(54) Title: METHOD AND APPARATUS FOR PROVIDING INFORMATION ON SEARCH ENGINE RESULT PAGES

(57) Abstract: A method and system that allows the web page provider to update the search engine’s description of the web page in an automated fashion without waiting for a crawler to revisit the web page. The invention also allows the search engine service to derive revenue from web site owners by allowing them to submit additional information, called the tagline, to be displayed with search engine results for their site. A tagline might be anything that could appear on a search result page, such as a single line of text, a graphic, an animation, or a list of hyperlinks to destinations on the site, or any combination of these. Taglines are retrieved dynamically and independently. They are not the same as crawl-based information. A search result page, which includes a tagline and search results having a record summary, is displayed.
METHOD AND APPARATUS FOR PROVIDING INFORMATION ON SEARCH ENGINE RESULT PAGES

BACKGROUND OF THE INVENTION

The present invention relates generally to information retrieval and, more specifically, to a method and system that allows a web page or online document provider to update a search engine's description of that document or web page in an automated fashion.

The expanded popularity of the World Wide Web ("the web") has brought new problems for web users. Web users use web sites called search engines to find information in the web. As users obtain more information from the web, they demand that the information displayed be accurate and up to date. Initially a user submits a query to a search service for particular information. The search service generally returns several search results, each including an abstract (i.e., a record summary) including a title and description relating to the web page content. Users decide whether to view a particular web page based on the abstract returned by the search service. The abstract for a page is generally determined when an automated browser called a web spider, also called a crawler, visits the web page and returns the title and description of the web page to the search service.

Currently, web pages are defined using Hyper-Text Markup Language (HTML) or other markup language. Traditionally, an HTML document contains various tags, such as the HTML title tag and the HTML meta-description tag. This set of tags generally defines the abstract of a web page in a search results page. State of art search engines display information captured at time of crawl. As a result, when the web page changes after it has been crawled, its actual title and description or other summary information often become unsynchronized with the title and description stored by the search engine. Thus, information provided by the search service result pages is often out of date. Also, it would be desirable for the web page provider to update or supplement information to be more relevant, for example to be more timely, or to be more relevant to the query. Thus, abstracts in the search service often become stale, providing users with outdated information.

Therefore, there is a need for a way for a provider to asynchronously supplement

information on a search result page.

SUMMARY OF THE INVENTION

A described embodiment of the present invention allows a provider of a web page to update a search engine's description of the web page in an automated fashion without waiting
for a crawler to revisit the web page. The invention also allows a search engine service to
derive revenue from web site owners by allowing them to submit additional information,
called a tagline, to be displayed with the search engine results for their site. The tagline might
be anything that could appear on a search result page, such as a single line of text, a graphic,
an animation, or a list of hyperlinks to destinations on the site, or any combination of these. A
tagline can draw attention to timely events on the destination web site, or provide shortcuts to
directly jump to preferred services of the site. In essence, the tagline provides more links
directing the users to a particular site, draws attention to a particular site, and distinguishes the
site from other sites on the search result page.

One embodiment displays the taglines under the search results in association with the
description of the page. Another embodiment displays the taglines in a location separate from
the search results.

In accordance with an aspect of the invention, as embodied and broadly described
herein, the invention may be implemented as a method for serving results of a search of an
index of a data network comprising a plurality of data records such as web pages, comprising
the steps of: receiving a query; choosing the search results that satisfy the query; looking up
the abstract for each result; generating zero or more taglines for each result based on
information dynamically updated independently from the abstract; and generating a search
results page, which includes the search results, abstracts, and taglines.

Advantages of the described embodiments of the invention will be set forth in part in
the description which follows and in part will be apparent from the description or may be
learned by practice of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated in and constitute a part of this
specification, illustrate several embodiments of the invention and, together with the
description, serve to explain the principles of the invention.

Fig. 1A pictorially illustrates an example of a search results page in accordance with a
described embodiment of the present invention.

Fig. 1B pictorially illustrates an example of a search results page in accordance with
another described embodiment of the present invention.

Fig. 2 is a block diagram illustrating an overall architecture in accordance with a
described embodiment of the present invention.
Fig. 3 is a block diagram illustrating the elements used to generate a search results page in accordance with a described embodiment of the present invention.

Fig. 4 is a flow chart of a method performed by the embodiment of Fig. 3 in accordance with a described embodiment of the present invention.

Fig. 5 is a block diagram of an accounting subsystem in accordance with a described embodiment of the present invention.

