Title: METHOD AND APPARATUS FOR TAKING PRODUCT SURVEYS FROM USERS AND ANALYZING SURVEY DATA

Abstract: The present invention provides apparatus and a method for gathering and managing demographic information received from outside source via a network (10). The system comprises one or more computing devices (12), which are used as database server for managing data storage and retrieval for reporting database (13), one or more computing devices (14) for executing demographic collection and report generating. Further, a plurality of user devices (16) are connected through the network (10) to permit users to access the computing devices (14).
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METHOD AND APPARATUS FOR TAKING PRODUCT SURVEYS FROM USERS AND ANALYZING SURVEY DATA

BACKGROUND OF THE INVENTION

Field of the Invention

This invention relates to collecting customers’ demographic information and using that collected data to target or address more accurately the marketing activity of a merchant to its customers and prospective customers. More particular, this invention relates to the use of a system of computers interconnected by a network, e.g., the Internet, to gather data about customers and/or prospective customers and to analyze such data in accordance with the demographics of a targeted customer to identify particular customers and/or prospective customers to whom the merchants’ marketing efforts will be addressed.

Description of the Background of the Invention

The Internet comprises a vast number of computers and computer networks that are interconnected through communication links. The interconnected computers exchange information using various services, such as electronic mail, Gopher, and the World Wide Web ("WWW"). The WWW service allows a server computer system (i.e., Web server or Web site) to send graphical Web pages of information to a remote client computer system. The remote client computer system can then display the Web pages. The World Wide Web is especially conducive to conducting electronic commerce. Web Servers have been programmed to permit vendors to provide a wide array of products and services for sale over the Internet. A user, who is a potential purchaser, may browse one or more websites, which provide lists of products or services for sale, much like a catalogue. A purchaser may preview these lists to select a desired product or service to be purchased. When the user has completed selecting the items to be purchased, the server computer system then prompts the user to enter information to complete the ordering of the selected items. This purchase generally deals with how and where the selected items may be delivered to the purchaser and how the purchaser will pay for the selected items.
Networks and, in particular, the Internet provide a mechanism for collecting a wide variety of data that is of significant value to merchants in their marketing efforts to their customers and prospective customers. Such data includes at least demographic data, i.e., the age, sex, employment and residence address of the customer, and psychological data that is generated based on the detected activity of the customer as he or she accesses various sites across the Internet for a variety of purposes. In particular, an Internet server may be programmed to record and maintain databases to store the various interactions of the customers with the Internet. For example, the server may track and profile a customer's shopping activity, which may include the cumulative purchase behavior of customer, the historic behavior or expected future behavior, or any combination thereof. In particular, the initiation of a desired communication over the Internet may be based on a specific purchase made by a customer, or the passage of a certain length of time from a specific shopping activity by the customer, or the last inquiry made by the customer and the seasonal activity by the customers, for example. U.S. Patent No. 5,924,080 of Johnson, U.S. Patent No. 5,956,693 of Geerlings and U.S. Patent No. 5,991,735 of Gerace relate to the gathering and analysis of such profiles for marketing purposes.

U.S. Patent No. 5,794,210 of Goldhaber et al. relates to the use of collected customer data to facilitate the marketing to a particular set of customers and, in particular, to use the Internet and a plurality of broker servers to implement such marketing activities of its merchants. For example, Goldhaber et al. suggest that one broker server stores ads relating to opera and has the objective of transmitting those ads to opera loving consumers. A consumer computer stores an interest profile of its consumer, which specifies skiing and opera as interest areas for this consumer. A software agent or message is transmitted across the Internet to each broker server of a merchant, which attempts to match ads with the content of the consumer's interest profile. When a match is found, the broker service with an ad that matches the interest of a particular consumer, may deliver the matching ads to the consumer's computer. In a further embodiment, the software agent may carry a brief summary of the ad to the consumer's computer, where it and an associated icon are displayed. The consumer has the option of whether to click on the displayed icon to permit thereby the display of the full ad or to ignore the ad. As an inducement to the consumer to read the ad, a reward in the form of digital cash
may be credited into a database associated with the consumer's computer. Alternatively, the consumer's account may be credited and the merchant's account may be debited by a financial clearinghouse computer which is also connected to the Internet.

Goldhaber et al. further suggests the construction of consumer interest profiles, which would include demographic and other information that details the consumer's interests, habits and preferences. This consumer interest profile information can be used by merchants to target advertisements for certain consumers and not others. This profile may be constructed by causing the consumer's computer to display at registration time a questionnaire and associated information requesting the consumer to provide identity information. This information may include personal data such as the name, gender, age, ethnicity, religion, the interests, telephone number, password, nickname and address of the consumer, and topics for which the consumer has previously searched. The consumer is enabled to select which of the above information may be passed on to a merchant, as well as to request a reward for the disclosure of the consumer's permissioned data.

**SUMMARY OF THE INVENTION**

It is therefore a principal object of the present invention to collect data indicative of the marketing interests of a set of users having common demographics.

It is a further object of this invention to obtain improved marketing data that will that will target more accurately the set of consumers to which a particular ad should be addressed.

It is a still further object of this invention to motivate consumers to provide marketing data about themselves.

In accordance with these and other objects of the invention, this invention provides a method of preparing a server to access and analyze data from a plurality of consumer terminals to more accurately target consumers with advertising messages relating to items for sale. The method comprises the steps of constructing at the server a database, opening a record in the database for each of the plurality of consumers, and entering for each consumer data descriptive of that consumer. Next, a survey is conducted with each of the plurality of consumers. The survey poses at least one question concerning the item. One answer is taken from each of the consumers and inputted in the
record of the database associated with that consumer. Then the database is searched by that
descriptive data which identifies one of the items for sale to identify the consumers with matching
descriptive data. Finally, the answers are taken from the records of the consumers and incorporated
into a report.

In a further aspect of this invention, the descriptive data takes the form of demographics,
which are used to filter the demographic data retained in a plurality of the records. A second survey is
conducted that relates to a second item for sale that differs from the first mentioned item, and that
searches the plurality of records by answers for only a selected one of the first mentioned and second
surveys. Further, the plurality of records may be searched by answers to specific questions of the

survey.

