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[54] **APPARATUS AND METHOD OF AUTOMATICALLY ACCESSING ON-LINE SERVICES IN RESPONSE TO BROADCAST OF ON-LINE ADDRESSES**

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[52] **U.S. Cl.** **395/200.47**; 395/200.48; 395/200.49; 395/200.57; 395/200.59; 455/3.1; 455/3.2; 455/4.1; 707/10; 707/104
[58] **Field of Search** 395/200.46–200.49, 395/200.55–200.6; 348/6, 7, 12, 13; 379/88, 89; 455/4.2, 5.1, 3.1, 3.2, 4.1; 707/10, 104

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,276,866	1/1994	Paolini	395/200.49
5,438,355	8/1995	Palmer	348/1
5,572,442	11/1996	Schulhof et al.	395/200.49
5,572,643	11/1996	Judson	395/200.48
5,657,450	8/1997	Rao et al.	395/200.47
5,721,829	2/1998	Dunn et al.	395/200.49
5,737,532	4/1998	DeLair et al.	395/200.49
5,794,250	8/1998	Carino, Jr. et al.	707/104

OTHER PUBLICATIONS

Website pages of "AirMedia Live Internet Broadcast Network", printed Oct. 7, 1996.
AirMedia Live Wireless Network Service Plans brochure, © 1996.
Website pages of "PageCard Wireless Messaging System For Windows", Socket Communications printed Oct. 24, 1996.
Walter S. Mossberos, "Personal Technology", Printed Oct. 24, 1996.

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[57] **ABSTRACT**

A method and apparatus is provided for connecting a computer to electronic addresses in sync with an audio/video broadcast. Simultaneously with the broadcasting of audio/video programming, an address transmitter transmits an address, such as a URL, identifying an on-line service which contains information about the audio or video programming. This address is received by a computer and used to automatically access the on-line service. Preferably, the process is repeated with different addresses corresponding with different programming. It is also preferred that the addresses be sent via a paging system.

38 Claims, 1 Drawing Sheet
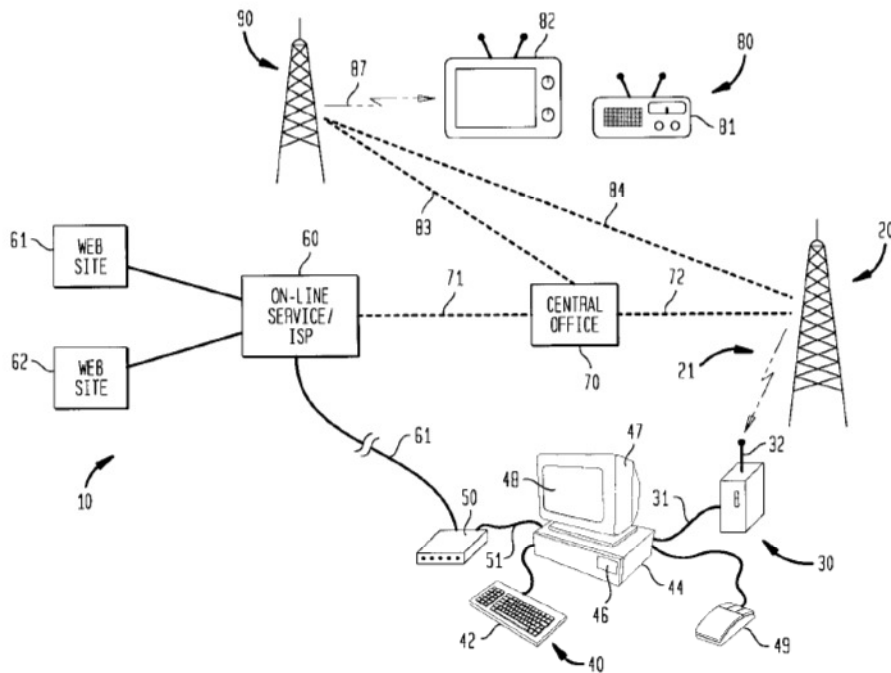
FIG. 1

APPARATUS AND METHOD OF AUTOMATICALLY ACCESSING ON-LINE SERVICES IN RESPONSE TO BROADCAST OF ON-LINE ADDRESSES

This application claims benefit of provisional application Ser. No. 60/008,111 filed Oct. 30, 1995.

BACKGROUND OF THE INVENTION

Although both television programming and the Internet have undergone an explosion of content, the two have essentially expanded and developed independently. There have been relatively few successful attempts to marry these two areas of communication. Accordingly, despite the vast business opportunities afforded by television, the potential of exploiting or enhancing revenues via the Internet has been largely untapped. The same is true with respect to radio stations, which are being all but left out of the information revolution.