Fig. 6 is a flow chart showing a monetizing step in accordance with a described embodiment of the present invention.

Fig. 7 is a block diagram showing a redirector detecting click-throughs in accordance with a described embodiment of the present invention.

Fig. 8 is a block diagram showing a record in a client database in accordance with a described embodiment of the present invention.

Fig. 9 is a block diagram showing a record in an accounting database in accordance with a described embodiment of the present invention.

Fig. 10 is a block diagram showing a tagline database in accordance with a described embodiment of the present invention.

Fig. 11 is a flow chart illustrating an administrative process in accordance with a described embodiment of the present invention.

Fig. 12 is a block diagram illustrating a client registration process in accordance with the present invention.

Fig. 13 is a block diagram illustrating a client updating process in accordance with a described embodiment of the present invention.

DETAILED DESCRIPTION OF ILLUSTRATED EMBODIMENTS

Reference will now be made in detail to several embodiments of the present invention, examples of which are illustrated in the accompanying drawings. Wherever practicable, the same reference numbers will be used throughout the drawings to refer to the same or like parts.

Described embodiments of the present invention allow users to view an updated search engine’s web page description in the form of taglines and further allows web page providers to update the search engine’s web description in an automated fashion via taglines. The described embodiments further allow the search engine service to derive revenue from web site providers by allowing them to submit additional information, via taglines.
Fig. 1A illustrates the display of a search results page 100A in one embodiment of the present invention. The search results page 100A includes a query box 102A, search engine results 104A and 112A corresponding to the following query displayed in the query box 102A: RUSSIAN + FOOD, and the taglines 110A and 118A. The search result 104A includes an abstract comprising a title 106A “Russian Food Store. Russian Recipes and Cuisine on Russia.Food.com”, a Uniform Resource Locator (URL) www.Russia.food.com 108A, description relating to the web page content, such as “Russian Food Store and the Best Russian Cooking Recipes”, and other information, such as when the web page was last modified. Certain search results 112A contain only one or some of the above examples. The tagline 110A is displayed under the search results 104A. According to the tagline 110A, “Five new Russian food stores have opened their doors to customers. Each store offers scrumptious and unique Russian food assortment.”

The search result 112A displays an abstract comprising a title 114A “Russian Food Market magazine”, a Uniform Resource Locator (URL) www.foodmarket 116A, description relating to the web page content, and the information when the web page was modified. The tagline 118A is displayed under the search results 112A. According to the tagline 118A, “A new Bay Area Russian food store which offers unique service to its customers.”

The information in abstracts comes from data retrieved when the search database was built by crawling the web. In contrast, tags are retrieved dynamically and independently. They are not the same as crawl-based information. The tagline might be a single line of text (for example an advertisement), a graphic, an animation, or a list of hyperlinks to destinations on the site, or any combination of these. A tagline can draw attention to timely events on the destination web site, or provide shortcuts to directly jump to prefered services of the site. In essence, the tagline provides more links directing the users to a particular site, draws attention to a particular site, and/or distinguishes the site from other sites on the result page. It will be noted that not all entries on the search results page will necessarily have taglines.

Fig. 1B illustrates the display of a search results page 100B in accordance with another embodiment of the present invention. The search results page 100B includes a query box 102B, search engine results 104B and 112B corresponding to the following query displayed in the query box 102B: RUSSIAN + FOOD, and the taglines 110B and 118B. The search result 104B includes an abstract comprising a title 106B “Russian Food Store. Russian Recipes and Cuisine on Russia.Food.com”, a Uniform Resource Locator (URL) www.Russia.food.com 108B, description relating to the web page content, such as “Russian Food Store and the Best Russian Cooking Recipes”, and other information, such as when the web page was last modified.
modified. The tagline 110B is displayed on a side separately from the search results 104B. According to the tagline 110B, “Five new Russian food stores have opened their doors to customers. Each store offers scrumptious and unique Russian food assortment.”

The search result 112B displays an abstract comprising a title 114B “Russian Food Market magazine”, a Uniform Resource Locator (URL) www.foodmarket 116B, description relating to the web page content, and the information when the web page was modified. The tagline 118B is displayed on a side separately from the search results 112B. According to the tagline 118B, “A new Bay Area Russian food store which offers unique service to its customers.” Thus, displaying the taglines on a side separately from the search results advantageously allows a web site provider to display the tagline not in association with the description of the page. However, a tagline associated with a search result might be displayed anywhere on the result page.

