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Minor et al.

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[54] **APPARATUS AND METHOD FOR PASSING PRIVATE DEMOGRAPHIC INFORMATION BETWEEN HYPERLINK DESTINATIONS**

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[51] **Int. Cl.**[6] **H04L 9/00**; H04L 9/32

[52] **U.S. Cl.** **380/49**; 380/9; 380/21; 380/23; 380/25

[58] **Field of Search** 380/4, 9, 21, 23, 380/25, 49, 50, 59

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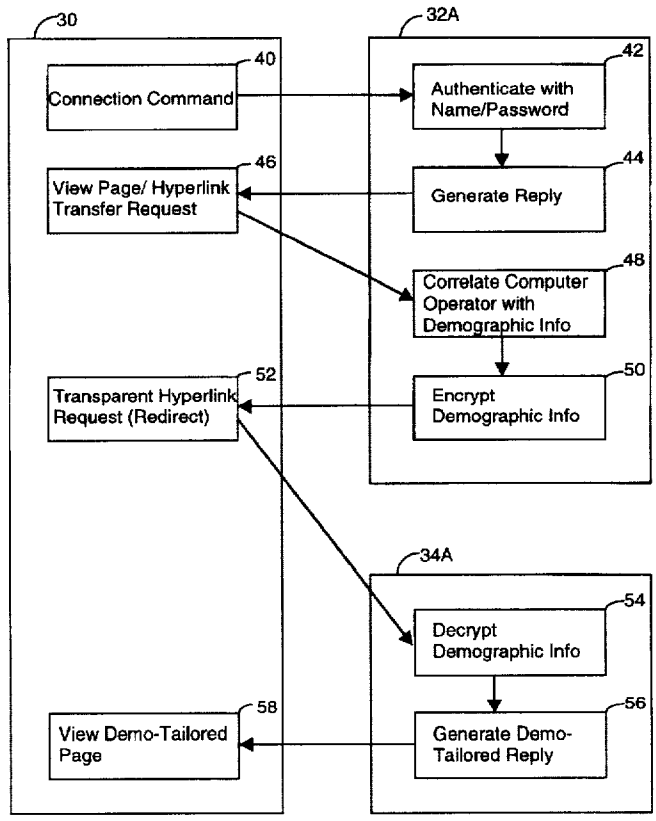
[57] **ABSTRACT**

A method of passing demographic information between computers includes the step of associating a computer operator with a set of demographic information. When the computer operator requests a transfer to another computer, a remote site information repository is accessed to identify a remote site destination address and a remote site encryption key. The demographic information is then encrypted using the remote site encryption key to form an encoded demographic signal. The encoded demographic signal is then combined with the remote site destination address to form an encoded demographic hyperlink transfer request, which is used to access the remote computer specified by the remote site destination address. The remote computer decrypts the encoded demographic information. The demographic information can be used by the remote computer in a number of ways, including the generation of a customized reply to an inquiry from the computer operator.

21 Claims, 5 Drawing Sheets



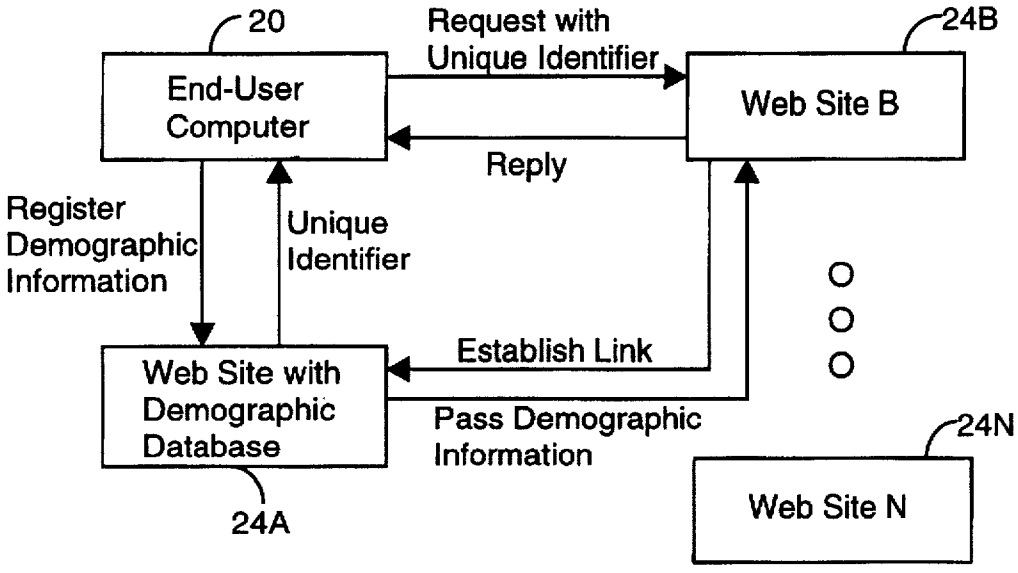


Figure 1
(Prior Art)