In a still further aspect of this invention, a method of attracting users to use a website with a
server, that comprises the steps of constructing at the server a database, opening a record in the
database for each user, and facilitating the user to perform a desired interaction with the website.
Points are credited to the record of each user for each desired interaction with the website. The points
are accumulated in the record of each user in accordance with the number of desired interactions. A
prize is awarded to that user who has accumulated a predetermined number of points. The desired
interactions include answering questions posed in a survey with respect to an item for sale, and
referring a new user to register with the website. Further, the record of a referring user is credited
with a predetermined number of points when that new user performs a desired interaction.

In a further aspect of this invention, the method of preparing a server to support a plurality of
male and female users to play a dating game on the server’s website, comprises the steps of
constructing at the server a database, opening a record in the database for each, and inputting from
each user an indication of whether the user is male or female and entering that indication in the user’s
record. A series of questions is posed to each user and the user’s answers are recorded to his/her
record. Next, the last set of answers as relate to a male user is compared with the sets of previously
recorded answers from the female users. If there is a match between the compared sets of answers, a
list of the matched female users is displayed to the male user.
In a still further aspect of this invention, a method of preparing a server to support a plurality of users to play a stock game on the server's website, comprises the steps of constructing at the server a database, opening a record in the database for each user, and initiating a round of the stock game for a predetermined period of time. Each player is credited with a predetermined amount of money with which to play the stock game. Each player executes a purchase or a sale transaction of stock, which stock is added to or deleted respectively from a user's portfolio of stocks. The portfolio of stocks and the remaining balance of the predetermined amount of money are tracked. Finally, the market value of each stock in each player's portfolio is obtained, and the user with the highest aggregate value of the stocks is determined at the end of the predetermined period.

BRIEF DESCRIPTION OF DRAWINGS

The foregoing objects and advantages of the present invention may be more readily understood by one skilled in the art with reference being had to the following detailed description of a preferred embodiment thereof, taken in conjunction with the accompanying drawings wherein like elements are designated by identical reference numerals throughout the several views, and in which:

Figure 1 is a functional block diagram of a network, e.g., the Internet, to which a plurality of a plurality of user devices or terminals are connected and a website which comprise one or more computer devices and a database;

Figure 2 is a functional block diagram of the components of each of the computing devices that are connected to the Internet as shown in Figure 1;

Figure 3a is an illustration of a splash or home page for the website of this invention that lists the various activities that are driven by the website including, for example, the surveys that may conducted, the games that may be played and its other functions;

Figure 3b is a flow diagram of the program that powers the splash page shown in Figure b;

Figure 3c is a functional block diagram that illustrates the structure or layout of the database shown in Figure 1 as a part of the website;

Figure 4 is a flow diagram of the program which permits a website user customize his or her splash page as shown in Figure 3a;
Figure 5 shows a flow diagram of the program which facilitates the user to update his/her profile, typically the user's demographic data;

Figure 6 illustrates a flow diagram of the program for facilitating the user to send a message to sign up a friend;

Figure 7 shows a flow chart of the program for constructing an events calendar which is maintained of the website;

Figure 8 illustrates a flow chart of the program for facilitating the user to construct wish lists of products that a user may want;

Figure 9 shows a flow chart of the program for setting up and permitting users to input and receive comments in a chat room;

Figure 10a illustrates a flow chart to permit a user to select one of a plurality of surveys to take, to pose the questions of the selected survey to the user and to record the user's answers;

Figure 10b show a flow diagram of a program for permitting a user to play a dating or meeting game;

Figure 10c illustrates a flow diagram of a program that enables a user to play a stock game;

Figure 11 shows a flow diagram of a program that facilitates a user to select products to redeem points that are awarded for performing anyone of a plurality of desired website activities such as the user taking a survey as shown in Figure 10a;

Figure 12 is a flow diagram of a program that permits a system's administrator to analyze the response or answer data received from users taking surveys and to construct reports of such data for particular sets of users according to selected demographic data;

Figure 13 illustrates a flow diagram of a program that permits the system's administrator to address messages to be particular sets of users according to their demographics;

Figure 14 shows a flow diagram of a program which permits the system's administrator to select a particular product and to determine how many time that selected product appears on one of the user's wish list; and
Figure 15 illustrates a flow diagram of a program that permits the system's administrator to construct and edit a calendar of events, which are selected according to the demographics of the users to which the calendars are intended to be sent.

**DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION**

The present invention provides apparatus and a method for gathering and managing demographic information received from outside source via a network. The inventive system may utilize in one illustrative embodiment of this invention the components shown in Figure 1 to enable clients of the invention to collect demographic information and to market products, via a network 10, which in the preferred embodiment of this invention is the Internet. However other connectivity, e.g., via a modem in a point to point connection or networks other than Internet are within the contemplation of this invention. The system comprises one or more computing devices 12, which are used as a database server for managing data storage and retrieval for reporting database 13, one or more computing devices 14 for executing demographic collecting and report generating. Further, a plurality of user devices 16 a - d are connected throughout the network 10 to permit users to access the computing devices 14 and to participate in activities leading to information gathering in a manner as will be described below.

The computing devices 12, 14, and 16, may illustratively take the configuration of any computer ranging from mainframes to personal computers (PCs). In one illustrative embodiment of this invention as shown in Figure 2, such computing devices and terminals may comprise a bus 30, which is connected directly to each of the following:

1. a central processing unit (CPU) 32;
2. a memory 34;
3. a system clock 36;
4. a peripheral interface 38;
5. a video interface 40;
6. an input/output (I/O) interface 42;
7. a communications interface 44; and
8. a multimedia interface 46.