Although some efforts have made to made to link these two areas, these efforts have suffered from disadvantages. Users can often obtain more information about their favorite programming or station by accessing a website on the World Wide Web which is dedicated to that programming. However, while the website may contain useful information which is of interest to the user, the user has to overcome a number of obstacles to get to that website. The user must first obtain an electronic address such as a Uniform Resource Locators ("URL") for the website and enter that electronic address exactly into the user's computer. These addresses are often long and complicated. These inconveniences can dissuade those who would otherwise be interested in finding programming information on the Internet.

Another manner in which broadcast programming and the Internet have been linked is allowing users to electronically communicate via the Internet with a live broadcast show. The television programming may change in response to the information being sent to the broadcaster, such as by broadcasting a transcript of the messages sent. Again, however, this method also requires the user to know and correctly use the appropriate URL.

Further, the foregoing efforts to link broadcast programming with the Internet also require that the user stay connected to one particular website. If the user wishes to find information on the Internet which is associated with different programming, they are required to change websites and undergo the same inconveniences of finding and entering the appropriate URL.

It would be advantageous, therefore, if there were a method and apparatus which saved the user the difficulty of finding and entering proper on-line electronic addresses associated with broadcast programming. There is an accompanying need for a method and apparatus which automatically connects the computer to different addresses as the programming changes.

SUMMARY OF THE INVENTION

The present invention addresses these needs.

In one preferred embodiment of the present invention, a method is provided for connecting a computer with multiple on-line services simultaneously with an audio and/or video broadcast. The method comprises the steps of providing a computer located at a first location and an on-line service located at a second location remote to the first location and broadcasting audio or video programming. Another step

includes transmitting an address identifying the on-line service from an address transmitter at a third location remote from the first and second locations. The on-line service contains information corresponding with the audio or video programming being broadcast at the time the address is transmitted. Further, the step of transmitting occurs simultaneously with the step of broadcasting, and the method also includes receiving the address at the computer, such that the computer automatically accesses the on-line service by using the address information.

Preferably, the address is a Universal Resource Locator and the on-line service is an Internet Service Provider which provides access to a website. The website sends information to the computer. The address may also identify a portion of the information contained in the on-line service, with the step of connecting the computer to the on-line service occurring before the step of receiving.

The step of automatically accessing the on-line service desirably includes sending the address via a modem and telephone lines to connect the computer with the on-line service. The on-line service may count the amount of times it has been accessed by the particular computer or any computer.

It is preferred that the transmission of addresses occur via electromagnetic waves, such as over a paging system. Alternatively, the addresses may be sent from an audio or video playback device such as a VCR or the like. On the other hand, the address transmitter may be a website and the step of transmitting comprises sending the address to the computer via the Internet. Yet further, the address transmitter may be an audio/visual broadcaster, such that the address transmitter also transmits television or radio signals.

In another preferred embodiment of the invention, a method is provided for directing computers located at a plurality of different first locations to communicate with an on-line service, the on-line service being located at a second location remote from the first locations. The method includes transmitting an address identifying the on-line service from a transmitter at a third location (remote from the first and second locations) to the plurality of the computers. Another step includes broadcasting audio or video information corresponding with the address simultaneous with the step of transmitting, and simultaneously receiving the address at the plurality of computers. At least one of the computers uses the address to access the on-line service.

Preferably, the transmitting step includes transmitting the address by modulating an electromagnetic wave which has a carrier frequency associated with a television or radio signal, with the audio and/or video information being broadcast at the same carrier frequency. Alternatively, the audio and/or video information may be transmitted at a different carrier frequency. The on-line service provides information related to the audio and/or video information to the computer. The audio and/or video information may be provided to the computer before, during or after the step of accessing.

Yet another preferred embodiment of the present invention provides a method of directing computers located at a plurality of different first locations to communicate with an on-line service, the on-line service being located at a second location remote from the first locations. The method comprises: transmitting an address from a transmitter at a third location (remote to the first and second location) to the plurality of computers; simultaneously receiving the address at the plurality of computers; broadcasting audio and/or video information corresponding with the address simultaneously with the step of transmitting; using the address so

that at least one of the computers accesses the on-line service; and sending information from the computer to the on-line service in response after the computer accesses the on-line service.

Desirably, the method also includes the step of modifying the audio or video information in response to the response information. More steps would include repeating the process with different addresses identifying different on-line services and then storing those different addresses in the computer. The information would then be accessed at a time after the addresses were stored.

An additional preferred embodiment provides a method of directing a computer at a first location to communicate with a first on-line service identified by a first address and a second on-line service identified by a second address. The steps include broadcasting first audio or video programming corresponding with the first on-line service simultaneously with the step of transmitting the first address; receiving the first address at the computer; transmitting the second address from the address transmitter; broadcasting second audio or video programming corresponding with the second on-line service simultaneously with the step of transmitting the second address; receiving the second address at the computer; the computer automatically accessing the first on-line service by using the first address and automatically accessing the second on-line service by using the second address.