Fig. 2 is a block diagram illustrating an overall architecture and embodiment of the present invention. A server system 200 includes, but is not limited to, a search database server 202, an abstract server 203, a query integrator 204, a tagline server 206, a search database 208, an abstract database 215, an accounting database 210, a client database 212, a tagline database 214, an abstract database 215, an administrative subsystem 216, an accounting subsystem 218, a redirector 220, and search results pages 222. It should be understood that the architecture shown in Fig. 2 is shown for purposes of example only and is not to be construed in a limiting sense. Each of the databases discussed herein is shown as being conceptually separate but in practice all or combinations of these databases can be implemented as a single database or set of databases. For example, the information in the Abstracts database 215 (titles and description) may instead be included in the search database 208.

The query integrator 204 communicates with the search database server 202, with the abstract server 203, with the tagline server 206, and with a user 201. The abstract server 203 communicates with the abstract database 215. The tagline server 206 communicates with the tagline database 214. The tagline server 206 sends the taglines in the tagline database 214 based on the search results, to the query integrator 204. In an alternative embodiment, the tagline server 206 sends the taglines based on the search results and a query, to the query integrator 204. In the tagline database 214 each tagline is associated with a particular Uniform Resource Locator (URL) or a set of URLs, and with a client ID. In yet another alternative embodiment, in the tagline database 214 each tagline is associated with a particular (URL) or a set of URLs, a client ID, and a query. The search database server 202 communicates with the search database 208. The search database server 202 sends the search results in the search
database 208 in response to a query from the query integrator 204. Each search result is preferably uniquely identifiable by a Uniform Resource Locator (URL). The query integrator 204 generates search results pages that include the search results and zero or more taglines.

The administrative subsystem 216 is a system for registering clients and updating client information. The administrative subsystem 216 communicates with the client database 212 where client information is submitted. The administrative subsystem 216 further communicates with the accounting subsystem 218, which in turn communicates with the query integrator 204 and the redirector 220. One or more of the administrative subsystem 216, the query integrator 204 and the redirector 220 originate monetizing (revenue-generating) events. The accounting database 210 communicates with the accounting subsystem 218. The accounting database 210 maintains and adjusts client accounts based on the information received from the accounting subsystem 218.

The user system 201 includes a browser 224 and sends the server 200 a query 226 composed by a user. The query 226 is transmitted by the browser 224 to the query integrator 204. The query integrator 204 generates search results pages that include at least search results and taglines, which are displayed by the browser. The browser 224 is special purpose software effecting the requesting and displaying of search results pages. The browser software can be standalone or integrated within other software products. Any commercially available browser such as Netscape™ or Microsoft Explorer™ can be used for this purpose.

It should be understood that each of client and server systems in the described embodiment preferably includes a processor and a memory. The memory includes instructions capable of being executed by the processor to perform the functions described below. The systems can also include a computer readable medium for storing the instructions. The server system 200 communicates with the user system 201 via any appropriate communication mechanism, including but not limited to a network, an intranet, the Internet, wireless communications, telecommunications, cable modems, and satellite communications.

Fig. 3 shows a diagram of elements in the server system 200 that generate a search results page based on a query. The query can be received from a user or from some other source, such as a software program. As shown in Fig. 2, a query integrator 204 communicates with the user system 201, the tagline server 206, the abstract server 203, and the search database server 202. The query integrator 204 sends the query to the search database 208. The search server 202 processes the database query and returns a URL to identify each search result. The query integrator 204 sends the URLs to the abstract server 203 to obtain the abstracts, each possibly including a title and description related to a web page content. Then,
the query integrator 204 sends the search results in the form of the URL to the tagline server 206. The tagline server 206 processes the request using the tagline database 214 and returns the tagline(s) corresponding to the URL received from the query integrator 204. In an alternative embodiment, the query integrator 204 sends the search results in the form of the URL along with the query to the tagline server 206. The tagline server 206 processes the request using the tagline database 214 and returns the tagline(s) that match both on the URL and the query. Next, the query integrator 204 generates a search results page that includes the search results, the abstracts, and the taglines. Taglines are retrieved dynamically and independently from the crawl-based information, such as the title and description related to a web page content. Finally, the query integrator 204 displays the search results page, for example, by sending the search results page to the user for display.