The common bus 30 is further connected
9. by the video interface 40 to a display 50;
10. by the I/O interface 42 to a storage device 52, which may illustratively take the form of memory gates, disks, diskettes, compact disks (CD), digital video disks (DVD), etc.;
11. by the multimedia interface 46 to any multimedia component 56;
12. by a peripheral interface 38 to the peripherals 58, such as the keyboard, the mouse, navigational buttons, e.g., on a digital phone, a touch screen, and/or a writing screen on full size and hand held devices, e.g., a palm pilot™;
13. by the communications interface 44, e.g., a plurality of modems, to a network connection 60, e.g., an Internet Service Provider (ISP), and to other services, which is in turn connected to the network 10, whereby a data path is provided between the network 10 and the computing devices 12, 14, 16, and 18 (Figure 1) and, in particular, the common bus 30 of these computing devices; and
14. furthermore, by the communications interface 44 to a wired and/or a wireless telephone system 54.

Please redirect you attention to Figure 1. When the customer using a common web browser, e.g., Microsoft Explorer or Netscape Navigator, on computing device 16 accesses the inventive website executing on the computing device 14, a splash page 78 (Figure 3a) will be displayed on that customer's computing device's 16 screen. As shown in Figure 3b, a program 80 executing in the background to power the splash page 78, after achieving the initial connection to the inventive website on the computing device 14 in step 100, the customer will be shown an informative page in step 102 with locations 104 enabling the customer to retrieve textual information, such as, parents page, privacy policy, help page, what's new, site map, and other information about the inventive website 14.

In step 106 the customer will be shown a join-up introductory page and will be asked to join as a member. In step 108 a determination is made whether the customer is joining or decided not to join. If the customer decided not to join the program 80 will terminate in step 124. If the customer
decided to join, in step 110 that customer will be asked to enter some relevant information. In step 112 that relevant information may be reviewed and if errors or inconsistencies are found, the flow of program 80 will continue in step 110. After the relevant information is validated in step 112, it will be saved in step 114 to the database 13 (Figure 1).

A record layout of database 13 is shown in Figure 3c. The user information may be stored into a users table 62 where the information saved may include the name, login name, password, address, identity of a referrer, etc. Referring back to Figure 3b, in step 116 the customer will be allocated a number of points for signing up. In one embodiment of the present invention shown in Figure 3b, the amount of points is shown to be 750, however any number of points may be allocated and may be determined by the operator of the website or a system's administrator. The system's administrator is a person or an entity underwriting the collection of the demographic data performed by the inventive website. In step 118, a determination is made whether the customer has been referred by an existing customer. If in fact the new customer has been referred by the existing customer, points will be added to the referrer's account in step 120. The referrer will be sent an e-mail appraising him or her of that fact in step 122, the referrer information will be added to a referrals table 64 (Figure 3c), after which the program 80 will terminate in step 124. If it is determined in step 118 that the new customer has not been referred by an existing customer, the program 80 will then terminate in step 124.

The inventive database 13 comprises various sets of tables including the following: The survey master table 63 comprising information identifying the person or the company on whose behalf the demographic information is being gathered. The information stored in the survey master table 63 includes (a) user id; (b) user name; (c) password; etc. Persons identified as system's administrators 63 are allowed to execute the reporting program 98a (Figure 12) and programs 98b-98c (Figures 13 to 15).

The surveys table 72, where each survey table 72 has a plurality of associated questions tables 74 and a plurality of associated answers tables 73. The information stored in the surveys table 72 includes (a) survey id; (b) survey name; (c) password; (d) whether it is a single or multiple screen/page survey; (e) targeted demographic for this survey; etc. Each questions table 74 has a
corresponding answers table 73. The information stored in the questions table 74 includes (a) survey id; (b) question text; etc. The information stored in the answers table 73 includes (a) survey id; (b) question id; (c) answer text; etc. The questions 74 are loaded and executed by the survey program 94 (Figure 10a).

The users table 62 comprises: 1) One or more home pages tables 66 in which the information stored includes information derived from the sounds table 66b, corners table 66c, colors table 66b and the background table 66e; 2) One or more wish list tables 70 in which the information may be saved by the program 90 (Figure 8) and includes (a) user id; (b) title; etc.; 3) One or more events tables 68 in which the information is saved and may be used by the wish list program 88 (Figure 7) and includes (a) user id; (b) event date; etc.; 4) A plurality of referrals tables 64 in which the information regarding these new users referred by a referring user is stored by the program 86 (Figure 6) and includes (a) referee id; (b) referee e-mail; etc.; 5) A plurality of transaction tables 65 in which the information regarding the transactions performed by the user are stored and includes (a) user id; in table 65a and (b) action in table 65b.; 6) A plurality of user answers 75 associated with a specific questions table 74.

The information stored in the user answers table 75 includes (a) survey id; (b) question id; etc. The users table 62 further comprises an associated provinces and countries tables 61 to enable the pull down or pop up menus to facilitate filling in user information in the sign up program 80 Figure 3b.

After the new customer has been signed up and that customer's record has been saved in the database 13 (Figure 1), the customer will be presented with the splash page 78, which includes a menu of choices 82, 84, 86, 88, 90, 92, and 94 (Figure 3a). Before getting to these selections and choosing any of the selections, the customer may be asked to log in. As shown in Figure 4, the customer will proceed through the login process 160. A display of a home page will be shown in step 132. The customer will be asked to login in step 134 and, if the login is successful as verified in step 136, that customer's point total will be retrieved from the users table 62 (Figure 3c) and will be displayed in step 140. If the login was not successful the program will revert to step 134, where the customer will be asked to re-login. In step 142, a home page with various options for customization will be displayed to the customer. In step 144 the customer will be allowed to choose the background color, in step 146 the type font may be chosen, in step 148 the color of that font may be chosen, and in step
the customer will be allowed to choose various images to be displayed on the home page. In step
152, the customer may be enabled to select sounds that will be played during the accesses to his or her
customized web page. In step 154, the selected customization choices will be shown back to the user.
In step 156, if the customer decides that the preferences should be changed, the program 82 will
proceed back to step 142 from where the steps 144, 146, 148, 150 and 152 will be repeated. If the
user is satisfied with the customization choices, the program 82 will save the customization choices in
tables 66 (Figure 3c) and will terminate in step 158.

