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(54) **SYSTEM AND METHOD FOR PROVIDING CUSTOMIZED ADVERTISEMENTS OVER A NETWORK**

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(52) **U.S. Cl.** **705/14.63**; 705/14.49; 705/14.58; 705/14.55; 705/14.67; 705/26.63

(58) **Field of Classification Search** 705/14, 705/14.49, 14.58, 14.55, 14.63, 14.67, 26.63
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,774,868	A *	6/1998	Cragun et al.	.... 705/10
5,918,014	A	6/1999	Robinson	.... 395/200.49
5,948,040	A *	9/1999	DeLorme et al.	.... 701/201
6,009,410	A	12/1999	LeMole et al.	.... 705/14
6,026,369	A	2/2000	Capek	.... 705/14
6,026,375	A *	2/2000	Hall et al.	.... 705/26
6,112,192	A	8/2000	Capek	.... 705/59
6,128,663	A	10/2000	Thomas	.... 709/228
6,266,649	B1 *	7/2001	Linden et al.	.... 705/26
6,587,835	B1 *	7/2003	Treyz et al.	.... 705/14
6,636,733	B1 *	10/2003	Helferich	.... 455/412.2

FOREIGN PATENT DOCUMENTS

WO	WO 98/36366	*	8/1998
WO	WO 98/47295	*	10/1998

OTHER PUBLICATIONS

www.vindigo.com , selected web pages (23 pages, printed Sep. 22, 2000).
Ben Hammer, *GPS To Do Wonders for Wireless Browsing*, cnn.com (dated May 25, 2000; printed Sep. 22, 2000).
www.my.yahoo home page (printed Sep. 22, 2000).

