A DATA ACCESS METHOD

Field of the Invention

The present invention relates to a data access method and a method of establishing a data access method, particularly for accessing data on a public network such as the Internet.

Background of the Invention

One of the inherent difficulties associated with the extensive amount of data available on the Internet is being able to locate or direct a person to a specific page of data. Internet directories, such as Yahoo! And Excite, have gone someway to alleviating this difficulty but even extensive directories cannot cater for all data on the Internet. A person's site once registered with a directory can still prove difficult to locate as a keyword search for a site will invariably produce search results with a large number of additional sites having similar keywords. The database systems of the directories hold a number of keywords, descriptions or even the complete text of data for each Internet address, which whilst being comprehensive, enhances the difficulty in resolving one Internet site or page from another. In an effort to direct people to their sites, a number of parties have resorted to advertising their URLs in mainstream media. The URLs, by their nature, are invariably difficult to recall or remember. The URLs also only direct a person to normally the home page of a party's site. Directing a party to another specific page in the site, although advantageous for specific promotions, is generally not done as these URLs, by virtue of the Internet addressing system, are invariably long, cumbersome to enter, and detract from the party's promotion or advertisement.

Summary of the Invention

In accordance with the present invention there is provided a data access method, including:

recognizing a keyword in media as being associated with a network site;

sending said keyword to said network site;

accessing a database on the basis of said keyword, said database mapping keywords to respective network addresses;

retrieving a network address from said database which corresponds to said keyword; and

obtaining data at said network address.

The present invention also provides a method of establishing a data access method, including:

sending a keyword and respective network address to a registration network site;

storing said keyword and said network address in a database mapping keywords to respective network addresses;

generating data concerning use of said keyword in media with a mark representing a keyword resolution network site; and

placing said keyword in media with said mark.

The present invention further provides a method of establishing a data access method, including:

sending a keyword and a respective network address to a registration network site so as to invoke storage of said keyword and said network address in a database mapping keywords to respective network address;

receiving data concerning use of said keyword in media with a mark representing a keyword resolution network site; and

placing said keyword in media with said mark.

The present invention further provides a data access method, including:

recognizing a keyword in media as being associated with a network site;

sending said keyword to said network site to invoke access of a database on the basis of said keyword, said database mapping keywords to respective network addresses;

navigating to a network address obtained from said database which corresponds to said keyword; and

receiving data at said network address.

The present invention also provides a data access method, including:

receiving from a party a keyword recognized in media by said party as being associated with a network site;

accessing at said network site a database on the basis of said keyword, said database mapping keywords to respective network addresses;

retrieving a network address from the database which corresponds to said keyword; and

invoking transmission of data at said network address to said party.

The present invention also provides a method of establishing a data access method, including:

receiving a keyword and a respective network address at a registration network site;

storing said keyword and said network address in a database mapping keywords to respective network addresses; and

transmitting data concerning use of said keyword in media with a mark representing a keyword resolution network site.

By associating keywords with respective network addresses, which may be World Wide Web uniform resource locators (URLs), enables a person recognizing the keyword in media to send the keyword to the network site to

resolve the keyword and navigate directly to the network address to obtain data.

Brief Description of the Drawings

Preferred embodiments of the present invention are hereinafter described, by way of example only, with reference to the accompanying drawings, wherein:

Figure 1 is a flow diagram of a preferred embodiment of a keyword registration process;

Figure 2 is a diagram of a registration page of the process of Figure 1;

Figure 3 to 13 illustrate examples of use of a keyword with a mark in media;

Figure 14 is a flow diagram of a preferred embodiment of a data access method; and

Figure 15 illustrates a keyword resolution page of the data access method of Figure 14.

Detailed Description of Preferred Embodiments of the Invention

A data access method is established by executing an establishment or registration process 2, as shown in Figure 1. The process 2 includes a first step 4 of navigating to a World Wide Web site of a service provider, using a browser, such as Navigator™ or Internet Explorer™, to access a keyword registration page 6, as shown in Figure 2, at step 8. The page 6 allows for entry of a keyword in a text box 9 and entry of an associated URL in a text box 11. The URL is to be respective and exclusive to the keyword. By activating a command button 13 a registration application on the service provider's server is invoked and the entered keyword and URL are transmitted to the server, at step 10. The registration application accesses a database 12 at step 14 to determine if the keyword is unique to the database