If it was the customers' choice to update their profiles 84 (Figure 3a) as shown in Figure 5, the
user will be asked to proceed through the login process 160. After proceeding through steps 130 to
140, as described with reference to home page customized program 82, the customer will proceed to
step 172. In step 172, the user is allowed to change her/his profile with choices such as login changes
in table 62 (Figure 3c). These updates will be validated in step 174. If a determination is made in
step 174 that the entries are not valid, the logic of program 84 will revert to step 172 where the
customer will be requested to re-enter her/his selections. If in step 174 it is determined that the entries
are all valid, a confirmation of a successful update of the user's profile will be displayed to the
customer in step 176 and the program 84 will end in step 178.

If a selection, sign up a friend 86 (Figure 3a), is made as shown in Figure 6 after the customer
has completed the login process 160, step 182 provides a description of the process of signing up a
friend of that customer. In step 184, a determination is made whether the user had decided not to sign
up a friend, in which case the program 86 will terminate in step 192. If the determination is made to
sign up a friend in step 186, the user enters information about the friend which may include that
friend's e-mail address. In step 198, a determination is made if a customer entered as a friend already
exists in the table 62 (Figure 3c) of the data base 13 (Figure 3c). If the user was referred by a friend,
the program 86 reverts back to step 186, where a notification of that fact is given to the referring user.
If the referred user does not exist, step 190 an e-mail is sent to that referred user asking him or her to
come or login and visit the inventive site. After the e-mail is sent, the program terminates in step 192.
After receiving the e-mail sent in 192, the signed up user may choose to participate in the inventive
method and login to the inventive site, in which case that new user will proceed through the steps as described above with reference to program 80 (Figure 3c).

If the calendar selection 88 (Figure 3a) was chosen as shown in Figure 7, and the login process 160 has been completed, the current events information is retrieved from the tables 68 (Figure 3c). That current events information, which is specifically designed for the demographic group of the current user, is displayed in step 204. The current events information displayed in step 204 may include information concerning personal events, e.g., birthdays, sports, music, marketing or other events for the current month. If the user has decided in step 206 not to view the data event, the program 88 will terminate in step 220. If in step 206 the customer has decided to view the events, for example current day's events, those events will be displayed to the customer in step 208. Further in step 208, the customer will be allowed to add personal events to the tables 68 (Figure 3c) so that the inventive system may notify the user of the personal event before the time of the occurrence of that event. In step 210, a determination is made if such an event has been added. If it is determined that no additions have been made, the program 88 will terminate in step 220. If in step 210 the determination is made that the customer does want to enter personal events, the customer will be asked to in step 212 enter the event data. In step 214, a validation is made of the entered data. If the data entered is determined to be inconsistent, the processing of program 88 will revert to step 212. If the data is validated in step 214, it will be saved in step 216 into the table 68 (Figure 3c) associated with the current user. After the data is saved in step 218, all entered events may be shown to the user.

An independent process or a scheduled task 221 is scheduled to execute periodically, e.g., every morning, on the computing device 12 (Figure 1), which acts as a database server for the database 13 (Figure 1). That task 221 reviews the entered events of all participants of the inventive method as represented by the step 222. After reviewing individual user's data, a decision is made in step 224 as to whether the user should be notified of the approaching event. If this determination is negative, the program will terminate in step 228. On the other hand if the determination is that the customer should be reminded, an e-mail is forwarded to the user in step 226.

If the wish list selection 90 (Figure 3a) is chosen as shown in Figure 8 and the user has completed the login process 160 (which was previously described with reference to program 82
(Figure 4)), the tables 70 (Figure 3c) are accessed in step 232 to retrieve a list of the user's wishes. These wishes are products, which the user would like to have or own. In step 234, the present wish list is displayed to the user and the user is enabled to change the entries, i.e., by adding new wishes and deleting the old ones. In step 236, a determination is made whether the user would like to add an item to the wish list. If the user has decided not to add an item, a determination is made in step 238 of whether the user has decided to delete an item. If the user has decided not to delete any items and not to add any items, the program 90 will terminate in step 250. If the user has decided to delete an item in step 240, the deleted item will be stored in a table 70 (Figure 3c) and marked so that it will not be shown to the user in the future. If the user has decided to add a new wish item, the user is allowed in step 242 to enter that item's name and information about it. In step 244, a validation is made if the product entered is acceptable. Any obscene or illegal entries will be detected and discarded, and the flow of program 90 will return to step 242 to request a new entry from the user. If the entry has been validated in step 244, that entry is stored in step 246 in the client's record of the table 70 (Figure 3c). In step 248, a determination if the user wants to enter additional items on a list of wishes is made. If yes, the flow of program 90 returns to step 242. If not, the program will terminate in step 250.

If the user chooses to participate in the chat room 92 (Figure 3a) as shown in Figure 9 and the login process 160 has been completed, a display of current topics being discussed in the chat rooms will be displayed in step 262 and a menu of chat room selections will be presented to the user. In step 264, the customer is allowed to select a chat room, and in step 266, the user joins the chat group. In step 268, the user reads the chat text and is allowed to make comments. If in step 270 it is determined that the user has decided not to make comments, the chat session will be terminated in step 276. If the customer decides to make comments, he or she is enabled in step 272 to reply to other participants' comments. The text of such comments, after being filtered in step 274 for words or phrases disallowed by the operator of the inventive method, will be displayed and the program 92 will revert to step 268. If in step 274 it is determined that the words used are not allowed, the flow of the program 92 will revert to step 272.

Referring now to Figure 10a, the user logs-in in step 160. Step 282 initiates the process of selecting which set of surveys will be presented to the user on his or her display 50 (see Figure 2).
Step 284 determines whether the user has completed each of the potential surveys and, if yes, step 288 deletes the survey(s) that have been completed. As explained above, each user has input demographic information about herself or himself. It is also contemplated that each survey is designed for a particular demographic set, e.g., a survey dealing with basketball shoes would target for example boys aged 12 - 17, whereas a survey dealing with makeup would be targeted for girls, aged 14 - 18. In this context, step 286 determines whether the user falls within the target demographic set of a particular survey and, if not, that survey(s) is deleted in step 288 from those to be displayed in step 290 on the user's display 50 (Figure 2). The user then selects in step 292 which survey of those displayed that he or she wants to take.