Fig. 4 is a flow chart showing the process of generating a search results page. In element 402, the query integrator 204 receives a request (a query), such as “Russian +Food” from a user. In element 404, the query integrator 204 forwards the query to the search database 208. In element 406, the search database 208, in turn, returns the search results. Each search result is preferably uniquely identifiable by a Uniform Resource Locator (URL), such as www.Russiafood.com/. The query integrator sends the URLs, such as www.Russiafood.com/ to the abstract server 203 to obtain abstracts, in element 408, each abstract possibly including a title and description related to a web page content. The abstract server 203 searches for abstracts that correspond to the received URLs in the abstract database 215 and returns to the query integrator the abstracts, in element 410. An example abstract includes a title “Russian Food Store. Russian Recipes and Cuisine on Russia.Food.com” and description “Russian Food Store and the Best Russian Cooking Recipes.” Then, in element 412, the query integrator sends the search results in the form of URLs to the tagline server 206. After receiving the URLs, the tagline server 206 searches for taglines that correspond to the received URLs in the tagline database 214, in element 413. In the tagline database 214 each tagline is associated with a particular Uniform Resource Locator (URL), such as Russiafood.com, or a set of URLs, having a wild card, such as Russiafood.*.com, and with a client ID, such as 1234. In an alternative embodiment, each tagline is further associated with a query. The tagline server 206 sends to the query integrator 204 the tagline, such as “Five new Russian food stores opened their doors to customers…” corresponding to the URL Russiafood.com in the tagline database 214, in element 414. In an alternative embodiment, the tagline server 206 sends the taglines in the tagline database 214 that match both on the URL, such as Russiafood.com and the query “Russia+food”. The
query integrator 204 then generates the search results page that includes the search results, each including a record summary comprising a title and description, and the tagline, in element 415. An example search results page is illustrated in Fig. 1A and Fig. 1B. The process ends in element 416.

Fig. 5 is a block diagram illustrating the accounting subsystem 218, the administrative subsystem 216, the query integrator 204, and the redirector 220. The accounting subsystem 218 detects monetizing events generated by one or more of the administrative subsystem 216, the query integrator 204, and the redirector 220. The accounting subsystem 218 charges website owners per different events. For example, a monetizing event may occur when a client initially registers to submit a tagline to the tagline database or/and during updating client information, when clients choose to change tagline(s). Similarly, a monetizing event may occur when the tagline, or a hyperlink to destinations on the site, or any combination of these are displayed. The redirector 220 is used for detecting user click-through(s). The steps of detecting the click-throughs are discussed in connection with Figure 7. Once a monetizing event occurs, that information along with a client ID is submitted to the accounting subsystem that charges website owners per event.

Fig. 6 is a flow chart showing a monetizing step. The process starts in element 600 and in element 602 the process determines whether a monetizing event takes place. The event could be any monetizing event, such as registering a client, updating client information, displaying a tagline(s), displaying a hyperlink to destinations on the site, or detecting user click-throughs. Once a monetizing event occurs in element 602, one or more of the administrative subsystem 216, the query integrator 204 or the redirector 220 sends the information regarding the event and a client ID to the accounting subsystem 218 in element 604. Once all information is received, the accounting subsystem 218 forwards all the information to the accounting database 210 in element 606. The accounting database 210 contains accounting records in the form of the client ID and client accounting information. The accounting database 210 adjusts the client’s account by debiting an amount based on information received from the accounting subsystem 218 in element 608. The process ends in element 610. If the determination in element 602 is negative (no monetizing event takes place), the process loops to the end and the client account is not adjusted.

Fig. 7 is a block diagram showing a process of detecting client click-throughs by a redirector 220. Initially, a redirector 220 receives a request for a web page X from a browser 224. The redirector 220 responds to the browser 224 that the requested web page is now at location Y. Having received this information from the redirector 220, the browser 224 sends a
request to the server 702 for the page at the location Y. The server 702 returns the requested
page to the browser 224. Once a monetizing event occurs, such as redirector 220 detecting a
user click-through, that information along with a client ID is submitted to the accounting
subsystem that charges web site owners per event.

Fig. 8 is a block diagram showing a client database 212 and an example client record
800. The client database 212 keeps client information in the form of client records 800
received from the administrative subsystem 216. The client record 800 identifies a particular
client. In one embodiment of the present invention, the client record may have the following
fields: a client ID, a client name, and a client address. When the client initially registers to
submit taglines to the system, all client information is forwarded to the client database 212.

