustrating components of an offer management system;

FIG. **2** is a block diagram of a computer system used to host the offer management system;

FIG. **3** is a diagram that illustrates components of an offer prepared using the offer management system;

FIG. **4** is a block diagram of a design component of the system;

FIG. **5** is a block diagram of an alternative design component in which a hierarchy of users prepare offers;

FIG. **6** is a block diagram of a delivery component of the system; and

FIG. **7** is a diagram that illustrates a presentation of an offer to a customer, including controls for a customer providing feedback to the system.

DESCRIPTION

1 Architecture (FIGS. **1-2**)

Referring to FIG. **1**, an offer management system **100** is used to select, deliver, and track offers. The offers have various forms and include commercial offers, which are related to particular commercial enterprises. The offers are initiated by one or more users **115** of the offer management system. Users **115** include individuals who are involved in sales and marketing efforts of the commercial enterprises, such as product marketing managers, sales managers, and marketing campaign directors. The offers are delivered by offer management system **100** to customers **110**. The term "customers" includes individuals or entities that are desired targets for the offers. For commercial offers, these customers include current or potential customers or consumers of products or services provided by commercial activities, as well as intermediate business customers (e.g., "business-to-business" customers, distributors, resellers, etc.) and individuals representing such business customers. The term "offer" includes various types of solicitations, advertisements, or any information-containing communication with the customer. In the case of commercial offers, they include solicitations that further commercial interests of the enterprise. For example, an offer can be a specific offer to sell a product or a service, a solicitation of interest in a product or service, advertising, or any of a wide variety of commonly used forms of communication directed at customers. In the discussion below, a "campaign" refers to a collection of offers, often specified as a template or rule from which one or more offers to specific customers determined. In this terminology, users **115** specify campaigns, and the system creates sets of specific customer offers from the campaigns.

Offer management system **100** supports delivery of offers to customers **110** through a wide variety of channels **140**. In the discussion below, a number of these channels are specifically identified, but it should be understood that the invention is applicable to many more types of channels, some of which may not yet be commonly used. The channels include both traditional channels, such as direct postal mailings and solicitations by sales agents, as well as electronic channels, such as email and Web delivery, and could include channels such as personalized location-based delivery of advertising to handheld devices. In general, offers can be delivered to any particular customer **110** through multiple of these channels. The offer management system provide a basis of controlling the potential flood of offers any one customer might receive.

Offer management system **100** includes a number of logical components that are hosted on a computer system, which generally includes a number of distributed server and client computers. These components control flow of offers from users **115**, or a collaborating set of users #**0115**, to customers **110**. The flow of an offer generally begins with a user **115** using a design component **120** to specify a campaign. The campaign may specify a single offer to a particular customer **110**. More typically, the campaign specifies a number of offers that are targeted to a group of customers **110** that share some common characteristic. Multiple users **115** are typically involved in the task of specifying different campaigns. In this embodiment, these users can work independently of one another, potentially generating offers that can be targeted to the same individuals. As illustrated in FIG. **1**, the system can include multiple design components **120**, each of which passes campaigns through a common delivery component **125** associated with the population of customers **110**. The campaigns are passed as data, which characterizes the resulting offers, from design component **120** to a delivery component **125**.

Channels **140** include a number of direct channels **146**, which are channels that do not involve an intermediary in presenting an offer passing through the channel to the customer. Examples of direct channels **146** include email, Web, and direct mailings. Channels **140** also include indirect channels **142** through which offers are first delivered to agents **144**, who then present the offers to customers **110**. Examples of agents **144** are sales representatives of an organization who interact with customers **110**. Some indirect channels **142** include automation tools, such as sales-force automation (SFA) systems and lead management systems that provide support to sales agents. In other indirect channels **142** offers are delivered to agents using simpler mechanisms such as electronic mail and facsimile. Channels **140** also include outbound call centers through which customers **110** are solicited by telephone. Operators at these call centers can make use of a lead management system in interacting with the customers.

Delivery component **125** is responsible for selecting (e.g., filtering) and timing delivery of (e.g., prioritizing and limiting the frequency) offers to appropriate customers **110** based on the campaigns it receives from design components **120**. Delivery component **125** presents offers through channels **140** using a variety of different types of interactions with customers **110**. For example, delivery component **125** can send an electronic mail message to one or more customers **110** that includes an offer. In this case, it is not essential that the customers communicate directly with the delivery component in response to the offer. For example, if the offer includes a specific sales offer, the customer may directly act on the offer by performing an online transaction. For some of such transactions, a fulfillment component **135** handles the transaction. Delivery component **125** can also present an offer using a Web interaction. In this case, delivery component **125** reacts to a particular customer **110** (or a member of a defined class of customers) accessing a Web server application and presents an offer, for example using a "banner ad," with an offer targeted to that customer.