The survey may be formatted in a first style, wherein each question is placed on a separate page, or a second style, wherein all of the questions appear on a single page. Step 294 determines whether the selected survey is constructed to be of the first or second style, and if of the first, one-question-on-a-page style, the process moves to step 306, where the first page and its question are displayed to the user. The user enters her/his answer in step 308, before that answer is written to the database 13 in step 310. Next, step 312 tests whether the last question (and last page) has been displayed and, if not, the process loops through steps 306 - 312, until step 312 determines that the last question of the current survey has been posed. When the last question has been answered, step 302 evaluates the answers and awards points based on those answers. Finally, step 304 stores those points in the user's record of the database 13, and further awards a lesser number of points the to user that had referred the present user to this website. If step 294 determines that the survey is a second, all-questions-on-one-page survey, the process moves to step 296, which displays all of the questions. Step 298 permits the user to enter her/his answers, before step 300 writes these answers to the database 13. As before, step 302 examines these answers and awards points to the user based upon his/her answers, before step 304 writes these points to the user's record in the database 13.

Referring now to Figure 10B, there is shown one of the games that a user may select to play, i.e., the dating game where boys and girls determine their potential compatibility by comparing their responses to a series of questions. Initially, the user logs in through step 160 and inputs in step 322 whether the user is a male or a female. If a male, the user will answer a series questions in steps 324a
- 342a. On the other hand if female, the user will answer a series of similar questions 324b - 342b. First in step 324a, a first question is posed to the male user on his display 50 (Figure 2), before the male user inputs his answer in step 326a. Then in step 330a, the response is inserted into the database 13, before step 328a determines whether the posed question was the last in its series or not. If not as determined in step 328a, the asking and answering of the questions continues by looping through steps 324a - 328a, until the last question is posed. If the last question has been posed as determined in step 328a, the process 296 continues to step 322a, where the answers recorded for this male user are compared with the answers collected from the female users who have previously entered their answers to these questions. If there are matches as would indicate a compatibility, the matches are displayed upon the male user's display 50 (Figure 2). The names of the female users are in one illustrative embodiment of this invention not used; rather, the nicknames of the matched females are displayed. The male user may then choose in step 338a to send or not send a message to any of the matched female users. If no message is to be sent, the process 296 is concluded in step 342a. If the boy wants to send a message, that message is sent in step 340a to the selected female user. In step 340b, the female user may then send a return message and, possibly, reveal her real identity.

Referring now to Figure 10c, there is shown another game which the users may elect to play, i.e., the stock game. The stock game involves a number of users, each competing against each other. This game is run for a fixed period of time. Each of the competing users selects a portfolio of stocks. Each player may purchase a number of stocks, whose total initial value may not exceed a given monetary amount. Further, the user is limited as to the number of stock purchases and sales that he or she can make, in one illustrative example 10. The winning user is that user whose portfolio has appreciated the most, i.e., the aggregate value of the stocks at the end of the game period is the greatest. The user logs-in in step 160. Step 352 determines whether the player has played this game before within the current game period. If yes, i.e., the user has played this game before in the current period, the process 296b moves to step 378 which invites the player to play the stock game and displays information about the game and how it is played. Then in step 380, the user decides whether to play or not. If the player decides not to play, the stock game ends in step 370. In step 382, a preset amount money is credited to the user's game account who plays this game. It is understood that the
same amount is credited to each user's account. Then step 384 displays the stocks that are available in this game for user purchase. In one illustrative embodiment of this invention, 100 stocks are available for user purchase. Next in step 386, the name of the stocks available for purchase, and the price of such stocks are displayed on the user's display 50 (Figure 2). The user then decides in step 388 whether or not to purchase any of the available stocks. If no purchases are to be made, the game is terminated in step 370. If the user decides to purchase stocks, the user makes his or her selection in step 390, and further enters the number of shares to be purchased in step 392. Next in step 394, the total monetary amount of that purchase is calculated and that amount is compared to the available game funds as retained in the user's game account. If the total of the proposed purchase is less than the available funds, step 396 executes the proposed purchase and displays the stocks held in the user's portfolio and the remaining balance of the user's funds. If the available funds are insufficient, the process returns to step 392 to adjust the stock to be purchased and the number of shares to be purchased. Next, step 398 determines whether the user has exceeded the number of stock purchases or sales that are allowed and, if exceeded, the process moves to step 370 to terminate the game play and to prevent this purchase of stock. If the stock play limit has not been exceeded, step 400 displays the number of stock shares purchased and terminates this round of the stock game.

If the user has played the stock game before in the current game period as decided in step 352, the stock game retrieves from the database (??) in step 354 the game data including the number of shares of each stock purchased and the balance of game funds retained in the user's game account and displays these figures in step 356. Next the user decides in step 358 whether to purchase further shares of stock. If the user decides to purchase stock, he/she selects the company in step 360, enters the number of shares of stock to sell in step 362 and then writes in step 363 these sales to the database. Then, step 366 displays each stock held in the user's portfolio and its price, and the user's remaining monetary amount. Then in step 368, it is determined whether the number of stock purchases or sales to date exceeds 10 and, if so, this round of the stock game terminates in step 370. If the limit of stock purchases has not been exceeded, the process returns to step 360.

If the user decides in step 358 not to make a purchase, the game permits the game user to determine in step 372 whether to sell stock. If the user decides not to sell stock, this round of the
game ends in step 370. If the user decides to sell a part of his/her portfolio, step 374 determines
whether the user has reached his/her limit of transactions. If the transaction limit has been exceeded,
a message to that effect is displayed to the user on his/her display 50 (Figure 2), before this round of
the game is terminated in step 370. If step 374 decides the total transaction limit had not been
exceeded, the process moves to steps 360 - 364 which proceed to purchase a number of shares of a
particular stock before displaying the balance of the user's fund in step 366.

