(54) Title: INFORMATION PRESENTATION SYSTEM AND METHOD

(57) Abstract: A context-driven information presentation system and method, wherein data is supplied by a user himself of the user’s area or interest, and information is presented to the user in response to data, using a computer system (100). Information requests are initiated by the user, or triggered by an algorithm or other means, such as a rules based engine which monitors data being input by the user, as shown in the Figure. In the later case, selected information is typically stored on the user’s system, based in data gathered from the user is during the current or previous sessions, and the user notified that such information is available for immediate display (510). Thus, information is retrieved by the user from a local (110) database or other storage facility that contains information previously provided by the information provider, or is pushed onto the user’s system by the algorithm or other means. Information can be processed in a number of ways, including a live person by means of a conference call, a virtual person, or other means. The system also allows physical products to be requested.
BACKGROUND OF THE INVENTION

Field Of The Invention

This invention relates to a method and system for retrieving relevant information by a user. The system includes means to monitor information or data about a user, his environment, and/or people or things the user interacts with. This information is then used to supply the user with information that is likely of interest to the user. The user is given the facility to request initial or further information about a particular topic and the manner in which it is to be presented, possibly including a multimedia display. The system and method also allow the user to interact with a live person or with the system and to ask questions. Similarly, the system or live person can ask questions of the user to more effectively target the information supplied to the user, to the user’s need.

Description Of The Prior Art

Information retrieval systems typically take the form of an inquiry presented by a user which, in the case of a computer system, is transmitted to a search engine for retrieval of portions of text having the corresponding key words in the text. In web-based search engines such as Infoseek the user may be provided with a list of potential documents for downloading and can select one of these. Search facilities such as Altavista, in turn, provide for a search term entry block for the entry of user selected key words.

The search engines typically all involve a request by a user and a response by a system. It would be desirable to combine a text entry system relevant to the user’s area of interest or expertise, which is linked to a search facility that automatically monitors the information entry and presents the user with information of potential interest. One such proposal is described in the Borovoy, et al. Patent 5,873,107 in which key words are extracted from the text as the author enters the data. The user is presented with a user interface having a first portion for data entry and a second portion for the return of relevant information from the document collection system. The user then has the choice of reading or ignoring the returned information or can choose the full text from which the information came.

What is needed, however, is a system that allows the user to interact with the system by pulling certain information or have initial information pushed onto his or her computer and to have the option of retrieving additional information on a particular subject thereby allowing him or her to dictate what further information is to be returned to him or her. It is also desirable to have a system that allows the user to select the manner in which the information is returned, whether it be in text format, graphics, video, a virtual person, or a real person. Furthermore, it would be desirable if the system permits not only the establishment of a live conference call with a third person to discuss a topic of interest but also provides the user or any other designated person with the facility to order and/or receive physical materials such as samples or copies of instructional or other information based on information presented to the user. It would also be desirable to have a system that monitors a particular user’s activities, not only in regards to the type of information requested, but also
regarding the manner in which it is to be presented, and stores such information to assist the user in subsequent information retrieval sessions. It would be desirable to have a system that can format the display of information based on the user’s observed and explicitly stated preferences. Thus, it is desirable to have a system in which the information display may be automatically selected or guided by the context of the situation. The present invention seeks to address these issues by proposing a novel data entry and information retrieval system and method.

In the medical field, physicians keep records of their patient visits, including the patients’ medical history, their symptoms, the diagnosis that is rendered, and any drugs prescribed. Thus a profile is created, not only about the patients, but also about the physician’s practice and habits. Such information is clearly of interest to pharmaceutical companies that wish to monitor the activities of physicians in order to potentially target the physicians with promotional material. The promotional information may include information regarding certain drugs and their attributes. Thus the information is potentially of great interest to the physician. However, to get the maximum benefit from the feedback, it is desirable to provide a system wherein the physician can actively participate in the information delivery process by requesting specific further information, either by asking questions, by requesting communication channels to be set up with a live person, or by requesting samples of a particular drug. Further, it is desirable to have a system in which the pharmaceutical company can pose questions in order to more effectively structure the information supplied to the physician. It is also desirable to have a facility allowing the physician to specify the manner in which information is presented to him, whether in written form, as a sound file, as video material, or by a virtual or live person. Preferably the system should include means for monitoring past physician preferences to establish a default presentation method, and means for tracking the information previously supplied to the physician or others in his field. Similarly the physician should preferably be in a position to save the information presented to him, to allow him to review the material at a later time.