In some instances, a customer **110** provides explicit or implicit feedback to delivery component **125** in response to an offer. For instance, in the case of a Web presentation of an offer, a customer may provide explicit feedback by "clicking" on a displayed button on the presentation of the offer. Implicit feedback can include delivery component **125** recording a customer's access to a Web server after an offer has been presented. In some forms of email, deliver component **125** may receive a notification that the customer has read the email. Also, some email may solicit an email response, for example, to receive further information about an offer.

Delivery component **125** can also pass information directly to fulfillment component **135**. For example, a customer **110** may provide feedback to delivery component **125** that he wants to accept an offer. Instead of completing the transaction directly, delivery component **125** may inform fulfillment component **135**, and the fulfillment component then interacts with the customer to complete the transaction.

Delivery component **125** also passes offers to customers **110** through indirect channels **142**. One example of an indirect channel **142** includes a lead management system. Such a lead management system is described in U.S. patent application Ser. No. 09/575,283, "Customer Lead Management System." In this case, rather than presenting an offer directly to a customer **110**, delivery component **125** passes data to the lead

management system that identifies the offer and the targeted customer. Then an agent **144** makes use of the lead management system, for instance, in contacting the targeted customer in person to act upon the lead.

Indirect channels **142** also at times provide information to delivery component **125**. For example, if an agent **144** has interacted with a particular customer **110**, the agent or an automated component of the indirect channel can inform the delivery component so that the delivery component limits presentation of further offers to that customer for a period of time. Similarly, fulfillment component **135** at times provides information to delivery component **125**. For example, if a customer **110** performs a transaction using fulfillment component **135**, fulfillment component **135** may notify delivery component **125**, which may provide additional offers to that customer that are tailored for "cross-selling" of products or services related to that transaction.

A tracking component **130** receives information from delivery component **125**, fulfillment component **135**, and channels **140**. This information is used to characterize various aspects of the offers made by delivery component **125**. For instance, the success of particular marketing campaigns, which are associated with groups of offers, is tracked by tracking component **130**. One product of this tracking is reports **134**, which can include characterizations of the effectiveness of various types of offers. Another related product is data that is input to a marketing database **132**, from which various reports can be generated.

Tracking component **130** also provides data to a customer profile database **150**. This data includes information specific to particular customers **110**, or to classes of customers. For example, the effectiveness of certain types of offers may be recorded in customer profile database **150** for different customers. Delivery component **125** can then make use of this information in determining which offers to present to a particular customer.

A profiling component **155** is used to assemble information about particular customers **110**. This information can come from various sources, such as external marketing databases, systems for passive monitoring of customer access to Web servers (click monitoring), and from customer-provided information, such as survey forms filled out by customers when registering a product. Profiling component **155** provides data to customer profile database **150** in a batch mode, for later use by delivery component **125**. Profiling component **155** can also provide information directly to delivery component **125**, for example, triggered by obtaining particular information about a customer.

Referring to FIG. **2**, the logical modules of offer management system **100** are hosted on a computer system **200**, which generally includes a number of distributed server and client computers. The logical components include modules that are implemented by software-controlled processes executing on these computers, and include storage modules, provided, for example, by storage devices coupled to the computers or by a dedicated database server computers. The software for controlling these computers is stored on media (not shown), such as magnetic disks coupled to server and client computers, and in some embodiments is downloaded from server computers to client computers at run-time, for instance in the form of "applets" that are downloaded to client computers as needed.

In this embodiment, an offer server **220** hosts portions of design component **120** and delivery component **125**. A user **115** interacts with the system using a user computer **210**, on which a client application **212**, such as a Web browser application, executes. Client application **212** communicates with offer server **220**, for instance over a local or wide area data network. Offer server **220** communicates with a number of different server computers that are associated with channels **140**. These include one or more email servers **240** and one or more Web servers **250**, which are used to pass offers to customers **110**. Indirect channel servers **245**, such as sales force automation servers and lead management servers, provide a path for passing offers to agents **144**, who then in turn communicate with customers **110**. Other server computers associated with channels **140** are not shown, including a fax server for transmission of offers to customers. A customer **110** uses a customer computer **260** to access the offers passed from an email server or a Web server using an email client application **262** or a Web browser application **264** hosted on the customer computer.