* cited by examiner

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(57) **ABSTRACT**

In response to a request for audio-visual content from a user, a method and system is provided which sends the content and additional information related to the location of the user.
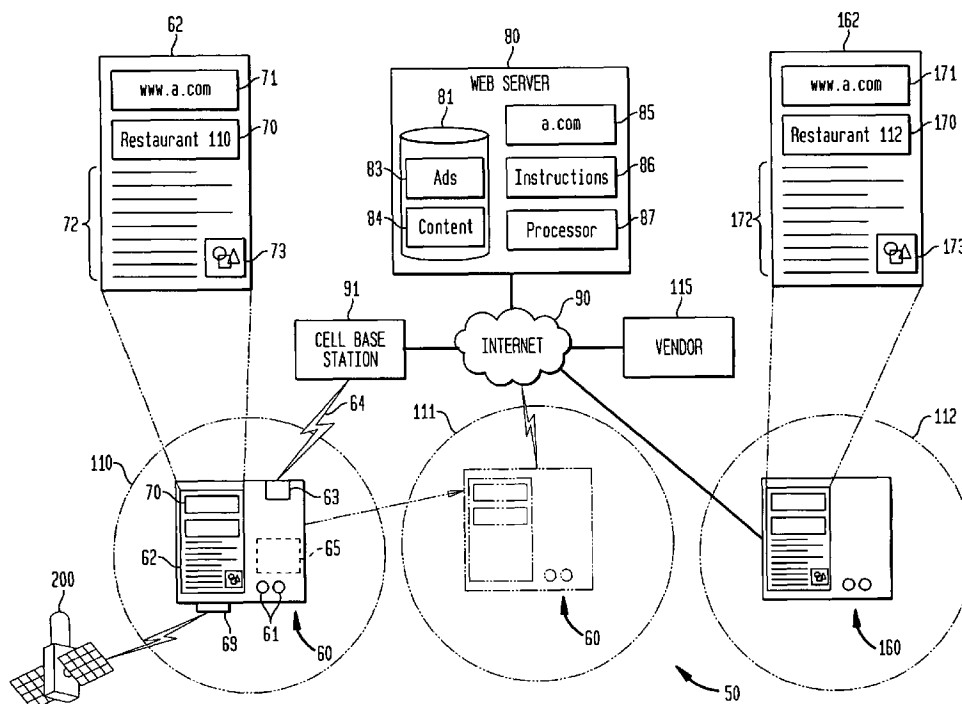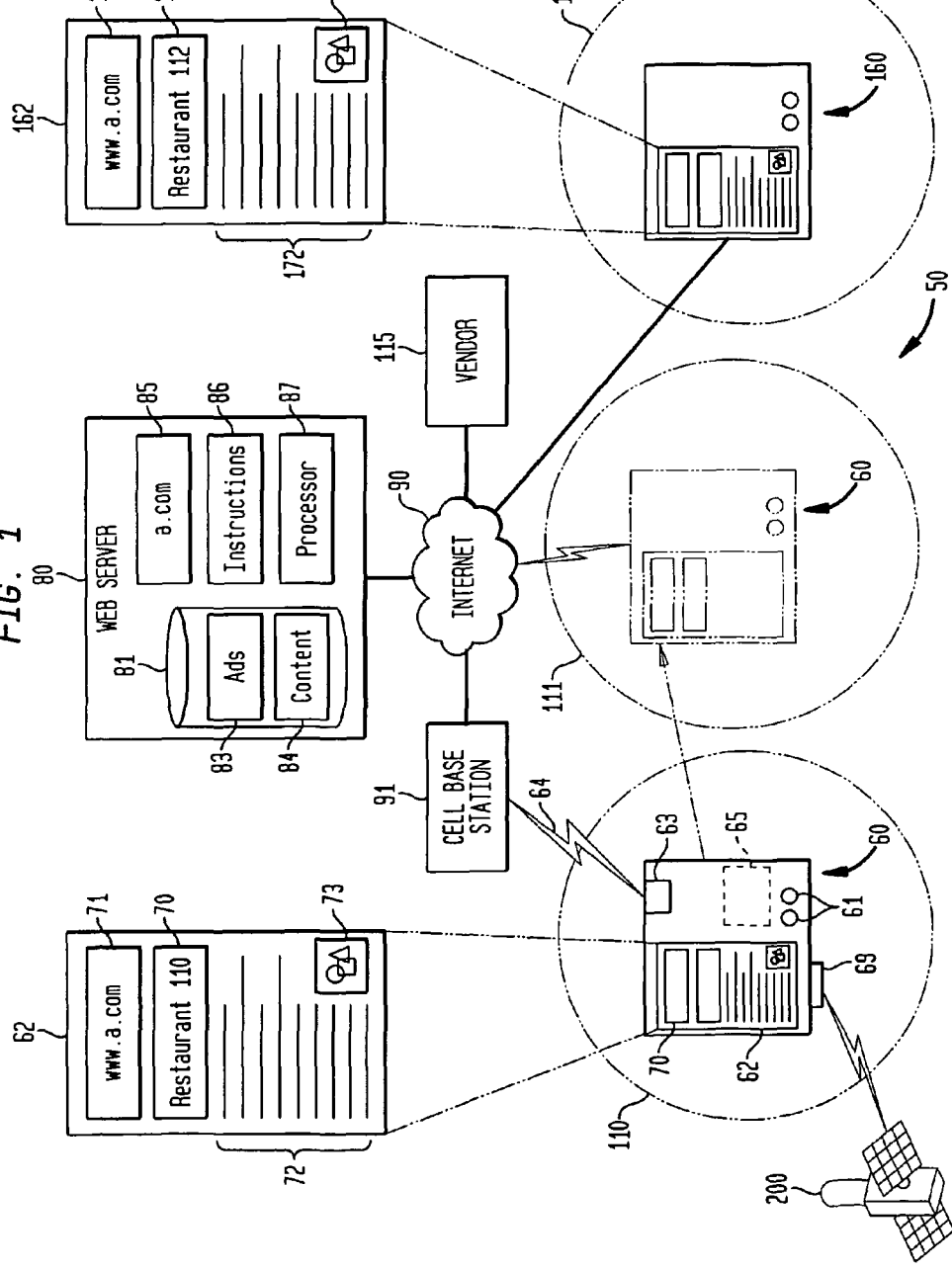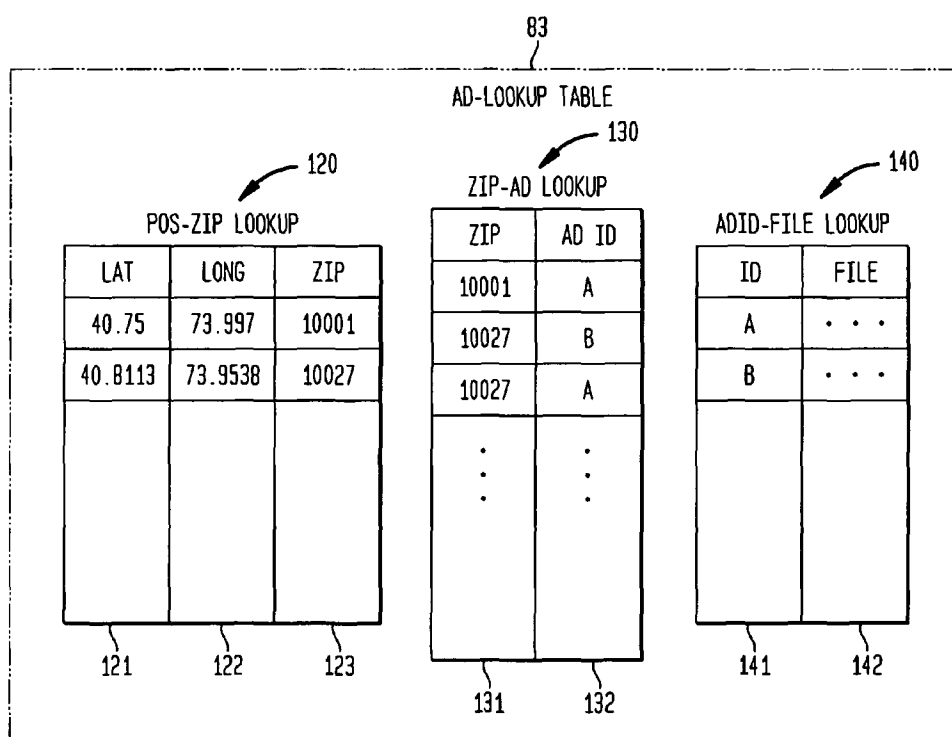
48 Claims, 2 Drawing Sheets