**SUMMARY OF THE INVENTION**

According to the invention there is provided an information presentation system provided by an information provider to a user, wherein information is retrieved by the user using a computer system. More particularly, data is supplied by a user regarding the user himself or his area of interest, and may take the form of a document filled out by the user. Preferably, the system is a client-server system wherein data is entered on the client side and at least some of that data is sent to the server which sends back information such as advertising material, product specifications, or other data.

Information requests may be initiated by the user, or triggered by an algorithm or other means, such as a rules based engine which monitors data being input by the user. In the latter case, selected information might be stored on the user’s system, based on data gathered from the user during the current or previous sessions, and the user notified that such information is available for immediate display. Thus, information may be retrieved by the user from a local database or other storage facility that contains information previously provided by the information provider, or may be pushed onto the user’s system by the algorithm or other
means. In particular, key words, or diagnostic or procedural codes extracted from the user supplied data, or the context of the interaction, may be used to retrieve relevant information.

In a client-server arrangement, information supplied to the user located on the client side, is not limited to information supplied by the service provider, but includes information provided by third parties on the server side or connected to the server.

As mentioned above, one application would be for advertisers to target a particular audience. For example, a physician entering data about a patient may be targeted by pharmaceutical companies based on his or her area of practice and typical patient needs. The information supplied by the information supplier can be stored on the server side or on a storage medium on the client side, or elsewhere.

In one embodiment, the data entry document, or table, or form used by the user on the client side may take the form of a third party web page downloaded by the user. In accordance with the invention, advertisement may be included on the web page in response to the particular user’s search engine downloading the Web page. In another embodiment, the data entry document comprises a graphical user interface loaded onto the user’s computer. The user is given the ability to download further information, for example, further information about a particular drug. This may be requested from the server or may already be resident on the client side, having previously been sent to the client based on statistical information obtained from the client. One mechanism available involves using an information mode such as a banner ad or other display to notify the user of the immediate availability of further information. Banner or other ads or other information displays within the user application may inform the user of the availability of the other interaction facilities available.

The system and method of the invention further includes the ability of the user to interact with the information retrieval mechanism, whether that be an automatic software driven retrieval system or a live person connected to the user’s computer by a network.

The user, the system, or the live third person can make queries to improve the data sent to the user.

The system and method of the invention provides the facility for the user to request physical product such as samples or product literature. The request may be made by e-mail, an instant messaging service, or other means, and may specify who the product is to be delivered to.

The user may also request a conference call to be set up with a person on the server side or a third person such as a representative of a pharmaceutical company which subscribes to the services provided by the service provider. The conference call may take the form of a telephone conference, video conference, or multimedia conference using the internet as a vehicle.

Insofar as further information is requested, by the user about a product being advertised, such further information may take the form of text, video, or graphics and sound such as a talking head (virtual person). The user may specify his preference regarding manner of information delivery or the system may keep track of past preferences. The user may also specify a recipient other than, or in addition to, the user. The information provided through the virtual person may use a script automatically assembled in a mix-and-match style. In the medical environment the script is assembled based on comorbidities, other medications the patient is taking, the
current drug for the condition that the patient is taking, the drug the physician usually prescribes for this condition, or the alternative drug that the physician wishes to consider.

The information gathered about users may also be commercialized by promoting it to potential advertisers which allows those advertisers to include banner ads on their own websites whenever a user uses his search engine to access the advertiser’s website. Alternatively, it allows advertisers to target users by conventional means or by sending advertising material to the user’s computer via a network such as the Internet.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a generalized block diagram of a typical computer system;

Figure 2 shows a user interface for a data entry system;

Figure 3 shows a client-server system;

Figure 4 is a flow diagram showing the steps involved in establishing real time interaction between a user and an information supplier;

Figure 5 is a flow diagram showing the steps involved in providing information using a virtual person, and

Figures 6 to 10 show various screens of one embodiment of a user interface.