Email client application **262** and Web browser application **264** are often used together, or their functions are alternatively integrated into a single application. For instance, offers may be sent to the customer as email that includes references to data that is accessed from a Web server. This can be the case when email is formatted according to the HTML (hyper text markup language), which allows embedding of "links" to data available elsewhere on the data networks to which the customer computer may be coupled, such as from Web server.

Various types of email client applications **262** are used by different customers, and each type may have be configured to accept different formats of messages. For example, some email client applications may be able to display HTML formatted messages to a customer, while others cannot. Some email systems, such as the America Online (AOL) system, can include special information that is particularly tailored to the AOL system. Similarly, different Web browser applications **264** may have different capabilities regarding the type of information that is presentable. One function of delivery component **125** (FIG. **1**) is to attempt to present the offers in the formats best suited for each customer's client applications.

Computer system **200** also includes a database server **230**, such as a SQL server, that provides storage for information that includes currently pending offers, and customer profiles.

In an alternative embodiment, the logical components shown in FIG. **1** are distributed and replicated on multiple servers. That is, copies of individual components are hosted on multiple servers, for instance, to distribute load and to provide fault tolerance. Offers are accessible to multiple instances of delivery component **125**, either using a shared database such as one using the Linda system to provide a shared message storage, or by replicating the offers at the separate instances. The instances of the offer brokers are coordinated so that the same offers are not acted upon by multiple offer brokers, thereby preventing a customer from receiving duplicate or conflicting offers. Some offers are designed to be handled as a group and these are identified so that they can all be handled by one of the offer brokers.

2 Design Component (FIGS. **3-5**)

Referring to FIG. **3**, as introduced above, a user **115** make use of design component **120** (see FIG. **1**) to specify campaigns **310** which are passed to delivery component **125** as data structures holding data that specify characteristics of the offers to be sent according to those campaigns. Various types of campaigns include some, but not necessarily all, of the following fields:

- a type **312**, which characterizes the general nature of the campaign,
- an event **314**, which characterizes the condition under which offer under this campaign are sent to a customer **110**,

a recipient **316**, which characterizes a particular customer or a class (e.g., a market segment) of customers **110** to whom the campaign is targeted,

content **318**, which characterizes the material that is to be included with each offer, and

lifecycle **320**, which encodes time-based rules and characterizes a set of related offers are to be sent to customers in this campaign.

Type **312** can identify one of a number of offer types to be sent, including the following:

Notifications of new products, news, events, newsletter and bulletins—An example of this type of offer is a weekly newsletter that is sent a customer list.

Offers of products that match a customer profile—An example of this type of offer is one that is presented to customers, for example, on a Web site based on characteristics that a customer provided in a registration survey. When a customer with these characteristics visits a particular Web site, delivery component **125** reacts by presenting the offer to that user.

Inferred product recommendation—In situations in which a customer has not explicitly provided information, characteristics of that user can often be inferred by their other activities such as related transactions and navigation history at various Web sites and used to select products.

Order solicitations—This type of offer may be a Web form that directs a Web server that implements part of fulfillment component **135**.

A notification of customer status—This "offer" notifies the customer about a recent event related to an action that they took, such as acceptance of profiling information by the system, completion of a request for the customer, and execution of an order by the customer

Event **314** characterizes the condition under which user **115** wants offers to be sent to a customer **110**. The event is specified as a triggering condition or rule. For instance, profiling component **155** collects information about the Web visitor. This information is passed to delivery component **125** where it can be used to determine whether a triggering condition for a particular offer has been satisfied. Another triggering condition includes a customer explicitly expressing interest in an offer, for example by asking for product information using email or a Web form. User **115** can also specify IF-THEN statements. An example of use of such statements includes web visitors who meet a set of qualification criteria (based on title, budget or income, company size, etc.) that automatically qualify for a special discount.

A customer purchasing or registering another product can also trigger offers. For example, the offer may be a promotion of a complementary product. Another example is an offer that is triggered by a customer providing registration information at a Web site, such as an offer with a discount coupon for a purchase from a web site at which the customer registered. Offers can also be triggered based on the status of previously sent offers, for instance as reminders. Offers can also be triggered by another external input to the delivery component. For example, an offer may be triggered at the initiation of a sales agent through an indirect channel **142**.

Other triggering conditions can be based on customer profile information stored in the system. For instance, certain types of offers may not be sent to customers unless they have explicitly "opted-in" to receiving such offers. This feature is particularly needed in situations in which an enterprise is not permitted to send certain type of solicitations to a customer without their consent, for instance because of legal restrictions or following privacy policies of the enterprise. Also, as described further below, particular customers **110** may have specified a maximum frequency that offers may be sent to them, and abiding by such a request is an implicit or explicit condition of the offer.