Fig. 9 is a block diagram showing an accounting database 210 and an example
accounting record 900. The accounting database 210 keeps and adjusts client accounts based
on information received from an accounting subsystem 218. The accounting database 210
contains accounting records 900. The accounting record 900 provides accounting information
about a particular client. In one embodiment of the present invention, the accounting record
900 may have the following fields: a client ID and client accounting information. The client
accounting information may include the client's account number, whom the accounting
information needs to be sent to, as well as how the client takes responsibility for the payment.
During the monetizing step discussed in regard to Fig. 6, when a monetizing event occurs, that
event along with the client ID is sent to the accounting subsystem 218, which, in turn adjusts
the client account in the accounting database 210.

Fig. 10 shows a tagline database 214, a tagline server 206 and an example record 1000
in the tagline database 214. The tagline database 214 includes client-submitted taglines, a
client ID, and a URL pattern. During the administrative process in Fig. 11, after the client
submits taglines, the taglines are checked for proper style. Once the system accepts the
tagline(s), the taglines are submitted to the tagline database 214. The tagline server 206
communicates a query to the tagline database 214 and the tagline server 206 sends the taglines
in the tagline database 214 corresponding to the search results to the query integrator 204. In
the tagline database 214 each tagline is associated with a particular Uniform Resource Locator
(URL), such as Russiafood.com, or a set of URLs, having a wild card, such as Russiafood.*,
or Russiafood/®.com, and with a client ID, such as 1234. In an alternative embodiment, in the
tagline database 214 each tagline is associated with a particular URL, or a set of URLs, a
client ID, and a query.
Fig. 11 shows a diagram of elements that describe an administrative process. The administrative process involves registering clients and client updating information. In element 1102 the administrative process starts. First, a client registers with a system by filling out a registration form in element 1104. Filling out the registration form, which may be, for example a web form, may require providing client name, address and password for authorization purposes. In element 1106, authorization process takes place. Specifically, the system verifies whether clients are indeed who they claim they are, i.e., web page providers. This verification can be accomplished, for example, by sending email and requesting a response or by a human being calling the prospective web page provide on the telephone.

Then, the process allows the client to submit new client information in element 1107. All the information submitted by the client is forwarded to the client database 212, including the client name and address, in element 1108. The client database 212 maintains client information in the form of client records 800 received from the administrative subsystem 216. In one embodiment of the present invention, the client record 800 may have the following fields: a client ID, a client name, and a client address.

The client has an option of updating information. In element 1110, the client updates information by filling out an update form. This form, which may be, for example, a web form, may request the new client information. Clients who chose to update information in the system typically undergo the authentication process in element 1112 to ensure that only owners of a web page can insert taglines in the taglines database 214. This may be as simple as requiring the user to enter their password. In element 1114 the administrative process inquires whether new client information is submitted. If the answer is positive, then new client information is forwarded to the client database 212, including the client name and address. The client database 212 keeps client information in the form of client records 800 received from the administrative subsystem 216. In one embodiment of the present invention, the client record 800 may have the following fields: a client ID, a client name, and a client address. If the answer is negative in element 1114, i.e., no new client information is offered, the system allows the client to submit a tagline(s) in element 1115. Then, the system validates client-submitted taglines for proper style in element 1116 to ensure that the taglines meet the style requirements of the search engine. The search engine may impose requirements such as certain length of the tagline(s), no use of color or bold, font size and type, and a URL destination. Once the system accepts client-submitted material, taglines are forwarded to the tagline database 214 in element 1118. In the tagline database 214 each tagline is associated with a particular Uniform Resource Locator (URL) or a set of URLs, and with a client ID.
Fig. 12 shows an overview of a typical client registration process according to an embodiment of the invention. In display 1202, the client is asked to register before he can submit tagline(s) to the tagline database 214. To do so, the client fills out a form, which is displayed on the user system 201. The client may be prompted to enter client name and address. Further, in display 1204, the client is prompted to enter a password for authorization purposes. In other embodiments, a non-password based authorization check might be used. The client’s password is an important piece of information, which is used during client authentication process discussed in connection with Fig. 11 to ensure that only web page owners can insert taglines in the tagline database 214. Once the client provides all identification information, the system displays a message in display 1205 informing the client to submit new client information. In display 1206, the client is notified that all identification information will be submitted to the client database 212, including the client name and address. The client database 212 maintains client information in the form of client records 800 received from the administrative subsystem 216. In one embodiment of the present invention, the client record 800 may have the following fields: a client ID, a client name, and a client address.