12. The database 12 maps keywords to respective URLs. If the keyword is not unique then the submitting party is sent a message advising them accordingly and is returned to the registration page 6. Whilst a number of unique keywords can be mapped to the same URL by the database 12, it is advantageous to have the database 12 map the keywords to URLs on a one-to-one or exclusive basis. This restricts parties from monopolizing a number of keywords on the database 12 for one site, reduces the size of the database 12 and consequently enhances speed of access to data on the database 12. This is achieved by accessing the database at step 14 to ensure the submitted URL is unique, in addition to the keyword being unique to the database 12. If either is not unique then operation of the registration procedure returns to step 10, as described previously. If both the keyword and the URL are unique then the registration procedure 2 proceeds to step 16 where the keyword and the URL are stored in the database 12 as an associated pair. Data is then forwarded in a web page to the submitting party advising of the conditions of registration. With the associated keyword and URL in the database, an expiry time is also stored which designates a time when the associated pair will be removed from the database 12. Inclusion of the expiry time is also advantageous in maintaining and restricting the size of the database 12. The registration conditions passed to the submitting party include details concerning the expiry time which may be a default time, such as one month. The registration application may additionally provide the submitting party with a facility to adjust the expiry time as desired. The registration conditions also include details concerning the type of mark which can be used with the keyword in media to designate a site provided by the service provider for resolving the keyword, as described in detail below.

The keywords registered on the database 12 may comprise any relatively short combination of alphanumeric characters and can refer to descriptions, instructions, commands, words, numbers, telephone numbers, fax numbers, names, labels, brands, titles, signals, headings, codes, signatures, sentences, barcodes, logos, slogans, expression, addresses or any combination of these

appearing in any languages, formats and forms of transmission and which can be specifically highlighted and distinguished by a mark. The term "keyword" used herein encompasses all of these alternatives.

The mark is essentially a symbol or sign which the service provider designates and uses in the course of trade, commercials and publicity to indicate to people that a keyword has been registered at its site on the database 12. Implicitly, it informs people recognizing the mark that on navigating to the keyword resolution site of the service provider, entering the keyword designated by the mark will allow the keyword to be resolved and will navigate the party resolving the keyword to the web page corresponding to the URL associated with the keyword. The mark can be, for instance, a device, signal, badge, brand, logo, heading, label, ticket, name, signature, word, letter, character, numeral, or any combination of these. The mark can also be, for instance, a device with memory storage that can perform radio or infrared transmission to automate the data access process.

Once the mark has been sufficiently promoted or is sufficiently descriptive so the party viewing the mark recognizes that they must navigate to the associated keyword resolution site to resolve any keywords, the mark can be used in media with keywords. Figures 3 to 13 illustrate various examples of use of a mark 22 with a keyword 20 in different types of media. The examples include a slogan, an advertisement, a classified ad, an encyclopaedia, an announcement on radio, a license plate, a logo, a barcode, a newspaper article and name card respectively. If, for example, the service provider is known as Netten, the mark 22 may be $\mathcal{N}$ or a reference to "Netten coded", which people would recognize as a reference to a Netten web site where the keywords 20 can be resolved and data obtained on subject matter associated with the keywords 20. Alternatively, the mark 22 may be a description which gives the URL of the site where the keywords can be resolved, as shown in Figure 11. As will be apparent from the examples, the media in which a keyword 20 can be used with a mark 22 includes advertisements,

publications, products and mass media, such as banners, catalogues, letters, instructions, titles, subtitles, articles, packaging, stores, documents, notice, programs, slides, printouts, handouts, manuals, newspapers, magazines, movies, books, articles, circulars, brochures, records, laser disc, compact discs, audio and videotapes, teletext, cassettes, computer graphics, programs on television, radio and television broadcasts, tag, smart cards, plastic cards, contactless chip cards, magnetic strip, mini pins, accessories, jewelry, stationary, and apparel.