Yet another preferred embodiment provides a method of directing a computer to access information related to radio or television programming currently being broadcast comprising transmitting an address identifying an on-line service from a paging system; receiving the address at the computer; automatically accessing the on-line service by using the address; and receiving information related to the radio or television programming.

A system in accordance with the preferred embodiment connects a computer with multiple on-line services. The system includes an audio or video programming broadcaster and a receiver for receiving different addresses identifying the on-line services, whereby the addresses are transmitted simultaneously with the programming being broadcast by the broadcaster and the on-line services contain information corresponding with the programming.

DESCRIPTION OF THE FIGURES

FIG. 1 is a schematic view of a system in accordance with the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. 1 shows a system 10 in accordance with one embodiment of the present invention. The system comprises a general computer 40, a receiver 30, an on-line service 60, a central office 70, television/radio broadcaster 90, a radio and/or television 80 and a transmitter 20.

General computer 40 includes a processor unit 44 containing a microprocessor (not shown) and a memory storage device such as hard-drive 46. A plurality of input/output peripherals are connected to the processor unit 44 including monitor 47 having a screen 48, keyboard 42, modem 50 (connected to processor unit 44 via cable 51) and mouse 49. The general computer 40 and its associated peripherals may be any of the standard personal computers currently available, such as an IBM-compatible personal computer operating under the Windows platform. In the preferred embodiment, the computer includes a program which performs the steps outlined below.

Receiver 30 is connected to processor unit 44 via cable 31. Receiver 30 is preferably an alpha-numeric pager/beeper unit, which is capable of receiving alpha-numeric information via a page. Receiver 30 includes an antenna 32 and outputs the pages it receives via cable 31 to computer 40. Pagers/beepers capable of outputting received alpha-numeric messages to a computer are currently available, including the PageCard Wireless Messaging System offered by Socket Communications, Inc. of Fremont, Calif.

Modem 50 is connected to a telephone line 61 as well as processor 44. The modem preferably connects with a POTS/Centrex telephone line in a manner well-known and standard to modems. The modem may alternatively be connected via ISDN, leased line, or cable modem.

An on-line service 60 is also connected to the phone network. Preferably, the on-line service is an Internet Service Provider which is capable of connecting the general computer 40 to the Internet via modem 50. The on-line service is at a physical location remote from the computer, i.e. the on-line service and computer are connected only by a communication medium such as the phone system. As used herein, the term remote means being separated by a physical distance of any length in addition to the term's ordinary meaning. The Internet Service Provider, in turn, allows Internet connections to websites/on-line services 61 and 62 which are remote from the other components of the system 10.

The system also includes two broadcasters which are located at locations remote from the other components: radio and television broadcaster 90 and paging system broadcaster 20. In manners well known in the art, radio/television broadcaster 90 broadcasts its programs via electromagnetic signals 87 to television 82 and/or radio 81. Likewise, pager broadcaster 20 broadcasts alpha-numeric pages via electromagnetic signals 21 to pagers and beepers. As is typical with such paging systems, the page can be sent on multiple frequencies and include information embedded in the signal which identifies the one or more beepers intended to receive the message.

Central office 70 maintains contact with on-line service 60 via any electronic connection 71 such as the Internet or standard telephone lines. Central office 70 maintains similar communication connections 72 and 83 with the pager and programming broadcasters 20 and 90, respectively. Preferably, the central office is another website. Central office 70 is used to help coordinate the various activities of the components of the system. However, as many of these activities may be planned in advance as shown below, central office 70 is not necessary to implementation of the invention.

In operation, paging system tower 20 broadcasts a page intended for reception by receiver 30. The request for the page may have originated from either the central office 70 or from the radio/television broadcaster 90, with the page request being sent by telephone lines. The receiver 30 receives the transmitted paged message and outputs the message to the processor 44 via cable 31.

The general computer handles the page in accordance with the dictates of the program. The program continuously monitors and/or polls receiver 30 to determine whether any pages have been received, such as by monitoring the processor's COM port connected to receiver 30 via wire 31. When a page has been detected as received, the program tests the page to determine whether it includes a valid URL. By way of example, a valid URL might be "http://www.palmer.net" which is the URL for website 61. If the

message is a valid URL, the program stores the URL in memory such as by writing it onto hard drive **46**.

The processor **44** next causes modem **50** to connect computer **40** with the Internet Service Provider **60** (if not already connected) via telephone line **61**. Using functions typically present in a web browser, the program then sends the stored URL to the Internet Service Provider **60** which in turn allows the computer **40** to receive information from and interact with the website associated with the URL. The information received from website **61** will be displayed on screen **48**. The program repeats the process each time a new and different URL is received by receiver **30**, such as when the URL for website **62** is transmitted. Alternatively, the next URL may be another webpage of the current website **61**. Accordingly, it is preferable for the program to be a World Wide Web compatible browser (Mosaic, Netscape or Microsoft Internet Explorer) with the remaining aspects of receiving and testing incoming URL's being a TSR (Temporary Stay Resident), DLL (Dynamic Link Library) or "plug-in", i.e., specific software code useable by a web browser.