Recipient **316** of an offer includes data that can define a class of customers **110** to whom offers may be sent, subject to other limitations, such as the conditions described above. Note that an campaign can be thought of as a template for offers that are instantiated for particular customers identified through the recipient field. The specific customers to whom the offer is sent by delivery component **125** can be based on a database query of customer profile database **150**, or base on information from profiling component **155**. The offer management system separately delivers and tracks the instances of offers sent to particular customers. Recipient **316** can also identify one or more specific customers **110**, rather than specifying an entire segment or class of customers. For example, an offer may be directed to a predetermined set of purchasing agents associated with a particular business customer.

Content **318** specifies the content and layout of the information of an offer that is to be transmitted to a customer. This content can be text, formatted HTML data, or other forms of multimedia. Often the content is to be personalized to each customer, and content **318** identifies portions that need to be filled in (such as the customer's name) before delivery. Content **318** can include multiple portions. For example, an email message may be sent directly to customers, while HTML links in the email message reference portions of the content that are placed on web servers. Content **318** can also reference secondary content that is provided by other parties, such as on Web servers of other commercial enterprises.

Lifecycle **310** specifies time-based rules that affect how related offers are sent to a customer. Campaigns have different types of lifecycles. Some campaigns are "direct" in that once delivery **125** receives a campaign, it immediately instantiates offers based on the campaign and sends these offers to customers. Other campaigns are "triggered." These campaigns are turned into specific offers only when particular conditions occur. Finally, some campaigns have a more complex time plan, or lifecycle. For example, a number of staged offers may be sent to a customer as they interact with the system. For instance, a customer may first get an "introductory offer" for a service. Then after responding to the offer, perhaps with a predetermined time delay, the customer then gets a "followup" offer. Similarly, the customer can receive a "reminder" offer if they have not responded to the introductory offer. In another example, a series of offers may be send periodically to customers in a particular segment, or who have expressed some interest in a product. This periodic deliver may continue until the customer requests to not received more offers, or the customer finally acts on one of the offers. For these more complex campaigns, lifecycle **310** encodes the rules by which these sequences of offers are sent to customers.

Referring to FIG. **4**, delivery component **120** is logically composed of separate paths from each user **115** to delivery component **125**. Each user **115** specifies campaigns that are queued in a distribution box **410**, and then passed as messages to delivery component **125**. Note that since each user **115** is free to act independently, campaigns targeted to overlapping classes of users **110** are generally passed to delivery component **125**, which then determines which offers, and when, to send to those multiply targeted customers.

Referring to FIG. **5**, in an alternative embodiment, users **115** use a design component **120**A that provides a hierarchical arrangement of distribution boxes **510**. In this arrangement, a

user **115** can send a partially specified campaign to the distribution box of another user. For example, one user may be responsible for initiating a marketing campaign, which other users may specify particular content to provided with the offers of that campaign. Another user **115** can inspect the campaigns in his distribution box and choose which to use to make more specific campaigns, or to send to delivery component **125**. The distribution of campaigns is optionally controlled by rules that control how campaigns are passed from one distribution box to another. For example, a particular user **115** may identify the types of campaigns he is interested in receiving. Another example is that there may be a limit to the number of offers any particular user may receive during a time interval, such as per week.

The arrangement shown in FIG. **5** can be hosted on a distributed set of computers, and the users may belong to different commercial organizations. For example, a top-level user may belong to the provider of a product or service, such as an automobile manufacturer, while a next-level user **115** may belong to a reseller, such as a regional automobile dealer. The top-level user may send an offer that provides rebates to a limited number of customers, which the next-level user may then decide which particular segment of users to whom to target the rebate promotion.

3 Delivery Component **125** (FIGS. **6-7**)

Referring to FIG. **6**, delivery component **125** receives campaigns from design components **120**. From these campaigns, delivery component **125** forms offers that it passes them to various channels **140**. Campaigns received by delivery component **125** are first stored in a campaign store **620**, where they are held during the time that they are designed to initiate specific customer offers.

A number of engines take campaigns in campaign store **620** and form offers for specific customers. These formed offers are held in offer store **625**. Offers for each customer are held in that customer's "offer box" **628**, which is a data structure holding the instantiated offers for that customer. These offers are further divided according to which channel **140** each offer is to be delivered through.