DETAILED DESCRIPTION OF THE INVENTION

Figure 1 shows a generalized block diagram of a typical computer system 100 which includes a CPU unit 102 that comprises a micro processor, memory, and logic circuitry. An input device 104 provides input to the CPU 102 and may take the form of a keyboard, a mouse, a track ball, joystick, a touch screen, or microphone or any other suitable input device. Clearly the input device may also comprise a combination of any of the input devices. The system 100 further includes an output device 108 which may take the form of a video display or liquid crystal display. For purposes of mass storage of programs and data, external storage 110 is included and can take the form of a hard disc drive, floppy disc drive, memory cards, etc. In many computer systems 100, and in the preferred embodiment of the invention, a network connection 112 is provided to allow the computer system 100 to be connected to other computers through a network 114 such as a local area network or the Internet, or an extranet. Thus a user can retrieve information from a database on the storage medium 110. Alternatively, the user can retrieve information from a remote data storage location 116 which is connected to the system 100 by means of the network 114. The user is thus given the ability to retrieve information from the local database or from the remote data storage location 116 or from a person connected to the user’s computer via a network such as the Internet. The data retrieval application may be a stand alone application or be embedded within in a data capture application used by the user to gather data, such as patient data captured by a physician.
The user is provided with the means for directly requesting information about a subject of interest by specifying what he wants, or information may be entered by the user into a data entry system that gathers user related information. It is then used to prompt the delivery of the determined information to the user.

In an embodiment in which a data entry system is used, the user fills in a document in the form of a table or form having a structured format as illustrated in Figure 2. Figure 2 shows a simple user interface 200 which can be implemented on any system based on a graphic user interface such as Microsoft Windows, Apple graphical interface, etc. The top area 202 of the user interface 200 constitutes the user text entry area. This area is typically provided with a predefined document entry format having specific user entry locations. This may take the form of a table with rows and columns or a template or other document having predefined sections 204. The lower part of the user interface 206 presents the user with data or information retrieved by the system. The user interface 200 may also include buttons or icons 208 or a text entry area 210 within the lower region 206 to establish a connection with an information provider or submit a request or queries such as questions on additional data or requests for samples or a conference call with an expert as discussed in more detail below. The lower area 204 also includes a user selection facility in the form of a drop down menu 212 for selecting the user preferred method of information presentation. In order to prompt the user for data entry, the sections are associated with prompt text 214. The information entered by the user is used to retrieve information from the local 110 or remote 116 storage. In one embodiment, key words inherent in the information supplied by the user are used to retrieve related information using a standard search engine.

In a preferred embodiment, shown in Fig. 3, the user at location 300 and a server at the data storage location 302 interact with each other as a client-server system connected by the Internet, intranet, or an extranet. In one embodiment, the client illustrated in Figure 3 by reference numeral 300 downloads a webpage from the server 302 over an intranet, the Internet, or an extranet 304. The web page, commonly written in HTML, includes text, information defining the layout of the text, and tags for accessing graphic files, sound files or video streams. Web pages may include data entry locations and may include prompts for the user in the form of drop down menus or other selection options. The web page or a data capture application loaded onto the client machine presents a user interface as illustrated in Figure 2. In a preferred embodiment, movement from one data entry location to another, selection of options, and entry of data is performed using voice commands. The information entered by the user on the client side is transmitted to the server 302. The information supplied by the user is used to retrieve data or other information from a server storage location which is sent back to the client. It will be appreciated that storage of any client relevant information need not occur on the server side and that data manipulation and storage may take place in a distributed fashion on the client side, the server side, or elsewhere.

One application of the system and method envisaged is the gathering of data about users or their activities and the subsequent targeting of those users with promotional material such as advertising relevant to the user’s particular needs. For example, the user may be provided with a data entry system by presenting him or her with a disc that he loads onto his computer system thereby providing the user with a suitable graphic user interface. Instead, as mentioned above, the user may access a web page created by the system implementor.
which is configured as a data entry system. For instance, a physician may be provided with an appropriate template or a selection of templates for entering patient information for his records. This information would be relevant also to pharmaceutical companies which may then target the physician with advertising material or product specifications relevant to the particular patient’s needs or generally to the physician’s area of expertise. Thus the system becomes a means for data mining followed by targeted advertising and information delivery.