Fig. 13 shows an overview of an example client updating information process. In element 1302, a client is offered to update information. To do so, the client is prompted to fill out an update form, which is displayed on a screen 1302. The client may be prompted to enter his password for authentication purposes. As discussed above in connection with to Fig. 12, the client’s password is an important piece of information, which is used during the client authentication process discussed in connection with Fig. 11. The authentication process preferably ensures that only web page owners can insert taglines associated with those pages in the tagline database 214. Then, the client is offered to type his tagline in display 1303. In element 1304, the system displays a message on the screen informing the client that client-submitted tagline(s) will be validated for proper style to ensure that the taglines meet the style requirements of the search engine. The search engine may impose the following requirements: certain length of the tagline(s), no use of color or bold, font size and type, and a URL destination. Then, a message appears on the screen 1306 informing the client that the client-submitted tagline is accepted and will be forwarded to the tagline database 214 where each tagline is associated with a particular Uniform Resource Locator (URL) or a set of URLs, and with a client ID.

In an alternative embodiment, the client prepares a file of URL patterns and taglines and sends the complete file to the system through an upload mechanism. Yet, in another
embodiment, the client places the file on its web server and submits the URL of that file to the system. The system fetches the file over the web and inserts the taglines from the file into the tagline database 214.

While the invention has been described in conjunction with a specific embodiment, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art in light of the foregoing description. For example, the web page provider may be able to specify an expiration date for a tagline. As another example, the user may be able to submit more than one tagline at the same time (bulk submission). Accordingly, the present invention is intended to embrace all such alternatives, modifications and variations as fall within the spirit and scope of the appended claims and equivalents.
WHAT IS CLAIMED IS:

1. A computer-implemented method for serving results of a search of an index of a data network comprising a plurality of data records, comprising the steps of:
   determining search results responsive to receiving a query;
   generating a record summary for at least one of the search results based on information retrieved from each data record;
   generating a tagline for at least one of the search results based on information dynamically updated independently of the record summary; and
   generating a search results page, which includes the search results and the tagline.

2. The method of claim 1 further comprising:
   generating the search results page, which further includes the record summary.

3. The method of claim 1, wherein the data records comprise web pages.

4. The method of claim 1, wherein the step of generating the tagline includes returning the tagline, from a tagline database, corresponding to a URL of the search results.

5. The method of claim 1, wherein the step of generating the tagline includes returning the tagline, from a tagline database, corresponding both to a URL of the search results and the query.

6. The method of claim 1, wherein the record summary includes a title, a URL pattern, and description.

7. The method of claim 1, wherein the search results page is generated by a query integrator.

8. The method of claim 1, wherein the tagline is displayed under each search result.
9. The method of claim 1, wherein the tagline is displayed on a side of the search results page separately from each search result.

10. The method of claim 1, further comprising a monetizing step including:
    occurrence of a monetizing event;
    sending the monetizing event and a client ID to an accounting subsystem;
    adjusting a client account based on occurrence of the monetizing event.

11. The method of claim 10, wherein the monetizing event is originated by an administrative subsystem.

12. The method of claim 10, wherein the monetizing event is originated by a query integrator.

13. The method of claim 10, wherein the monetizing event is originated by a redirector.

14. The method of claim 11, wherein the monetizing event originated by the administrative subsystem is registering clients.

15. The method of claim 11, wherein the monetizing event originated by the administrative subsystem is a client entering update information.

16. The method of claim 12, wherein the monetizing event originated by the query integrator is sending to a user a search results page which includes search results and taglines.

17. The method of claim 12, wherein the monetizing event originated by the query integrator is sending to a user a search results page which includes search results, and a hyperlink.

18. The method of claim 12, wherein the monetizing event originated by the query integrator is sending to a user a search results page which includes search results, taglines and a hyperlink.
19. The method of claim 13, wherein the monetizing event originated by the redirector is detecting a user click-through.

20. A system for serving results of a search of an index of a data network, comprising:

   a query integrator for generating search results pages, said search result pages include taglines and search results having a record summary;
   a tagline database for keeping the taglines; and
   a tagline server for returning the taglines corresponding to a URL, said taglines are retrieved independently from the record summary.

21. The system of claim 20, wherein the tagline database includes client-submitted taglines, a client ID, and the URL.

22. The method of claim 20, wherein the tagline database includes client-submitted taglines, a client ID, the URL, and a query.