A direct engine **666** takes campaigns that specify offers that are ready to send when they are received by delivery component **135**. For instance, direct engine **666** may take information from profiling module **155** or customer profiles **150** to determine the specific set of customers that will receive offers under the campaign. For each of these customers, direct engine **666** forms a separate offer and passes that offer to offer store **625**. Each of these offers is associated with a particular channel **140**, as specified by the campaign.

A trigger engine **664** handles campaigns that produce offers only when particular criteria become true. For instance, a campaign may send offers to customers after they have initially registered at a web site. Trigger engine **664** receives input from channels **140** and tracking component **130** to determine when the criteria are satisfied.

A lifecycle engine **662** handles complex staged offers. Like trigger engine **664**, lifecycle engine **662** relies on information from channels **140** and tracking component **662** to determine when to send offers. In addition, lifecycle engine **662** also uses the history of each customer to determine which offers to send to those customers. In this way, lifecycle engine **662** can produce a staged set of offers as a customer performs a series of actions, such as registration, initial purchase, repeat purchase, etc.

A central module of the deliver component is an offer broker **610**. Offer broker **610** acts on offers which are stored in an offer store **625**. Offer broker **610** uses a rule-based engine to determine which offers can be sent to customers. An internal set of rules govern overall operation of the broker. When offer broker **610** determines that an offer from the offer store should be sent to a particular customer, it passes that offer to a delivery engine **630** which is responsible composing and transmitting the offer to the selected customer over the channel associated with the offer.

Offer broker **610** performs three primary functions. First, it prioritizes offers for each customer **110**. In general, a customer may have multiple offers in his offer box **628**, and offer broker **610** determines which offer should be sent next. Second, offer broker **610** implements a limiting function that uses feedback from the customer to prohibit or limit the frequency of various types of offers. The mechanisms by which this feedback is received from customers is described further below. Third, offer broker **610** allocates capacity for the various channels over which offers are presented to customers.

Offer broker **610** selects the delivery engine **630** to which it sends offers based on the channels associated with those offers. For instance, for offers that are specified to be delivered as email, the associated delivery engine **630** composes and passes offers to an email server application. An example of such an offer is one that was triggered by a customer expressing interest in response to a previous offer, or through a broadly targeted Web-based advertisement. Another type of offer uses a "bulk" mailing to a number of customers based on a characteristic specified in the offer. As introduced above, different customers may have email client applications with different capabilities. It is often desirable to make use of formatting and multimedia characteristics of an email message using message formats that may not be universally supported. For example, some email clients support only plain text, some support static HTML-based formatting, some support hyper-links in the HTML, and still others support formatting that includes scripts to execute at the client application, or multimedia content. If the type of email application for a customer is available in customer profile **150**, or can be inferred from the address for the email (e.g., and address in the "aol.com" domain is inferred to be associated with client applications supported by the AOL online service) delivery engine **630** composes an appropriate format of email message. Data in the customer profile may be solicited by a survey form or questionnaire in which the user requests the type of email to be sent.

In alternative embodiments in which very large scale bulk email is to be sent, a third-part email service bureau is used and data specifying a large number of instances of an offer is passed to the email service bureau for transmission to the target customers.

Another example of passing offers from offer broker **610** to a customer involve presenting the offers using a customer's web browser application. The delivery engine **630** for the Web channel passes information, directly or indirectly, to web server application. Various approaches to passing this information are used. The Web server application responds to requests from a customer's web browser application. That is, it generally does not typically "push" content to the customer without some input from that customer. In an indirect mode, offer broker **610** passes an offer through delivery engine **630** in anticipation of the next visit by the customer to the web site hosted by the web server application. Delivery engine **630** composes web content associated with that offer. When the targeted customer later visits the web site, the targeted content is available. For instance, an interaction with a customer may involve sending an email message that includes a link to content stored in the web offer database specifically for that customer. Also, the web server application can include the capability to identify the customer, for example by retrieving

information from the web browser application (e.g., "cookies") which is uses to identify the content to present. The offer can be presented in a variety of ways, including as "banner ads" that are presented concurrently with other content requested by the web browser, as "pop up" windows, or entire displays dedicated to the offers.

Another method of presenting Web-based offers involves dynamically composing the content. In this mode, the web server application detects the presence of a customer, and it informs trigger engine **664** or lifecycle engine **662**. These engines then create a new offer based on the customer's presence that are passed to offer broker **610** through offer store **625**. Then, offer broker **610** passes the offer to delivery engine **630** which composes the content for the offer on-the-fly and passes it directly to the web server application.