The system thus allows the system implementor (who provides the service that facilitates the exchange of information and can, for this purpose, be referred to as a service provider, and who is typically located at the server side 302) to gather data about clients 300 (i.e., users which in this application takes the form of physicians) and provide this to parties such as the pharmaceutical companies 306. The pharmaceutical companies or other sources 306, in turn, send data about their products to the physicians 300. The information provided by the third parties (pharmaceutical companies) 306 can be stored at the server 302 or on a local storage device 308 on the client side. Storing the information locally on a storage device 308 avoids bandwidth constraints, permitting the client 300 to immediately access further information that may be of interest.

Thus, a two-way communication process takes place, in which the user on the client side submits requests for information or supplies contextual data to a data entry application, which is then used by a data retrieval application to download information. Where a data entry application is used by the physician to gather information, such information may include background information about the patient, e.g., the patient is a 83-year-old white female with a history of heart disease, etc. It tells about a patient’s prior conditions, e.g., that the patient has significant cardiovascular disease with a history of atrial arrhythmias. In the example involving a physician, client, and pharmaceutical company, once the physician has entered some initial data, the pharmaceutical company may pull the data entered by the physician and provide relevant information feedback to the physician. Information that may be supplied by the pharmaceutical company, includes a description of the drug, comorbidity information, indications, contraindications, warnings, precautions, adverse reactions, drug interactions, overdose information, drug abuse, dosage information, and how to supply the drug. Feedback information provided to the physician by the pharmaceutical company may also include the dosage prescribed for medications based on calculations done pursuant to user supplied information regarding the patient’s weight, height, age, etc.

Having received initial information of interest, the physician may then request further information about a particular drug, such as contraindications, administration, duration of use, etc.

Information supplied by the pharmaceutical company 306 can be supplied directly from the pharmaceutical company or other sources 306 to the user or can be supplied through the service provider. The service provider can also supply original information to the user, thus acting as an information supplier.

Both the initial information provided to the client and subsequent information pulled by the client may have been previously stored on the storage device 308 or may be presented at the relevant time by the server 302.
In the preferred embodiment, service providers gather data on users and their activities and provide this to third parties who can then target the users with information such as advertising material. Thus communication may be initiated by an information provider that pushes information onto the client's monitor.

By having the client connected to the pharmaceutical company via the server 302, or via a separate network 310 such as an intranet, or via a separate service provider on the Internet, the client may interact with the pharmaceutical company. This is not limited to mere question and answer sessions but provides for interaction between the user, on the client side, and the information provider or the service provider, on the server side, or with the local or remote information storage device. The system provides the physician with the ability to request samples or product literature or request that the physician's patient be enrolled in a disease management program. The physician or other user can also specify to whom the physical product, e.g., product literature, is to be sent. Thus, the physician may wish to have product literature sent to the patient.

The physician can also request an in-person visit from the pharmaceutical company or request the display of reference studies or papers, and gives him the ability submit questions at any point in time. Typically this would be done by means of e-mail or instant messaging. The user may also request a telephone call or other communication to be set up with a representative of the pharmaceutical or other company, or request a conference call with a number of experts. This is discussed in more detail below, with respect to Figure 4, and may take the form of a telephone conference, video conference, or a multimedia conference which may or may not include the Internet as a vehicle.

In order to provide the representative or expert with a facility to view the information requested by the user, or to review contextual information previously entered by the user into a data-capture application, the representative or expert is provided with a visual interface or dashboard. A pharmaceutical company representative may thus view the interactions with the physician. The information displayed to the physician is automatically displayed on the dashboard, thereby making the interaction more efficient.

Also, by automatically providing the pharmaceutical representative with the background information about the physician and his patient, time can be saved that would otherwise be spent in briefing the representative. The representative may also be provided with the option of viewing all prior interactions with the physician regarding a given product or pharmaceutical company.

The pharmaceutical company may also be provided with yet another display showing interactions with all physicians that subscribe to the system, regarding a particular product or any of the pharmaceutical company's line of products. The visual feedback, including statistical feedback, provided to the company can then be used to guide decisions about staffing, making experts available for conferences, and the dynamic allocation of other resources.