A keyword is resolved by executing a resolution process 30, as shown in Figure 14, to obtain data associated with the keyword. The first step 32 of the process 30 involves navigating to the keyword resolution site provided by the service provider, using a browser, such as Navigator™ or Internet Explorer™. The resolution site navigated to is the site designated by or associated with the mark which is placed with the keyword in media. Navigating to the site causes transmission to a user of a keyword resolution page 34, as shown in Figure 15. Page 34 includes a text box 36 for entering the keyword 20 and a command button 38 which can be activated to submit the keyword to the service provider server. Submitting the keyword at step 34 invokes a resolution application on the server which accesses the database 12 at step 36 on the basis of the keyword 20. The process 30 retrieves the URL associated with the keyword 20 from the database 12 and then the resolution application navigates to the HTML page corresponding to the URL at step 38. The page is therefore transmitted to the user's browser so as to provide access to the user with all of the data on the page. The data on the page would normally provide the user with information corresponding to the keyword, and can also enable the user to access additional data corresponding to the keyword.

The method described above allows data to be accessed directly and simply by recognizing a keyword which can be resolved at a site associated with a mark displayed with the keyword. It allows parties placing keywords with

marks to provide intended recipients with additional data which can be easily accessed on the Internet. Recipients only need to recall or bookmark the URL for the resolution site and promoters and advertisers can use a number of various keywords, which can be easily recalled, to direct recipients to various sites containing further data.

Many modifications will be apparent to those skilled in the art without departing from the scope of the present invention as hereinbefore described with reference to the accompanying drawings.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A data access method, including:

Recognizing a keyword in media as being associated with a network site;

Sending said keyword to said network site;

Accessing a database on the basis of said keyword, said database mapping keywords to respective network addresses;

Retrieving a network address from said database which corresponds to said keyword; and

Obtaining data at said network address.

2. A data access method as claimed in claim 1, wherein said database maps keyword to said network addresses for a predetermined period of time.

3. A data access method as claimed in claim 2, wherein said network is the Internet.

4. A data access method as claimed in claim 3, wherein said addresses are URLs.

5. A data access method as claimed in claim 1, wherein a mark placed in said media with said keyword designates an association with said network site.

6. A data access method as claimed in claim 5, wherein said mark represents a URL.

7. A data access method as claimed in claim 1, wherein said obtaining data includes navigating to a page of data corresponding to said network address.

8. A data access method as claimed in claim 1, wherein said database maps

keywords to respective and exclusive network addresses.

9. A method of establishing a data access method, including:

Sending a keyword and a respective network address to a registration network site;

Storing said keyword and said network address in a database mapping keywords to respective network addresses;

Generating data concerning use of said keyword in media with a mark representing a keyword resolution network site; and

Placing said keyword in media with said mark.

10. A method as claimed in claim 9, wherein said keyword resolution network site is adapted to receive said keyword, retrieve said respective network address from said database, and cause navigation to data at said respective network address.

11. A method as claimed in claim 9, wherein said database maps keywords to said network addresses for a predetermined period of time.

12. A method as claimed in claim 11, wherein said network is the Internet.

13. A method as claimed in claim 12, wherein said addresses are URLs.

14. A method as claimed in claim 9, wherein said database maps keywords to respective and exclusive network addresses.

15. A method of establishing a data access method, including:

Sending a keyword and a respective network address to a registration network site so as to invoke storage of said keyword and said network address in a database mapping keywords to respective network address;

Receiving data concerning use of said keyword in media with a mark representing a keyword resolution network site; and

Placing said keyword in media with said mark.

16. A method as claimed in claim 15, wherein said keyword resolution network site is adapted to receive said keyword, retrieve said respective network address from said database, and cause navigation to data at said respective network address.

17. A method as claimed in claim 15, wherein said database maps keywords to said network addresses for a predetermined period of time.

18. A method as claimed in claim 17, wherein said network is the Internet.

19. A method as claimed in claim 18, wherein said addresses are URLs.

20. A data access method, including:

Recognizing a keyword in media as being associated with a network site;

Sending said keyword to said network site to invoke access of a database on the basis of said keyword, said database mapping keywords to respective network addresses;

Navigating to a network address obtained from said database which corresponds to said keyword; and

Receiving data at said network address.

21. A data access method, including:

Receiving from a party a keyword recognized in media by said party as being associated with a network site;

Accessing at said network site a database on the basis of said keyword, said database mapping keywords to respective network addresses;

Retrieving a network address from the database which corresponds to said keyword; and

Invoking transmission of data at said network address to said party.

22. A method of establishing a data access method, including:

Receiving a keyword and a respective network address at a



registration network site;

Storing said keyword and said network address in a database mapping keywords to respective network addresses; and

Transmitting data concerning use of said keyword in media with a mark representing a keyword resolution network site.