Offer broker **610** handles allocation of channel capacity among offers to different customers. An example of a limited capacity channel is a call center that has a particular capacity to make outbound telephone calls, for example 100 calls per hour. Offer broker **610** limits the number of offers it sends to that channel based on that limit. Email servers similarly have limits on the number of offers that they can send, or limits on the number of emails that can be sent to a particular classes of customers (such as customers using a particular online service). Channels may have capacity limits that are based on cost. For example, the system may be configure to only allow a particular number of direct mailings based on the cost of those mailings. Indirect channels may also have capacity limits that are managed by offer broker **610**. For instance, each agent **144**, such as a personal financial planner or an insurance agent, may have a limit on the number of offers that they can handle each day. Indirect channels that make use of automated systems may present limits to offer broker **610** based on their internal configuration. For instance, a lead management system can assemble the limits of its individual users for offer broker **610**. Offer broker **610** may also send offers to particular users of a lead management system, and limit the number and type of offers sent to those users based on the configuration of the lead management system, thereby achieving a tight integration of the offer management system and the lead management system.

Offer broker **610** is configurable with rules that are applicable to all or classes of offers. An example of such a rule is that offers that have not been sent in a fixed number of days (e.g., 1 week) are discarded rather than being sent. Other rules relate to limits on the number and types of offers sent to users. For instance, one limiting rule can set the maximum number of emails sent to a customer, or disallow any unsolicited emails to be sent. As is described below, some of these global rules are driven by customer profile data that the customers themselves can set. Other rules relate to prioritization of offers. For example, new product promotions may be given preference over current product promotions. Other prioritization rules may relate to the class of user **115** that originated the offer, for example, preferring offers from a corporate marketing department to those from a local distributor.

Offer broker **610** can also send offers to indirect channels **142**, such as through a lead management system. These offers are meant to be delivered to the targeted customers through agents **144**. Some offers are send in parallel through both a direct channel **146** and an indirect channel **142**. For example, an agent **144** may be made aware of a direct offer to a customer so that they can interact with the customer accordingly, for example, by encouraging them to accept the offer, or by avoiding making conflicting offers.

Offer broker **610** also notifies tracking component **130** of events related to various instances of offers, or classes of offers. In this way, tracking component **130** has data available to it to determine the success of various marketing campaigns, or data related to particular classes of customers.

Delivery component **125** provides a mechanism by which a customer **110** may control the delivery of offers. Referring to FIG. **7**, in an example of this mechanism, an offer display **710** presented to a customer through a client email application includes a offer content portion **720**, which describes the offer, and an offer control portion **730**, which the customer can use to provide feedback to the offer management system. The offer control portion includes one or more controls. For instance, a user can adjust a slider **732** to indicate the frequency of offers he of she wants to receive. Selector buttons **734** indicate preferences, such as whether particular personal information can be used to select further offers, whether that personal information may be shared with other organizations, or the types of offers that the customer is willing to accept. A web-based presentation includes similar offer controls. The feedback provided by the customer is accepted by a web server application **650**, and the information provided is used to update that customer's profile. This information then later affect the selection and timing of offers by offer broker **610** for that customer. This mechanism can be thought of as a "privacy filter" in that the customer can select the degree of intrusion that he wants without violating his privacy. In some embodiments, the feedback also specifies other privacy-related characteristics, such as whether to use their browsing patterns is selecting what offers to make, and whether information related to their response to offers may be shared with other organizations.

4 Tracking Component **130**

Tracking component **130** provides a mechanism by which users **115**, and others, can measure the effectiveness of particular offers or marketing campaigns involving multiple offers. Tracking component **130** records various types of activities by customers. One type of activity is customers accessing particular web content, for instance, content related to previous offers or advertisements. Similarly, particular activity related to offers, such as requests for information, performing commercial transactions, or otherwise explicitly responding to offers are recorded by tracking component **130**.

Referring back to FIG. **1**, as introduced above, the information collected by tracking component **130** is used by the tracking component to generate reports, to update customer profiles **150**, and to populate a marketing database **132**. Information received from fulfillment component **135**, or other sources of purchase information, are matched to offers thereby allowing the effectiveness of the offers to be measured. Statistical analysis systems, such as SAS, can be used to access data in marketing database **132** to determine statistical measures related to the offers and related marketing campaigns. Reports include those which present return-on-investment (ROI) information. The cost of delivering the offers (including the costs of the promotions) are compared to the returns generated by the offers to generate these reports.