Referring now to Figure 11, there is shown the process by which the user may redeem the
awarded points by using them to purchase merchandize that is selected by the user. The user logs in
in step 160, before step 402 displays on the user's display 50 (Figure 2) the process of redeeming
his/her points for merchandize. In a first option, the user is permitted in step 404 to browse or not a
catalogue of products. If the user decides to browse, step 406 permits the user to select one of a list of
different catalogues, whereby the products from the selected database are selected from the database,
before step 410 displays the products in a descending order of their point values. In step 412, the user
can indicate whether the method of displaying products is satisfactory for the user. If not, the user in
step 430 is given the opportunity to display the sequenced products by entering the user's criteria for
the display, an attribute of the product or a description of the desired product. If the method of
display is satisfactory to the user, the user selects in step 414 the desire product. Next, step 416
displays on the user's display an image and description of the selected product. Next, step 418
determines whether the user had a sufficient number of points to redeem the selected product. If not,
the process returns to steps 410 - 416, whereby the user may select again a product for which he or
she will have sufficient points. If there are sufficient points for the selected product, step 420
confirms the product selection. If the user would like to reconsider her/his selection, the process
returns to steps 410 - 416, whereby the user may select another product. If the user confirms his/her
selection, step 422 prompts the user to enter her/his shipping information. Next step 424 deducts the
number of points for the most recent selection from the user's point balance, before step 426 displays
the new point balance of the user.

If the user does not wish to browse the catalogue for products, he/she can search in step 432
for the product by inputting in step 438 appropriate search criteria, before continuing the process in
steps 408 - 416 as described above. If the user does not want to search for the product, step 434 tests whether the user is logged in; if not, the redemption process 96 ends in step 440. If the user is logged in, the user can select to search for products for which the user has sufficient points to redeem. The process moves now to steps 408 - 416, where the user may make her/his product selection as explained above.

Referring now to Figure 12, there is shown the subroutine 98a which is run by a system's administrator, as opposed to the user who, as discussed above, logs-in over the Internet as described above. Generally, the system's administrator uses the subroutine 98a to analyze one of the surveys taken as explained below with respect to Figure 10a by a particular demographic set. In particular, the administrator is able to include in a particular report only those answers which were given for a particular demographic set; for example, the answers of a particular survey are filtered for girls, ages 13 - 16 with more than 5,000 points. Such survey reports are of significant value to product manufacturers. For example, Nike would be interested in a survey dealing with basketball shoes as filtered for boys, ages 11 - 18.

The system's administrator enters the subroutine 98a in step 450 and logs-in in step 452 by inserting a username and password, which is matched in step 456 with a list of administrators who are permissioned to use the subroutine 98a. If step 456 does not find that the user's password matches one held in the survey-master table 63 of the security database, the subroutine 98a loops through the steps 454 - 456, until a matching password is detected and the subroutine 98a moves to continues in step 458. Next in step 460, the system's administrator selects a set of demographics with which the data collected in step 110 will be filtered. For example, the system's administrator may select to filter this data against users that are girls, ages 14 - 18 that have accumulated 10,000 points. Next step 462 determines whether further filtering is required and, if not, step 466 compares the selected set of demographics against the gathered data to identify the users. A list of the users and their survey answers are displayed on the system's administrator's display in step 468. The output of step 464 is the report that is of value to the producers. Next in step 470, the system's administrator determines whether or not to export the gathered and filtered data; if the system's administrator decides to export the filtered data, it is incorporated into a spreadsheet and downloaded. If the filtered data is not to be
exported, the system's administrator decides in step 474 whether or not to attach a name to the data report. If not, the reporting subroutine 98a is then finished in step 488. If not, the system's administrator enters in step 476 an appropriate name to identify this filter data or report. Then in step 478, the filtered data is saved to the database 13, before the process 98a is completed in step 488.

If the system's administrator decides in step 462 to filter the survey data further, the process 98a moves to step 480, wherein a list of the conducted surveys is displayed on the administrator's display. In step 482, the system's administrator selects which survey or surveys are to be filtered. Next in step 484, the system's administrator determines whether the filtering needs to be effected at the survey level or at a subsurvey level. If the administrator selects yes, i.e., the survey data of an entire or whole survey or surveys as selected by the system's administrator in step 482 is sent to step 464 as explained above. On the other hand if the system's administrator determines in step 484 that further filtering is required, the administrator will select in step 468 the specific responses or answers to certain questions to be filtered in step 466. As seen in figure 12, the processing of the selected answers is processed in step 468 to 488 as explained above.

Referring now to Figure 13, there is shown a process 98b for transmitting a message, typically in the form of a calendar of events which are of interest to particular users. The message is addressable and may take a variety of forms without departing from the scope of this invention, e.g., a mailing, an email or a fax. In particular, each message or calendar is tailored for a particular set of the users. After login in step 492, the system's administrator initiates in step 492 the preparation of the events calendar to select of the users in accordance with a selected set of the demographics. Next in step 494, the chosen demographics are selected from the database 13. Then the system's administrator selects the demographics for the calendar in accordance with the perceived audience. For example if the calendar were to announce a basketball event, the selected demographics could be for example boys, ages 10 - 18. Next in step 498, the administrator edits the calendar or mail out, before step 498 displays the proposed message to the system's administrator. The administrator determines in step 502 whether the message is set for delivery. If ready, the message is transmitted in step 504. If not, the process 98b returns to step 498, whereby the system's administrator may again edit the message.
Referring now to Figure 14, there is shown a process 98c, wherein the system's administrator may determine how many times a particular product has appeared on one of the user's wish list, which was constructed as explained above with respect to Figure ??.

After the system's administrator has logged in in step 510, the administrator initiates in step 512 the process 98c by ordering the downloading of the wish list data from the database. In step 514, the administrator is prompted to enter the product of interest. Then step 516 searches the downloaded wish list data as to the number of users who have listed in their list the selected product, before the search results are displayed in step 518. The system's administrator can select in step 520 whether to download these results in a spreadsheet form whereby a correlation of user and product is provided in step 522 or to terminate the process 98c in step 524.