The user may also interact by asking further questions. In a preferred embodiment, the live or virtual person, or other information supply mechanism, can also pose questions, e.g., whether the patient is taking multivitamins that might contain iron salts that could inhibit absorption of some drugs such as Carbidopa-levodopa, also known as Sinamet, from the gut.
In a preferred embodiment, the user can specify his preferences regarding manner of data delivery or the system may monitor his past preferences and keep a record for future data delivery. This is implemented by keeping an evolving profile in a database. Thus, a system can meet a client’s request for further information by presenting it in one of a number of forms, including text, sound files, graphics, or a virtual person, such as a talking head that discusses the topic of interest. This is discussed in more detail below with respect to Figure 5. In situations where the information is presented not by a live person, the user is given the ability to fast forward or back track and to locally store relevant information. As mentioned above, the virtual person can also initiate questions. For example, if the patient’s current medications have already been supplied, but the patient’s comorbidities (other conditions or diseases) have not, questions can be developed using artificial intelligence techniques such as model-based reasoning and/or rule-based reasoning to elicit this information.

As mentioned above, and as illustrated in Figure 4, a live conference with an expert can be requested, typically after first gathering relevant context information about the patient (block 402). This may include the age, sex, ethnicity, main problem, directed other problems or diseases, allergies, medications taken by the patient, and considerations related to the patient’s compliance with therapies. Interaction may be requested and presented by means of a request from a physician for a conference (block 404) and can be a multimedia conference in which the user (in this case, the physician or nurse) and other person or persons interact orally and visually with each other. The user data gathering and presentation system may be part of a separate software application that gathers relevant data about the patient and/or the physician. Such data can be transmitted automatically, or upon request by the physician as a precursor to requesting a conference. The data about the physician (block 406) includes things like his area of expertise, i.e., his specialty, his preferred communication style (graphics, oral feedback or a live person) and the physician’s past behavior regarding prescribing of drugs. Once the data about the patient and physician is gathered and the conferences requested 404, a decision is made whether or not a representative is available at block 408. If not, the feedback is sent to the physician using a virtual person or other means, or a conference is scheduled at a later time as indicated by block 410. In situations where a conference is requested but can not immediately be scheduled, the physician may also be presented with the option of joining an existing conference that is already in progress, where the conference is of a broadcast nature with or without interaction by the physicians. If a representative is available, as indicated by block 412, any relevant information gathered by blocks 402 and 406 are presented to the representative and a conference is established with the physician.

As mentioned above, instead of providing a live person in a conference call, information may be provided to the physician or other user by means of a virtual person or talking head, e.g., ActiveHead by Headcase. This is illustrated in Figure 5 in which data is gathered in blocks 502 and 504 about the patient and the physician. In addition, the physician may be prompted for further information about the type of data required, indicated by block 506. All of the information gathered in blocks 502, 504 and 506 can be gathered from prior data input by the physician into a data entry application. In a physician/patient environment, the information exchanged may include the patient’s comorbidities, directed other medications that may be used including the disease state for which the medication is prescribed, the drug typically prescribed by the
physician, and alternative drugs currently considered by the physician. Once all the data has been gathered, a script is automatically assembled (508) using a mix-and-match style based on the contexts of the patient and the physician, and comprising the information that is to be fed back to the physician. This may involve first assembling a text script based on the gathered information, and submitting the text to a text-to-speech converter, which is then used to drive a talking head. Thus, a talking head is generated driven by the script (block 510). In addition to the talking head which comprises sound and graphics, the script may be displayed in text form.

The various forms in which the information can be presented to the user, is selectable by the user. As mentioned above, the user is presented with a data entry screen as depicted generally in Fig. 2. Clearly the screens may take a variety of forms. For example, the user data entry and information retrieval portions of the document may be on one screen or may constitute different screens. One embodiment of the latter, is depicted by screen 600 in Fig. 6 which shows the data entry areas that are filled out by the user. In one embodiment the user enters data into the locations 602, based on the prompts 604, for purposes of retrieving relevant information. In another embodiment, the data used to prompt information retrieval can comprise data previously collected, e.g., using a data capture application. Once ready, the user can indicate this by selecting the Enter button 608, which may be voice activated, touch activated, or activated by any other means. This causes the system to retrieve relevant video material which is then presented to the user on a new screen 700 as shown in Fig. 7. The user can, instead select the appropriate information retrieval format by selecting from the buttons 606, which include video (VIDEO), text (PDR), conference (CONF.), request for a referral (REF), or delivery of physical product (SERVICE). The video screen 700 includes typical control buttons, including volume control 702, play 704, pause 706, stop 708, rewind 710, fast forward 712, rewind to previous section 714, fast forward to end of current section 716. In order to avoid having to change screens to set up a conference or view details on specific drugs, hyperlinks 718 are included in the screen 700.