FIG. 1

FIG. 2

83

AD-LOOKUP TABLE

130

120

ZIP-AD LOOKUP

POS-ZIP LOOKUP

140

ADID-FILE LOOKUP

LAT	LONG	ZIP
40.75	73.997	10001
40.8113	73.9538	10027

121   122   123

ZIP	AD ID
10001	A
10027	B
10027	A
⋮	⋮

131   132

ID	FILE
A	· · ·
B	· · ·

141   142

SYSTEM AND METHOD FOR PROVIDING CUSTOMIZED ADVERTISEMENTS OVER A NETWORK

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application claims benefit of U.S. Provisional Application No. 60/210,499, filed on Jun. 9, 2000, which is hereby incorporated by reference.

BACKGROUND OF THE INVENTION

As with newspapers, magazines, television and radio, advertisements are also relied upon for financial support to pay for programming delivered via the pages of the World Wide Web. Web page content servers, such as for example Yahoo!, sell space in their web pages to third party advertisers. Advertisements in web pages are presented in many different forms, but most often in the form of an advertising banner displayed across the top or bottom of a web page. A web advertisement typically includes a hyperlink to the home page of the advertiser. Thus, by "double clicking" on an advertising banner, the user quickly jumps to the advertiser's home page, where products or services can be purchased and where more information about a particular product or service can be obtained.

As with traditional communications medium, absent selecting a web site that is more likely to reach a particular segment of the public, advertisements appearing in the pages of the World Wide Web are often targeted to a receiving end user without regard to the user's interest in the subject matter of the advertisement. However, unlike traditional communications medium, the Web offers a much more dynamic way for transmitting advertisements to the public in that different advertisements can be shown to different users who are simultaneously viewing or accessing the same file. Based on this feature, many proposals have been advanced for customizing Web advertisements so as to present different ads to different viewers.

Early efforts to customize Web page advertisements focused on customization preformed by a web site content server after very limited information was obtained about the user of the web site. Advertisements appearing in the home page of Internet search engines and Internet search directories, such as Google and Yahoo!, for example, alter advertisements that appear in advertising banners at the top of their web pages based on the search terms a user enters into the search engine or search directory. For example, after a user enters the search term "loans", the web page might display an advertisement from a loan provider in the advertising banner.