Referring now to Figure 15, there is shown a process 98d that enables the system's administrator to prepare a calendar of events that is tailored to a selected set of users according to the demographics of its users. After the system's administrator has logged in in step 530, the administrator selects in step 532 to download the calendar data to permit new events to be listed and the listing of previously entered events to be edited. The administrator determines in step 534 whether the event is new or previously entered. If new, the demographic data is downloaded in step 536 and displayed in step 538. From the displayed demographics, the administrator analyzes the event and selects from the displayed demographics that set that most closely defines those users who would have an interest in the event. After the event demographics are set, the administrator previews in step 544 the event before deciding in step 546 whether or not to edit the event again. If the event is to be re-edited, the process 98d returns to step 542 whereby the event is re-edited in steps 542 - 546. If the event is acceptable, the event is written in step 548 to the database 13 and associated with the chosen demographic(s). If the event was previously entered as determined in step 534, the process 98d is moved to step 550, wherein the names of the previously entered events are pulled from the database 13. Next, the system's administrator is prompted in step 552 to select an event to be edited, before the detailed data related to that event is downloaded in step 554. Then the selected event is re-edited in steps 540 - 548 as explained above.
While the invention has been particularly shown and described with respect to illustrative and preferred embodiments thereof, it will be understood by those skilled in the art that the foregoing and other changes in form and details may be made therein without departing from the spirit and scope of the invention that should be limited only by the scope of the appended claims.
CLAIMS

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent is:

1. A method of preparing a server to access and analyze data from a plurality of consumer terminals to more accurately target consumers with advertising messages relating to items for sale, said method comprising the steps of:
   a) constructing at the server a database;
   b) opening a record in the database for each of said plurality of consumers;
   c) entering for each consumer data descriptive of that consumer;
   d) conducting with each of the plurality of consumers a survey, said conducting including posing at least one question concerning said item;
   e) taking at least one answer from each of said plurality of consumers and inputting it in the record associated with that consumer; and
   f) searching the database by that descriptive data which identifies one of the items for sale to identify the consumers with matching descriptive data.

2. The method of preparing a server as claimed in claim 1, wherein said item for sale is a product.

3. The method of preparing a server as claimed in claim 1, wherein said item for sale is a service.

4. The method of preparing a server as claimed in claim 1, wherein there is further included the step of collecting the answers from the records of the consumers identified in step f) and incorporating the collected answers into a report.

5. The method of preparing a server as claimed in claim 1, wherein said descriptive data is demographic and said searching step f) filters said demographic data retained in said plurality of records by a particular piece of demographic data.

6. The method of preparing a server as claimed in claim 5, wherein said demographic data includes age and sex of the consumer.
7. The method of preparing a server as claimed in claim 5, wherein step d) of conducting
cconducts a second survey that relates to a second item for sale that differs from the first mentioned
item, and said step f) of searching the database searches the plurality of records by answers to only a
selected one of the first mentioned and second surveys.

8. The method of preparing a server as claimed in claim 5, wherein there is included a further
step of filtering the plurality of records by answers to specific questions of the survey.

9. The method of preparing a server as claimed in claim 1, wherein step d) of conducting
conducts a second survey.

10. The method of preparing a server as claimed in claim 9, wherein there is further included
a step of presenting to each of the consumers a menu listing said first mentioned and said second
survey and permitting each consumer to select one of said first mentioned and said second menus to
be conducted.

11. The method of preparing a server as claimed in claim 10, wherein if any of said first
mentioned and second surveys has been conducted previously in step d), removing that survey from
the menu provided in the presenting step.

12. The method of preparing a server as claimed in claim 1, wherein there is further included
the step of awarding points to each consumer from whom an answer has been taken in step c).

13. The method of preparing a server as claimed in claim 12, wherein there is further
included the step of inputting the awarded points to the record of the consumer to whom the points
were awarded.

14. The method of preparing a server as claimed in claim 12, wherein there is further
included the step of accumulating the points for each consumer.

15. The method of preparing a server as claimed in claim 14, wherein there is further
included the step of permitting each consumer to select merchandize to be redeemed for a given
number of points.

16. A method of attracting users to use a website, the website having a server, said method
comprising the steps of:

a) constructing at the server a database;
b) opening a record in the database for each user of the user of the plurality;

c) facilitating the user to perform a desired interaction with the website;

d) crediting to the record of each user points for each desired interaction with the website;

e) accumulating the points in the record of each user in accordance with the number of desired
5

interactions; and

f) awarding a prize to that user who has accumulated a predetermined number of points.

17. The method of attracting users to use a website as claimed in claim 16, wherein said

desired interaction includes answering questions posed in a survey with respect to an item for sale.

18. The method of attracting users to use a website as claimed in claim 16, wherein said

10
desired interaction includes registering as a user of the website.

19. The method of attracting users to use a website as claimed in claim 16, wherein said

desired interaction includes referring a new user to register with the website.

20. The method of attracting users to use a website as claimed in claim 19, wherein there is

included the further step of crediting to the record of the referring user a predetermined number of

15

points when the new user performs a desired interaction.

21. The method of attracting users to use a website as claimed in claim 16, wherein said

desired interaction includes transmitting a message over the Internet to a prospective user.

22. The method of attracting users to use a website as claimed in claim 21, wherein

there is further included the steps of entering a name of a proposed new user and of

20

comparing the proposed new member with the records of the database to determine whether the

proposed member has a record in the database.

23. The method of attracting users to use a website as claimed in claim 22, wherein the name

entering step of a proposed new user includes entering an email address of the proposed new user, and

there is further included the step of forwarding an email over the Internet to the proposed new user.

24. The method of attracting users to use a website as claimed in claim 23, wherein there is

further included the step of facilitating the proposed user to click on a link of the received email and

the user's deciding whether or not to become a user of the website.
25. The method of attracting users to use the website as claimed in claim 16, wherein there is further included the step of accumulating the points for each user.

26. The method of attracting users to use the website as claimed in claim 25, wherein there is further included the step of permitting each consumer to select merchandise to be redeemed for a given number of points.

27. The method of attracting users to use the website as claimed in claim 26, wherein there is further included the steps of facilitating the user to select a particular product, determining the accumulated points required to receive the selected product, comparing the required number of points with the accumulated number of points, and if less, awarding the selected merchandise to the user.

28. The method of attracting users to use the website as claimed in claim 27, wherein there is further included the step of facilitating the user to browse through a catalogue of prizes and the points required to redeem each prize.