5 Fulfillment Component **135**

Fulfillment component **135** supports electronic commerce functions that allow customers **110** to complete commercial transactions that were prompted by offers sent to those customers. Transactions are handled directly by fulfillment component **135**, or are passed to another system or organization. Fulfillment component **135** can also make use of a third-party service to complete the transaction.

6 Alternative Embodiments

In alternative embodiments, not all the channels **140** that are described above are necessarily all included, and various additional channels **140** can be coordinated using offer broker

610. Additional channels can include other electronic delivery approaches, such as offers sent to personal electronic devices, such as PDAs, cellular telephones, and pagers. Some of these may be based on location-based triggering events, such as a customer entering the proximity of a retail store. Another type of channel uses interactive voice response (IVR) telephone approaches to interact with customers.

The limiting mechanisms by which a user provides feedback to the offer broker regarding frequency and type limits on offers are applicable to other channels as well. For instance, an outbound call center channel can provide feedback by the customer telling the calling agent that they do not want to receive particular types of calls or an IVR system can accept touch-tone input from the customer to identify if they are interested in receiving further calls. Similarly, for an indirect channel, an agent **144** can provide feedback identifying the types of offers they want to receive for particular customers. The limiting mechanism is optionally applicable to the agents themselves. For instance, an agent **144** may provide feedback to offer broker **610** that the broker (as opposed to the customers serviced by that agent) desires a frequency or type limit to be imposed on offers sent to him.

In the description above, offer broker **610** is described as making use of rules to select and prioritize offers. In an alternative embodiment, offer broker **610** uses an optimization approach. In one such embodiment, each offer is associated with an expected return as well as a delivery cost. In addition, the expected return of sending multiple offers to individual customers are known to the system such that the return on sending multiple offers is not necessarily simply the sum of the individual returns. Offer broker **610** then performs an optimization to select the offers that provide the most expected return for a given constrain or constrains on cost and capacity.

It is to be understood that the foregoing description is intended to illustrate and not to limit the scope of the invention, which is defined by the scope of the appended claims. Other embodiments are within the scope of the following claims.

What is claimed is:

1. A computer implemented method for managing and distributing offers, the method comprising:

producing a plurality of marketing campaigns each comprising a plurality of offers selected from a set of offers to send to multiple targeted individuals;

selecting by one or more computers the offers to send for each of the plurality of marketing campaigns according to a determined channel allocation of such offers specified by offer data processing rules executed by the one or more computers, from which one or more of the offers are identified for targeting specific individuals; and

delivering the offers over channels to specific, targeted individuals of the multiple targeted individuals, with the channels and time of delivery of the offers based on execution of offer data processing rules and the allocation of the offers to the channels based on the determined allocations in each of the marketing campaigns with the channels being one of a plurality of different types of delivery channels.

2. The method of claim **1** further comprising:

determining a channel to select based at least in part on the specific, targeted individual's response to an offer.

3. The method of claim **1** further comprising:

prioritizing by the computer the set of offers for the targeted individual to determine which offer or offers from the set of offers should be sent to the targeted individual; and

limiting the number of prioritized offers using at least one privacy characteristic defined by the specific, targeted individual in the form of feedback from the specific, targeted individual to prohibit or limit the frequency of various types of offers.

4. The method of claim **3** wherein delivering, delivers the selected prioritized offer and the method further comprises:

allocating the selected prioritized offers according to a capacity associated with each of the channels.

5. The method of claim **4** wherein the capacity of the channels is related to monetary costs associated with of the channels.

6. The method of claim **4** wherein the capacity of the channels is related to a physical capacity of the channels.

7. The method of claim **1** further comprising:

accepting information from the specific, targeted individual and limiting selection of the offer for delivery to the specific, targeted individual according to the accepted information.

8. The method of claim **7** wherein the accepted information characterizes acceptable timing of presentation of offers to the specific, targeted individual, and limiting selection of the offer includes scheduling selection of the offer to the specific, targeted individual according to the acceptable timing.

9. The method of claim **1** wherein channels comprise direct postal mailings, solicitations by sales agents, email, Web delivery, and personalized location-based delivery of advertising to handheld devices.

10. The method of claim **1** wherein producing a marketing campaign comprises:

preparing data characterizing target groups of specific, targeted individuals associated with the offers.

11. The method of claim **1** wherein producing a marketing campaign comprises:

preparing data characterizing information to present with the offers.

12. The method of claim **1** further comprising:

tracking activities of the targeted individuals to whom the offers were targeted with tracking according to the channels over which the offers were sent; and

determining by the one or more computers an effectiveness of the plurality of offers by matching information received from sources of activity related information to the offers.