Prior efforts have also customized web advertisements by tracking a user's activity on the Internet, for example, through "cookies"—i.e., small pieces of information sent by a web server to the web browser which can later be read back from the web browser. Based on the user's activity on the Internet, a profile of the user is established, i.e., what types of web sites the user has selected. Other efforts have customized web page advertisements using demographic information previously obtained from the user. For example, demographic information obtained from the user's local browser, which was supplied by the user when setting up service, can be acquired and used to customize advertisements. The demographic information may have been supplied by the user, for example, to the Internet access provider.

SUMMARY OF THE INVENTION

matically receiving a request for information from the client device; receiving location information indicative of the geographical position of the client device; selecting audio-visual content based on the request and regardless of the location information; selecting geographically oriented information based on the location information; and sending response information to the client device, the response information including the geographically-oriented information and the content.

Another aspect of the invention provides a portable system for presenting information to a user. The system includes a processor, a positioning system, input means for receiving information from a user, a display, a modem, and instructions executable by the processor. The instructions include: receiving a request for information from a user via the input means; retrieving the geographic location of the positioning system from the positioning system; sending the request and the geographic location to a server via the modem; receiving from the server requested information and location information, the requested information being responsive to the request and the location information being responsive to the geographic location; and displaying the requested information and the location information.

In yet another aspect of the invention, a system for presenting information to a user comprises a remote device including a positioning system and a modem, and a server including neutral content and dependant content, the dependant content comprising geographically-oriented content. When the remote device requests the neutral content via the modem and sends its geographical location as determined by the positioning system, the server sends the neutral content and the dependant content.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a block diagram of a communications network for delivering customized file to users of the network.

FIG. **2** is a diagram of an Ad Lookup Table.

DETAILED DESCRIPTION OF THE INVENTION

As shown in FIG. **1**, a system **50** in accordance with one embodiment of the invention comprises a network of computers such as end user personal computer **60** that communicates with web servers **80** via Internet **90**. Although only a few computers are depicted in FIG. **1**, it should be appreciated that a typical system can include a large number of connected computers.

Preferably, end user computer **60** is a personal digital assistant (PDA) with wireless capability having all the internal components normally found in a PDA such as, for example, central processing unit (CPU) **65**, touch-sensitive display **62**, buttons **61**, wireless modem **63** and all of the components used for connecting these elements to one another. The buttons **61** and display **62** are typically used for data entry, although other data entry means may also be used and present such as keyboards, mice, microphones for voice recognition and the like. Although end user computer **60** is shown as a PDA, it may comprise any work station capable of processing instructions and transmitting data to and from humans and other computers, including network computers lacking local storage capability and Internet-capable wireless phones.

End user computer **60** communicates with the Internet **90** via wireless modem **63** as schematically shown by wireless

End user computer **60** also includes a GPS receiver **69**. The GPS receiver triangulates signals from satellites **200** to determine the latitude and longitude of the GPS receiver **69**. GPS receivers for PDA's are widely available. Computer **60** contains software which continuously writes the latitude and longitude in a "cookie" which is accessible to web sites interested in viewing the information contained in the cookie.

Web server **80** contains hardware for sending and receiving information over the World Wide Web, such as web pages or files. The web server **80** may be a typical web server or any computer network server or other automated system capable of communicating with other computers over a network, including the Internet, wide area networks or local area networks.

Web server **80** contains a processor **87**, a set of instructions **86** which are executed by processor **87**, and a variety of data. Preferably, the instructions **86** are stored as a program on the hard drive of the server. The functions, methods and routines of the program are explained in more detail below. The data includes the data contained in database **81** and, although the data is shown separately from instructions **86**, the data may be modified by the program. Although only a single processor is shown, the instructions may actually be distributed to a number of different components or processors for execution.

The server and data **81** are further associated with a particular URL, such as URL **85**. For the purposes of example only, the URL shall be considered to be "www.a.com."

Web server **80** provides web pages containing content such as a collection of audio-visual data containing text and pictures of an electronic magazine **84**. For all purposes herein, "audio-visual" means information which is either audible, visual or both. The web pages also contain advertisements from Ad-Lookup Table **83**. The advertisements differ in as much as they are geographically-oriented, i.e., they are more relevant to one geographical area than another. For example, one advertisement may be about a restaurant located in the northern section of a city whereas another advertisement may be about a restaurant located in the southern section of a city.