29. The method of attracting users to use the website as claimed in claim 27, wherein there is further include the step of displaying to the user a list of the available products ordered by the point required to redeem.

30. The method of attracting users to use the website as claimed in claim 16, wherein there is included the step of responding to each login by the user to the website by displaying to the user the number of points accumulated to date in the user's record.

31. The method of preparing a server to support a plurality of male and female users to play a dating game on the server's website, said method comprising the steps of:
   a) constructing at the server a database;
   b) opening a record in the database for each user of the plurality;
   c) inputting from each user an indication of whether the user is of a first or second sex and entering said indication in the user's record;
   d) posing a series of questions to each user of the plurality and recording his/her set of answers to his/her record;
   e) comparing the last set of answers as relate to a user of a first sex with the sets of previously recorded answers from users of the second sex; and
f) if there is a match between the compared sets of answers, displaying to the user of the first sex an indication of the matched users of the second sex.

32. The method of preparing a server as claimed in claim 31, wherein there is further included the step of facilitating the user of the first sex to transmit a message to selected of the displayed, matched users of the second set.

33. The method of preparing a server as claimed in claim 32, wherein there is further included the step of facilitating the selected user of the second sex to return a reply message to the user of the first sex.

34. The method of preparing a server to support a plurality of users to play a stock game on the server's website, said method comprising the steps of:

a) constructing at the server a database;

b) opening a record in the database for each user of the plurality;

c) initiating a round of the stock game for a predetermined period of time;

d) crediting to each player of the plurality a predetermined amount of money with which to play the stock game;

e) facilitating each player to execute a purchase or a sale transaction of stock, which stock is added to or deleted from a user's portfolio of stocks;

f) keeping track of the portfolio of stocks and the remaining balance of the predetermined amount of money; and

g) obtaining the market value of each stock in each player's portfolio and determining at the end of the predetermined period the user with the highest aggregate value of stocks in the user's portfolio.

35. The method of preparing a server as claimed in claim 34, wherein there is a limit to the number transactions that a user may execute in step e), and there is further included the steps of counting the number of transactions executed in step e), comparing the number of counted transactions with the transaction number limit, and if greater, inhibiting the execution of the present transaction in step e).
36. The method of preparing a server as claimed in claim 34, where in step e) the cost of executing the present purchase of stock is determined, and there is further included the steps of comparing the present stock purchase cost with the remaining balance as tracked in step f) and if greater, inhibiting the contemplated purchase of stock in step e).
FIG. 4

Start/Splash 130

Home Page 132

Login 134

Login Successful 136

Yes

Get Points Total (DB) 138

User Home Page and Balance 140

Customize Home Page 142

Choose BG Colour 144

Choose Font 146

Choose Font Colour 148

Choose Images 150

Choose Sounds 152

Preview 154

End 158

Like 156

160 Login process

Home Page Customize 82
FIG. 5

Start/Splash 130

Home Page 132

Login 134

Login Successful

Yes

Get Points Total From (DB) 138

User Homepage and Balance 140

Choose

Update Profile 172

End 178

Confirmation 176

Valid Entries

Update Profile

Profile

Update Profile 84

160 Login process

Yes

No
FIG. 6

Sign Up A Friend

86

End

192

User Enters Friend's Name & E-mail

186

User Exists Already

188

Yes

No

Send Friend E-mail

190

See FIG. 3

182

Login Process

Choose Sign Up A Friend

160

Sign Up

184

No

192

Yes
FIG. 8
Wish List

Login Process 160

Retrieve User's Wish List From DB 232

Display Wish List 234

Add Item  236
No

Delete Item  238
No

Enter Item  242
No

Validate  244
Yes

Enter Item into DB  246
Yes

Add Another  248

Set item as hidden in the database but leave for reporting purposes  240

End  250
No

SUBSTITUTE SHEET (RULE 26)
FIG. 9

Chat

92

160 Login Process
   - Choose Chat Room

262 Display Current Room Topics

264 Select Chat Room

266 Enter Nick Join Chat

268 Read Chat

270 Make Comment

272 Type Text

274 Validate Filter OK

276 End

SUBSTITUTE SHEET (RULE 26)
FIG. 10b
Meeting Game

160
Login Process

Male

322

Question

324a

User Answers

326a

Is This The Last Question?

328a

No

326b

User Answers

Pull Matches From DB

330a

Yes

330b

Question

Write to DB

332a

Insert into DB

332b

Pull Matches From DB (matched users)

Display Matches

334a

336a

Choose One

334b

336b

Display Matches

End

340a

User Chooses Message to Send

340b

User Chooses Message to Send

Send Them a Message?

338a

Yes

342a

Yes

Send Message

338b

No

342b

End

SUBSTITUTE SHEET (RULE 26)
FIG. 13

Mailout

98b

Admin. Login Process

Administrator Selects Mailout

Pull Demographics from DB

Administrator Selects Demographic(s) or All

Administrator Edits Mailout

Mailout Preview

Is OK

Yes

Mailed

SUBSTITUTE SHEET (RULE 26)
FIG. 15

Admin. Login Process

Administrator Selects Calendar

Pull Events

New?

Yes

Pull Demographic(s) from DB

Display Demographics

Administrator Selects Which Demographic Event is For

Administrator Edits Event

Preview

Is Event OK

Administrator Selects Event to Edit

Pull Events

No

SUBSTITUTE SHEET (RULE 26)
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : G06F 17/60
US CL : 705/10, 14
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
U.S. : 705/10, 14

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WEST 2.0, CAS ONLINE, DIALOG, IEEE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4,908,761 A (TAI) 13 March 1990, see entire document</td>
<td>1-36</td>
</tr>
<tr>
<td>A</td>
<td>US 5,774,869 A (TOADER) 30 June 1998, see entire document</td>
<td>1-36</td>
</tr>
<tr>
<td>A</td>
<td>US 5,809,481 A (BARON et al) 15 September 1998, see entire document.</td>
<td>1-36</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C. See patent family annex.

Date of the actual completion of the international search
03 JUNE 2001

Date of mailing of the international search report
27 JUN 2001

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