Fig. 8 depicts the PDR screen 800 for viewing text information on a particular topic. In the example illustrated, drug information is provided, which is selectable by topic as indicated by the labels 802. Screen 800 includes an upper section 804 for the entry of further user data into data entry locations 806, which are identified by labels 808. A button 810 allows patient literature to be requested and, in a preferred embodiment (not shown), allows the user to specify where the patient literature is to be sent. Screen 800 also includes a photo selection tab 812 for selecting a photo of the product being detailed. This corresponds to the product identified in location 610 of screen 600. The resultant screen with the photo is shown in Fig 9. To hide the product photo panel, the tab 902 is clicked on or otherwise selected.

Fig. 10 shows the conference panel which was selected using the appropriate tab 606 in Fig. 6 or by choosing the hyperlink 718 in Fig. 7, dealing with conferencing. In the latter case, the user can immediately make a choice of video conference or teleconference. In the former situation, where the tab 1002 (corresponding to 612 in Fig. 6, 720 in Fig. 7, and 814 in Fig. 8) is selected, the user can subsequently make a selection between video conferencing and teleconferencing, as shown by the start buttons 1004, 1006, respectively. Volume is adjustable using scroll bar 1008. The session can also be interrupted by means of Hold.
buttons 1010, 1012, or terminated using buttons 1014, 1016. The user is also given the facility of sending messages to any desired persons, using the message entry box 1018 and send button 1020. It will be appreciated that the screens may have different layouts and include different data entry and information retrieval boxes, without departing from the scope of the invention.

The system also envisages keeping track of all information supplied by the user physician and by the pharmaceutical company so that a record can be established of what recurring requests occur. Since a particular manufacturer could supply multiple drugs in a given category such information could be relevant in providing further targeted information to the physician, either upon request by the physician or by way of advertising pushed by the pharmaceutical company. In one embodiment, the server or pharmaceutical company computer updates information from time to time and then checks to see whether information previously sent to users has changed or new drugs are available with similar characteristics.

Not only information about the patients and the physician may be gathered in a record for future use, but also, the style of communication preferred by the physician. For example, the physician may state a preference or may indicate by his prior behavior that he tends to constantly jump ahead during a conference or wishes to have rapid interactions, or prefers long or short forms of answers, and his or her ability to understand the sessions. These sorts of behavior may also be used to indicate the user’s willingness to participate in conferences or clinical trials.

In certain circumstances the physician may not want to disclose particular data about a patient. For example, the patient may be a prominent person and his or her condition could receive unnecessary public interest. Also, the physician or his organization may have policies restricting the transmission of certain types of patient information under various circumstances. In this case, the system includes mechanisms for the physician to disable certain patient specific information from reaching a third party or require a password authorization. In a preferred embodiment the system will prompt the user (in this case the physician) regarding the transmission of certain information, such as patient names and addresses, and may prompt the physician to secure the patients’ consent prior to confirming the transmission of the critical information.

The system provides the user with the ability to download files sent by the pharmaceutical company. For example, in the case of a video file, the physician may choose to view the information at a later stage.

It is envisaged that the invention be commercialized by gathering relevant information about users or their activities, selling such information to third parties to permit targeted information delivery and advertising. For example, relevant snippets of information (banner ads) may appear on the third party websites (e.g., pharmaceutical company’s website) whenever it is detected that a particular user’s search engine accesses the third party website. Alternatively, as discussed above, the third party may take a more proactive role by pushing relevant information onto the user’s input screen and providing the user with a facility of downloading further information of interest.

Thus, pharmaceutical companies could be charged for information about physicians and/or their patients to facilitate targeted advertising on the pharmaceutical company’s website or on the service provider’s website accessed by the physician.
The system also envisages that the system be used as a method of doing business wherein the drug companies can create incentives for physicians to look at the companies' products by including in their banner ads on the pharmaceutical company websites or in the information pushed onto the physician's monitor, incentives like frequent flyer miles.