Ad-Lookup Table **83** is shown in more detail in FIG. **2**. Ad-Lookup Table **83** is actually a collection of data comprised of a number of lookup tables, including Pos-Zip Lookup Table **120**, Zip-Ad Lookup Table **130** and AdID-File Lookup Table **140**. Each record of the Pos-Zip Lookup Table **120** contains three fields, latitude **121**, longitude **122** and zip code **123**. The Pos-Zip Lookup Table **120** is used to determine the zip code corresponding with a particular latitude and longitude. FIG. **2** shows two example records for two zip codes in New York City. Each record of the Zip-Ad Lookup Table **130** contains a zip code field **131** and an Ad ID field **132**. The Zip-Ad Lookup Table **130** is used to determine the ID of an ad or ads that correlate with a particular zip code. As shown by the example illustrated in the figure, each particular zip code may be associated with more than one ad. Each record of the AdID-File Lookup Table **140** contains an ID field **141** and file field **142**. The AdID-File Lookup Table **140** is used to find the file containing the particular information about an ad, such as for example its text, pictures and hyperlinks (if any).

In operation, the user will cause the web browser of the PDA to download a page from a particular URL. More specifically and by way of example in FIG. **1**, the user enters the URL **85** of web server **80** into the web browser of the PDA, namely "www.a.com". The processor **65** then causes wireless modem **63** to connect with cell base station **91** and, via Internet **90**, to web server **80**.

Upon receipt of the request for the web page, web server **80**

and longitude) stored by GPS receiver **69**. For the purposes of illustration, it shall be assumed that reference circle **110** relates to a particular geographical location within New York City while reference circles **111** and **112** relate to other geographical locations in New York City.

Upon receipt of the latitude and longitude, processor **87** in accordance with instructions **86** queries the Ad-Lookup Table **83** to determine which advertisement should be presented to the user. Specifically and with regard to FIG. **2**, the processor queries Pos-Zip Lookup Table **120** for the zip code associated with the particular latitude and longitude. Using the sample values shown in the figure, if the latitude and longitude were 40.75 and 73.997, then the processor would select zip code 10001. Once the zip code is obtained, the processor next queries Zip-Ad Lookup Table **130** for the Ad ID or ID's associated with the particular zip code. Using the sample values shown in the figure, if the zip code were 10001, then the Ad ID would be "A". Once the Ad ID is obtained, the processor queries AdID-File Lookup Table **140** to get the information about the advertisement associated with that particular ID. For example, the ad may be the name of a restaurant (such as "Restaurant **110**") and function as hyperlink to the home page of the restaurant.

Returning to FIG. **1**, once the advertisement information is obtained, the advertisement is combined with the rest of the content **84** contained on the web page. In other words, the web server **80** combines information which is particular to the user's location with information which is not particular to the user's location, and sends the resultant web page to the end user computer **60** via Internet **90**. Thus, display **62** will show a web page showing the URL **71** of the web server **80**, a banner advertisement which is geographically related to the geographic location of the end user computer **60**, and other content (from content file **84**) which was requested by the user (such as text **72** and a picture **73**) but not necessarily geographically-oriented.

A different end user computer in another geographical location would get the same content as the end user computer **60**, but would get different geographically-oriented information. In other words, the steps described above are the same for end user computer **160** but a portion of the display would change. For example, if end user computer **160** is in a different geographical location **112** at latitude 40.8113 and longitude 73.9538, then using the sample values contained in FIG. **2**, the end user computer **160** may get an advertisement having the ID of "B", which may be a hyper linked advertisement to a restaurant known as "Restaurant **112**." Thus, if both computer **60** and computer **160** downloaded the web page at www.a.com, the displays **62** and **162** would be substantially identical with respect to information which is not dependent on location. The URL's **71** and **171**, text **72** and **172** and pictures **73** and **173** would all be identical. The advertisements **70** and **170**, on the other hand, would differ.

Similarly, if end user computer **60** moved to a different geographic location **111**, the advertisement would change but the rest of the web page would not. If the advertisement portion of the page is automatically refreshed, the advertisement will change automatically. Otherwise, it will change when the page is reloaded.

Accordingly, one of the advantages of the present invention is that in response to requests for information from users, the server provides not only the requested information but other information which is relevant to the current location of the user.

The invention has the added advantage of being able to

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