23. The system of claim 21, wherein in the tagline database each tagline is associated with the URL.

24. The system of claim 21, wherein in the tagline database each tagline is associated with a set of URLs, having a wild card.

25. The system of claim 22, wherein in the tagline database each tagline is associated with the URL and the query.

26. The system of claim 20, further comprising:
   an administrative subsystem for registering clients and updating client information.

27. The system of claim 20, further comprising:
   a client database for keeping client information received from the administrative subsystem.
28. The system of claim 20, further comprising:
an accounting subsystem for detecting monetizing events.

29. The system of claim 20, further comprising:
an accounting database for maintaining and adjusting client accounts
based on information received from the accounting subsystem.

30. The system of claim 26, wherein updating client information includes:
providing an update form to be filled out by a client;
forwarding new client information to the client database;
allowing the client to submit a tagline;
checking the client-submitted tagline for proper style; and
submitting the tagline to the tagline database.

31. The system of claim 30, wherein allowing the client to submit the tagline
includes allowing the client to submit more than one tagline at the same time.

32. The system of claim 30, wherein allowing the client to submit the tagline
includes allowing the client to specify an expiration date for the tagline.

33. The system of claim 27, wherein the client information in the client database
includes a client ID, a client name, and a client address.

34. The system of claim 29, wherein in the accounting database each record
includes a client ID and a client accounting information.

35. The system of claim 26, wherein registering clients includes:
providing a registration form to be filled out by a client;
authorizing client access to the system;
allowing the client to submit new client information; and
forwarding the client information to a client database.
1. Russian Food Store. Russian Recipes and Cuisine on Russia Food.com
   Russian Food Store and the Best Russian Cooking Recipes...
   URL: www.russiafood.com
   Last modified on: 20-Jun-2000 - 25K bytes - in English (Win-1252)
   Five new Russian food stores have opened their doors to customers. Each
   store offers scrumptious and unique Russian food assortment.

2. Russian Food Market magazine
   URL: www.foodmarket.com
   Last modified on: 4-Mar-2000 - 4K bytes - in Russian (Win-1251)
   A new Bay Area Russian food store offers unique service to its customers.

FIG. 1A
Search for:
russian + food

Related Searches:
- russian food recipes
- russian food stores

Find Results In:
Products News Business Discussions Web Pages Images MP3/Audio Video Directories

1. Russian Food Store, Russian Recipes and Cuisine on RussiaFood.com
   Russian Food Store and the Best Russian Cooking Recipes...
   URL: www.russiafood.com → 108 B
   Last modified on: 20-Jun-2000 - 25K bytes - in English (Win-1252)

2. Russian Food Market magazine
   URL: www.foodmarket/ → 116 B
   Last modified on: 4-Mar-2009 - 4K bytes - in Russian (Win-1251)

Five new Russian food stores have opened their doors to customers. Each store offers scrumptious and unique Russian food assortment.

A new Bay Area Russian food store offers unique service to its customers.

FIG. 1B
START

USER SENDS A REQUEST TO QUERY INTEGRATOR

QUERY INTEGRATOR FORWARDS QUERY TO SEARCH DATABASE SERVER

SEARCH DATABASE SERVER RETURNS SEARCH RESULTS TO QUERY INTEGRATOR

QUERY INTEGRATOR SENDS URLs TO ABSTRACT SERVER

ABSTRACT SERVER SEARCHES FOR ABSTRACTS CORRESPONDING TO URLs AND RETURNS ABSTRACTS TO QUERY INTEGRATOR

QUERY INTEGRATOR SENDS URLs TO TAGLINE SERVER

TAGLINE SERVER SEARCHES FOR TAGLINES IN THE TAGLINE DATABASE

TAGLINE SERVER RETURNS TAGLINES TO THE QUERY INTEGRATOR

QUERY INTEGRATOR GENERATES SEARCH RESULTS PAGE TO USER

END

FIG. 4
FIG. 5

ADMINISTRATIVE SUBSYSTEM
216

ACCOUNTING SUBSYSTEM
218

QUERY INTEGRATOR
204

Per tagline display
Per hyperlink display

REDIRECTOR
220

Per capturing
Per user click-through

Per client registering
Per client updating
etc.
START 600

MONETIZING EVENT OCCURRED?