As a method of doing business, the various degrees of interaction between the pharmaceutical company and the physician may result in revenue streams to the service provider in exchange for the service provider facilitating the gathering of user information and the presentation of third party information. The service provider may dictate different fee structures for the various forms of information delivery and advertising. In this way, the service provider is remunerated for providing information about the physician and patients and for providing the communication channels for both one way and two way communication between the pharmaceutical company and the physician.

It will be appreciated that this invention is not limited to the use by physicians and pharmaceutical companies but would apply equally to any other persons requesting or wishing to present information and may involve various revenue streams from the information requester or the information supplier to the service provider. Depending on the nature of the information and the parties involved, the information suppliers may receive remuneration for useful information or be required to pay for the benefits of receiving user information or for the use of the communication system allowing him to supply users with information such as marketing information. Similarly, it will be appreciated that the system can be implemented in a number of ways to ensure the efficient exchange of information.
What is claimed is:

1. A method of presenting information to a user comprising:
   gathering data related to the user, including at least one of, a request from a user, data about
   the user, and data about the user’s activities, using a computer system;
   using the gathered data to present the user with information; and
   providing the user with means to interact with the computer system to specify one or more of,
   the user’s desired information, and the user’s preferred form of information presentation.

2. The method of Claim 1, wherein the gathered data includes a user request for user-specified
   information.

3. The method of Claim 1, wherein the computer system is a client computer linked by a
   computer network to an information supplier and wherein the information that is presented to the user in
   response to the data that is gathered related to the user is derived from one or more of, the information supplier,
   and a storage facility located at the user’s computer system.

4. The method of Claim 3, wherein the presentation of information to the user is initiated by the
   information supplier or by the user’s computer extracting information from the storage facility.

5. The method of Claim 3, wherein the form of information presentation includes at least one of, voice
   feedback, graphic material, video material, text, a virtual person involving graphics and sound, and a live
   person.

6. The method of Claim 5, which further comprises the user requesting at least one of, delivery
   of a physical product, interaction with a live person, and choice of the form of information presentation.

7. The method of Claim 5, wherein the virtual person is driven by a script generated from the
   data related to the user.

8. The method of Claim 5, wherein a record is kept in a computer storage device of the gathered
   data related to the user.

9. The method of Claim 8, wherein the step of presenting the user with information includes the
   use of at least part of the record of gathered data.

10. The method of Claim 6, wherein a record is kept of the user’s preferred form of information
    presentation, and a presentation mode is automatically selected based on said record.

11. The method of Claim 1, wherein a record is kept of information previously sent to the user.

12. The method of Claim 6, wherein the feedback from the live person is established by means of
    communication through the computer network.

13. The method of Claim 3, wherein the gathering of data by the user comprises using a data
    capture application on the client computer.

14. The method of Claim 3, further comprising, accessing a web page using the client computer
    wherein the gathering of data by the user comprises entering the data on the web page.
15. A method of Claim 3, wherein the information supplier is a pharmaceutical company, the user is a medical professional, the data gathered relates to at least one of, the medical professional and his patient, and the information includes drug information.

16. A method of doing business comprising:

providing a user with information supplied to a user computer by an information supplier using at least one computer network linking the user and information supplier, and extracting user data from the user to assist in selection of information.

17. The method of Claim 16, wherein the extracting of user data includes providing the user with a facility for data entry that includes a user interface for the user computer, and transmitting the entered data to the information supplier by means of the at least one network.

18. The method of Claim 17, wherein the facility for data entry includes data capture software that is loaded onto the user computer.

19. The method of Claim 17, wherein the facility for data entry includes a web page.

20. The method of Claim 17, wherein a revenue stream is derived from one or more of the sources comprising, the user for the use of the data capture software, the information supplier for providing the information supplier with means for the delivery of information to the user, the user for receiving user relevant information, and third parties that are permitted access to user related data.

21. A method of obtaining information on a topic of interest to a user, comprising:

submitting to a first computer system, data relating to the user, including at least one of a request from the user, data about the user, and data about the user’s activities, using a second computer system;

extracting information from the first computer system based on data submitted from the second computer system; and

presenting the information to the user, wherein the data submitted to the first computer system includes at least one of, data specifying the user’s preferred form of data presentation, a request for specific information, or a response to a query based on information previously presented to the user.