13. The method of claim **12** further comprising:

delivering through channels selected from the plurality of channels a sequence of subsequent offers to individuals based on their tracked activities.

14. The method of claim **1** wherein at least one of the offer data processing rules is a rule selected from a set of time based rules, the time based rules including at least one of a direct rule that immediately instantiates offers based on an offer campaign, a triggered rule that instantiates offers based on the occurrence of particular conditions, and a staged rule that instantiates offers based on user interaction with previous offers; and wherein selecting further comprises:

selecting by the one or more computers one of the offers based on execution of one of the time based rules.

15. An offer management system comprising:

a computer system comprising:

a processor;

memory; and

a computer-readable media storing a computer program product comprising instructions executed in memory and causing the processor to:

produce a plurality of marketing campaigns each comprising a plurality of offers selected from a set of offers to send to multiple targeted individuals;

select the offers to send for each of the plurality of marketing campaigns according to a determined channel allocation of such offers specified by templates and/or rules from which one or more of the offers are identified for targeting specific individuals; and

cause a delivery of the offers over channels to specific, targeted individuals of the multiple targeted individuals, with the channels and time of delivery of the offers based on execution of offer data processing rules and the allocation of the offers to the channels based on the determined allocations in each of the marketing campaigns with the channels being one of a plurality of different types of delivery channels.

16. The offer management system of claim **15** wherein the computer program product further comprises instructions to:

track activities of the targeted individuals to whom the offers were targeted with instructions to track being according to the channels over which the offers were sent; and

determine an effectiveness of the plurality of offers by matching information received from sources of activity related information to the offers.

17. The system of claim **15** wherein at least one of the offer data processing rules is a rule selected from a set of time based rules, the time based rules including at least one of a direct rule that immediately instantiates offers based on an offer campaign, a triggered rule that instantiates offers based on the occurrence of particular conditions, and a staged rule that instantiates offers based on user interaction with previous offers; and wherein instructions to selecting further comprises instructions to:

select one of the offers based on execution of one of the time based rules.

18. A computer program product stored on computer-readable media comprising instructions for causing a computer system to:

produce a plurality of marketing campaigns each comprising a plurality of offers selected from a set of offers to send to multiple targeted individuals;

select the offers to send for each of the plurality of marketing campaigns according to a determined channel allocation of such offers specified by templates and/or rules from which one or more of the offers are identified for targeting specific individuals; and

cause a delivery of the offers over channels to specific, targeted individuals of the multiple targeted individuals, with the channels and time of delivery of the offers based on execution of offer data processing rules and the allocation of the offers to the channels based on the determined allocations in each of the marketing campaigns with the channels being one of a plurality of different types of delivery channels.

19. The computer program product of claim **18** further comprising instructions to:

determine a channel to select based at least in part on the specific, targeted individual's response to an offer.

20. The computer program product of claim **18**, further comprising instructions to:

prioritize the set of offers for the targeted individual to determine which offer or offers from the set of offers should be sent to the targeted individual; and

limit the number of prioritized offers using at least one privacy characteristic defined by the specific, targeted individual in the form of feedback from the specific, targeted individual to prohibit or limit the frequency of various types of offers.

21. The computer program product of claim **20** wherein delivering the selected prioritized offer comprises instructions to:

allocate the selected prioritized offers according to a capacity associated with each of the channels.

22. The computer program product of claim **21** wherein the capacity of the channels is related to monetary costs associated with of the channels.

23. The computer program product of claim **21** wherein the capacity of the channels is related to a physical capacity of the channels.

24. The computer program product of claim **18** wherein instructions to produce a marketing campaign further comprises instructions to:

determine characterizing conditions under which the offers are delivered;

determine which individuals associated with particular ones of the offers based at least in part on profiles of each of the individuals.

25. The computer program product of claim **18**, further comprising instructions to:

track activities of the targeted individuals to whom the offers were targeted with instructions to track according to the channels over which the offers were sent; and

determine an effectiveness of the plurality of offers by matching information received from sources of activity related information to the offers.

26. The computer program product of claim **25**, further comprising instructions to:

present through channels selected from the plurality of channels a sequence of subsequent offers to individuals based on their tracked activities.

27. The computer program product of claim **18** wherein at least one of the offer data processing rules is a rule selected from a set of time based rules, the time based rules including at least one of a direct rule that immediately instantiates offers based on an offer campaign, a triggered rule that instantiates offers based on the occurrence of particular conditions, and a staged rule that instantiates offers based on user interaction with previous offers; and wherein instructions to select further comprises instructions to:

select one of the offers based on execution of one of the time based rules.

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