602

YES

SEND MONETIZING EVENT AND A CLIENT ID TO ACCOUNTING SUBSYSTEM

604

ACCOUNTING SUBSYSTEM FORWARDS THE MONETIZING EVENT AND THE CLIENT ID TO ACCOUNTING DATABASE

606

ACCOUNTING DATABASE ADJUSTS CLIENT'S ACCOUNT

608

END 610

FIG. 6
FIG. 8
## FIG. 10

### TAGLINE DATABASE

<table>
<thead>
<tr>
<th>URL PATTERN</th>
<th>TAGLINE</th>
<th>CLIENT ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russiafood.com</td>
<td>1. Five new Russian food stores have opened their doors to customers...</td>
<td>1234</td>
</tr>
<tr>
<td>Russiafood/.* com</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russiafood/.* com</td>
<td>2. New Bay Area Russian food store offers unique services...</td>
<td>1234</td>
</tr>
<tr>
<td>Russiafood.com</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TAGLINES**
ADMINISTRATIVE PROCESS STARTS

REGISTRATION PROCESS

AUTHORIZATION PROCESS

ALLOW CLIENT TO SUBMIT NEW CLIENT INFORMATION

SUBMITTING CLIENT INFORMATION TO CLIENT DATABASE

UPDATING PROCESS

AUTHENTICATION PROCESS

NEW CLIENT INFORMATION?

ALLOW CLIENT TO SUBMIT A TAGLINE

CHECKING SUBMITTED TAGLINES FOR PROPER STYLE

SUBMITTING TAGLINES TO TAGLINE DATABASE

FIG. 11
IF YOU WANT TO SUBMIT A TAGLINE(S) TO TAGLINE DATABASE, PLEASE REGISTER BY FILLING OUT A FORM

CLIENT NAME
CLIENT ADDRESS
CLIENT PASSWORD

PLEASE PROVIDE YOUR PASSWORD FOR AUTHENTICATION PURPOSES

PASSWORD

PLEASE SUBMIT CLIENT INFORMATION

YOUR IDENTIFICATION INFORMATION WILL BE SUBMITTED TO THE CLIENT DATABASE

FIG. 12
PLEASE FILL OUT AN UPDATE FORM AND PROVIDE YOUR PASSWORD FOR AUTHENTICATION PURPOSES

1302

PASSWORD

1303

TYPE YOUR TAGLINE(S)

YOUR TAGLINE WILL BE REVIEWED FOR STYLE

1304

YOUR TAGLINE(S) IS ACCEPTED AND WILL BE SUBMITTED TO TAGLINE DATABASE

1306

FIG. 13
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
   IPC(7) : G06F 17/30
   US CL : 7077/1, 3, 6
   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. : 7077/1, 3, 6; 705/1, 14
   Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

C. DOCUMENTS CONSIDERED TO BE RELEVANT
   Category *  Citation of document, with indication, where appropriate, of the relevant passages  Relevant to claim No.
   Y  RD 429147A Search result advertisements
      Derwent 10 January 2000, pages 1-3
   Y  US 6,098,065 A (SKILLEN et al) 01 August 2000 (01.08.2000), abstract, column 1, lines 38-49, column 4, lines 14-25, column 5, lines 39-57,
   Y  US 5,953,811 A (ANGLES et al) 03 August 1999 (03.08.1999), abstract, fig. 4, fig. 11, column 4, lines 17-26, column 13, lines 35-60, column 15, lines 32-67, column 16, lines 1-44, column 20, lines 27-37, column 21, lines 7-32
   Y  US 6,038,591 A (WOLFE et al) 14 March 2000 (14.03.2000), abstract, fig. 1, fig. 2, fig. 3, column 4, lines 1-11 and lines 43-59, column 5, lines 26-44
   A,P  US 6,212,545 B1 (OHTANI et al) 03 April 2001 (03.04.2001), abstract, fig. 10, fig. 22, column 4, lines 28-51, column 5, lines 1-18, column 7, lines 9-14

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

   * Special categories of cited documents:
      "A"  document defining the general state of the art which is not considered to be of particular relevance
      "E"  earlier application or patent published on or after the international filing date
      "L"  document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
      "O"  document referring to an oral disclosure, use, exhibition or other means
      "P"  document published prior to the international filing date but later than the priority date claimed
      "R"  later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
      "X"  document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
      "Y"  document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
      "A"  document member of the same patent family

   Date of the actual completion of the international search  29 October 2001 (29.10.2001)
   Date of mailing of the international search report  05 Dec 2001
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   Commissioner of Patents and Trademarks
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Form PCT/ISA/210 (second sheet) (July 1998)