22. The method of Claim 21, wherein the form of information presentation includes at least one of voice feedback, graphic material, video material, text, a virtual person involving graphics and sound, and a live person.

23. The method of Claim 22, wherein the first computer is supplied with information supplied by a pharmaceutical company, and wherein the user is a medical professional, and the data submitted relates to at least one of, the medical professional and his patient, and the information includes drug information.

24. The method of Claim 22, wherein a record is kept of the user’s preferred data presentation, and a presentation mode is automatically selected.

25. The method of Claim 22, wherein the second computer system is connected to the first computer system by at least one network.
26. The method of Claim 25, wherein the data submitted to the first computer system includes at least one of a request for communication with a live person, and a request for delivery of physical product.

27. The method of Claim 22, wherein a record is kept of information previously sent to the user.

28. A system for information exchange between a user and an information supplier comprising:

   information gathering means on a first computer system for allowing the user to enter

   requests, or data pertaining to the user or the user’s activities; and

   means for providing the user with information based on the requests or data supplied by the

   user, wherein the data gathering means includes one or more of, means for specifying the form of information

   presentation to the user, means for requesting communication with a live person, means for requesting physical

   product, and means for submitting queries.

29. A method of Claim 28, wherein the means for providing the user with information includes a

second computer system connected to the first computer system by at least one network.

30. A method of Claim 29, wherein the second computer system includes means for submitting

requests to the first computer system for additional data.

31. An advertising method involving advertisement by a supplier, comprising:

   collecting data about a prospective customer by means of a software application;

   based on the collected data, identifying information about a product or service; and

   transmitting the information to the prospective customer, wherein the prospective customer

   collects the data using a first computer system, and the supplier transmits information to the prospective

   customer using a second computer system, and wherein the prospective customer and supplier transmit their

   respective data and information by means of at least one network connecting the two computer systems.

32. A method of Claim 31, wherein the prospective customer and supplier are given the option of

requesting further information from the other.

33. A method of Claim 31, wherein the supplier is given the ability to pull information from the

first computer system and push information onto the first computer system.

34. A method of Claim 33, wherein the supplier is a pharmaceutical company, the customer is a

medical professional, the data collected relates to at least one of, the medical professional and his patient, and

the information includes drug information.
Fig. 1

Fig. 2

Fig. 3

SUBSTITUTE SHEET (RULE 26)
**Fig. 4**

- Determine Context for Patient or Other Person or Group to be Advised*,**
- Determine Context for Physician or Other Expert**,*****

- Request Conference

- Representative Available?
  - Yes: Display Contexts on Representative's Dashboard and begin eDetailing Conference
  - No: Attempt to schedule eDetailing Conference at a later time

**Fig. 5**

- Determine Context for Patient or Other Person or Group to be Advised*,**
- Determine Context for Physician or Other Expert**,*****

- Designate Type of Feedback Desired
  - Examples for Medical Application where Drug being eDetailed
    - Selected Common morbidity
    - Selected Other Medication
    - All Comorbidities
    - All Other Medications
    - All Comorbidities and Other Medications
    - Drug Usually Prescribed by Physician
    - Alternative Drug being Considered by Physician

- Dynamically Assemble Script

- Display script text plus use script to drive Talking Head
Sinemet is used to treat Parkinson's Disease. Typically patients with PD can exhibit disturbances in mobility and control of the musculoskeletal system such as resting tremor, rigidity, and bradykinetic movement(s). Levodopa therapy is the "gold standard" in the management of Parkinson's disease. levodopa (or L-dopa), which is the pre-cursor of the neurotransmitter Dopamine, neuro-transmitter. In Parkinson's disease the Substantia Nigra progressively dies off and when approximately 80% of the normal complement of dopamine-producing cells have died off, the familiar tremor and/or muscular rigidity begins to reveal itself, along with other symptoms.
A. CLASSIFICATION OF SUBJECT MATTER
IP(7) :G06F 15/16
US CL. :709/203, 311, 318, 331, 332; 705/51
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. : 709/203, 311, 318, 331, 332; 705/51

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 database and, where practicable, search terms used)
STN US/PATFULL, profile, match, user, client, information

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
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Further documents are listed in the continuation of Box C. See patent family annex.

Date of the actual completion of the international search: 20 DECEMBER 2000
Date of mailing of the international search report: 26 JAN 2001

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