In the preferred embodiment, the URL's are broadcast over the paging system to correspond with the programming broadcasted for radio or televisions. For example, every time a commercial is shown on television **82**, a URL associated with that advertiser's website is simultaneously sent from tower **20** to receiver **30**. That website may be the advertiser's home page. The tower **20** then sends out the address of a different website when the next commercial begins. Thus, computer screen **48** displays different information from different websites to simultaneously correspond with television or radio programming. The computer connects with the different websites automatically and in relatively synchronously with the broadcast signals. The broadcaster, in effect, controls the Internet destination of the user's computer. This turns the receiver's computer into a directed video kiosk controlled and programmed by the television or radio broadcasters. As paging and phone systems are essentially ubiquitous, there is essentially no geographical limit to the invention. Although the sending and receiving of audio/visual information and URL's should be simultaneous, the URL actually may be accessed during or after the audio/video signal.

Central office **70** coordinates the activities between paging system **20** and programming broadcaster **90**. The radio and television stations may provide the central office with a schedule of programming and the associated URL's. In accordance with those schedules, the central office sends page requests to the paging system via the telephone lines or Internet at predetermined times. For any radio and television programming where it is difficult to predict when the ULR's should be simulcast with the broadcast programming, such as live broadcasts, the station **90** may send its URL page requests either to central office **70** or directly to paging system **20** (as referenced by line **84** of FIG. 1) in relative synchronicity and real-time with the programming. Yet further, the station may inform the central office of what URL's should be paged by embedding the information right in its broadcast. For example, the URL may be embedded in the vertical blanking interval, sideband or alternative band or channel of the broadcast and extracted by the central office **70**.

In another preferred embodiment, the URL messages are not broadcast via a paging system but are instead sent over the Internet. For instance, the computer **40** uses a first web browser to connect with central office **70** over the Internet, and receives a steady stream of URL locations from central

office **70**. These locations are provided to a second web browser running on computer **40** which connects with different websites as noted above. Thus, by running the first web browser connected to the central office in the background or "minimized", the second web browser will continuously update the screen with changing information.

The present invention allows a wide variety of other options which increases its versatility to meet a user's particular needs. For example, the user can run the program in two modes, namely "auto-pilot" and "history-stack". In the auto-pilot mode, the computer automatically connects to a website the moment the website's URL is received by receiver **30**, as explained above. In history-stack mode, on the other hand, the computer does not immediately connect to a website upon receipt of a URL. Rather, the URL's are stacked on hard drive **46** to be used at a later time and order chosen by the user. In order to access any of the websites, the user need do no more than select one of the URL's which have been stored in memory. The user does not have to enter any electronic addresses. To fully bring out the value of history-stack mode, it is recommended to add information to the transmitted URL messages, i.e. an English description of the URL. For example, the transmitted message might be "http://www.palmer.net Palmer Computer Services, Inc. Home Page", where the first portion of the message is the URL used by the web browser and the second portion of the message is displayed by the program so the user can understand what the website is about.

While in auto-pilot mode, the program allows the user to interrupt the automatic connection to websites by clicking anywhere in a given web page or by pressing a key on the keyboard or other applicable user controlled input device. When the user opts out of auto-pilot mode, the program automatically switches to history-stack mode so that the user can return to the websites which were missed while reviewing the paused website. The user may switch back to auto-pilot mode at any time.

The program can also be configured to automatically switch between auto-pilot and history-stack modes upon the occurrence of predetermined events such as expiration of timers or connection to specific websites. For example, the program may switch from auto-pilot mode to history-stack mode and wait for a user response when the program detects certain information, such as connection to a website offering a contest entry form.

The invention is uniquely suited to capitalize on and add value to traditional broadcasts by manipulating Internet connections. Advertising is enhanced by making more complete information and options available to potential buyers. By way of example, the system can promote direct response selling such as taking users to specific web sites in sync with radio broadcasts. While a song is playing on the radio, the computer may simultaneously connect to a website which allows the user to immediately order the artist's CD. Thus, the user can order a product over the Internet with relatively minimal effort and without knowing or typing any specific electronic addresses. The website (or page) changes when the song changes, offering yet another selling opportunity. Alternatively, potential buyers may be directed to on-line chat areas to ask live salespeople questions about the products being transmitted over the broadcast. Further, where technology permits, an Internet telephone call can be created between the user and the content provider.

A variety of other sales opportunities are also presented. Options include making coupons available to users in sync with commercials. Special-offer and limited-time sales are

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