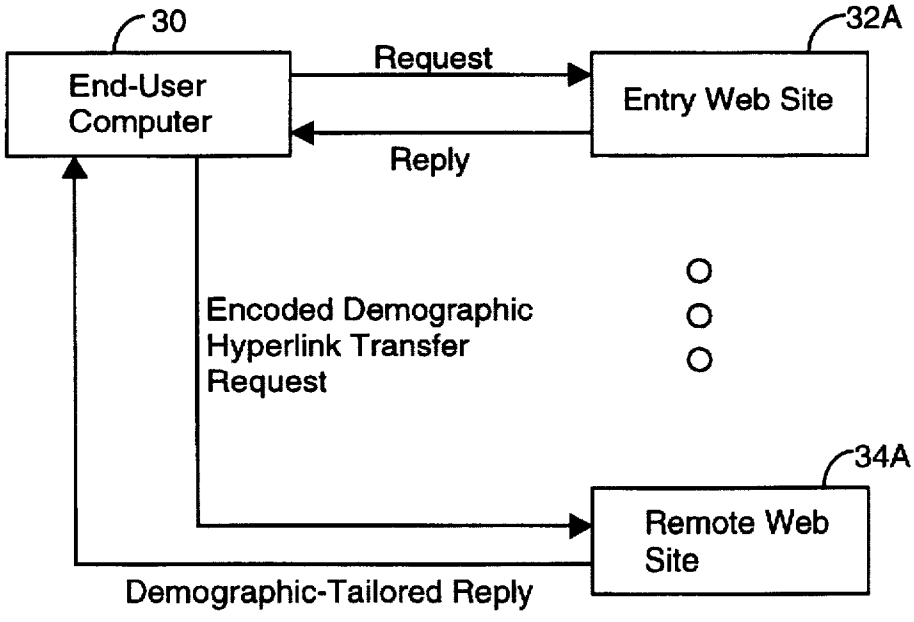


Figure 2

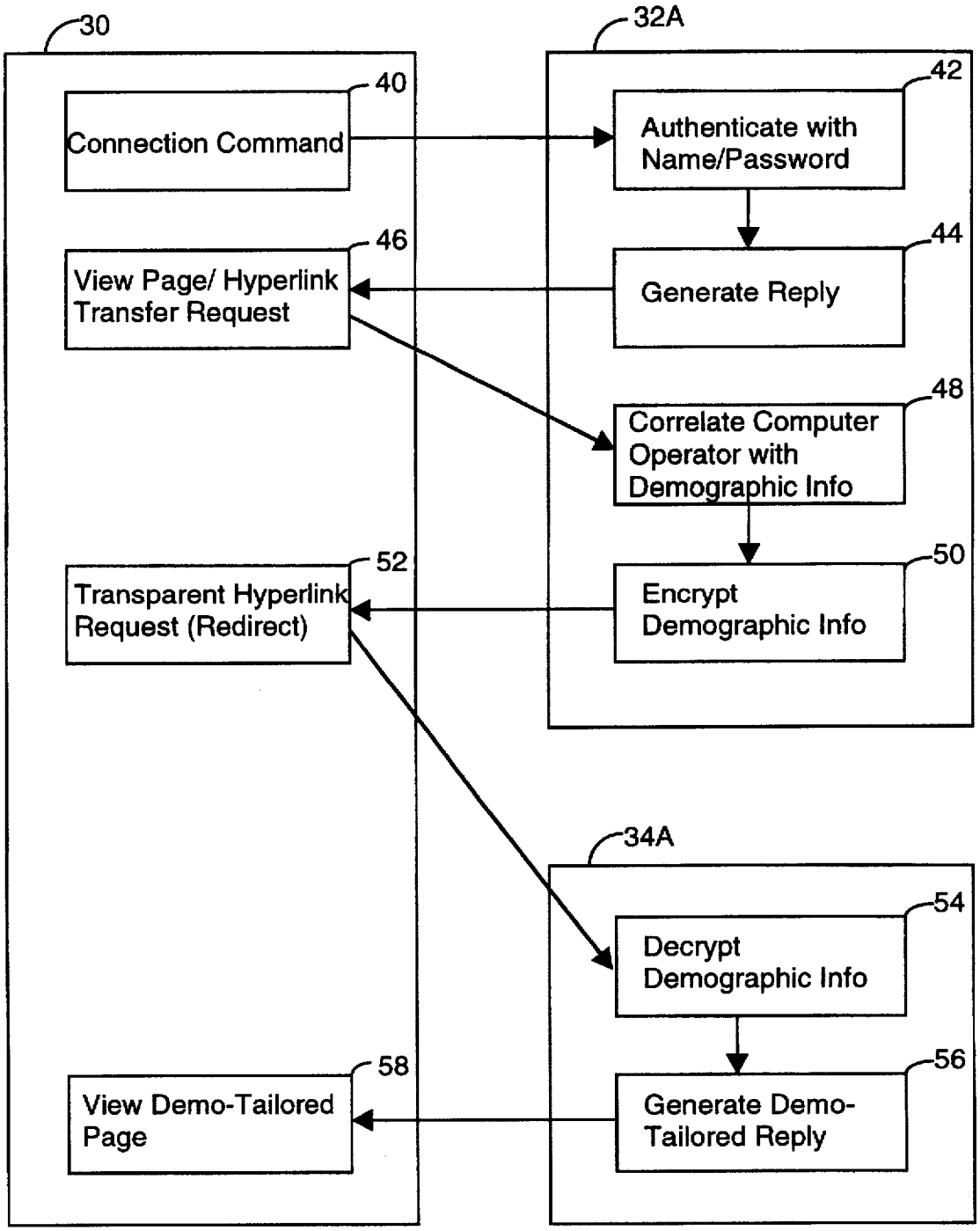

30
32A
40
Connection Command
42
Authenticate with Name/Password
46
View Page/ Hyperlink Transfer Request
44
Generate Reply
48
Correlate Computer Operator with Demographic Info
52
Transparent Hyperlink Request (Redirect)
50
Encrypt Demographic Info
34A
54
Decrypt Demographic Info
58
View Demo-Tailored Page
56
Generate Demo-Tailored Reply

Figure 3

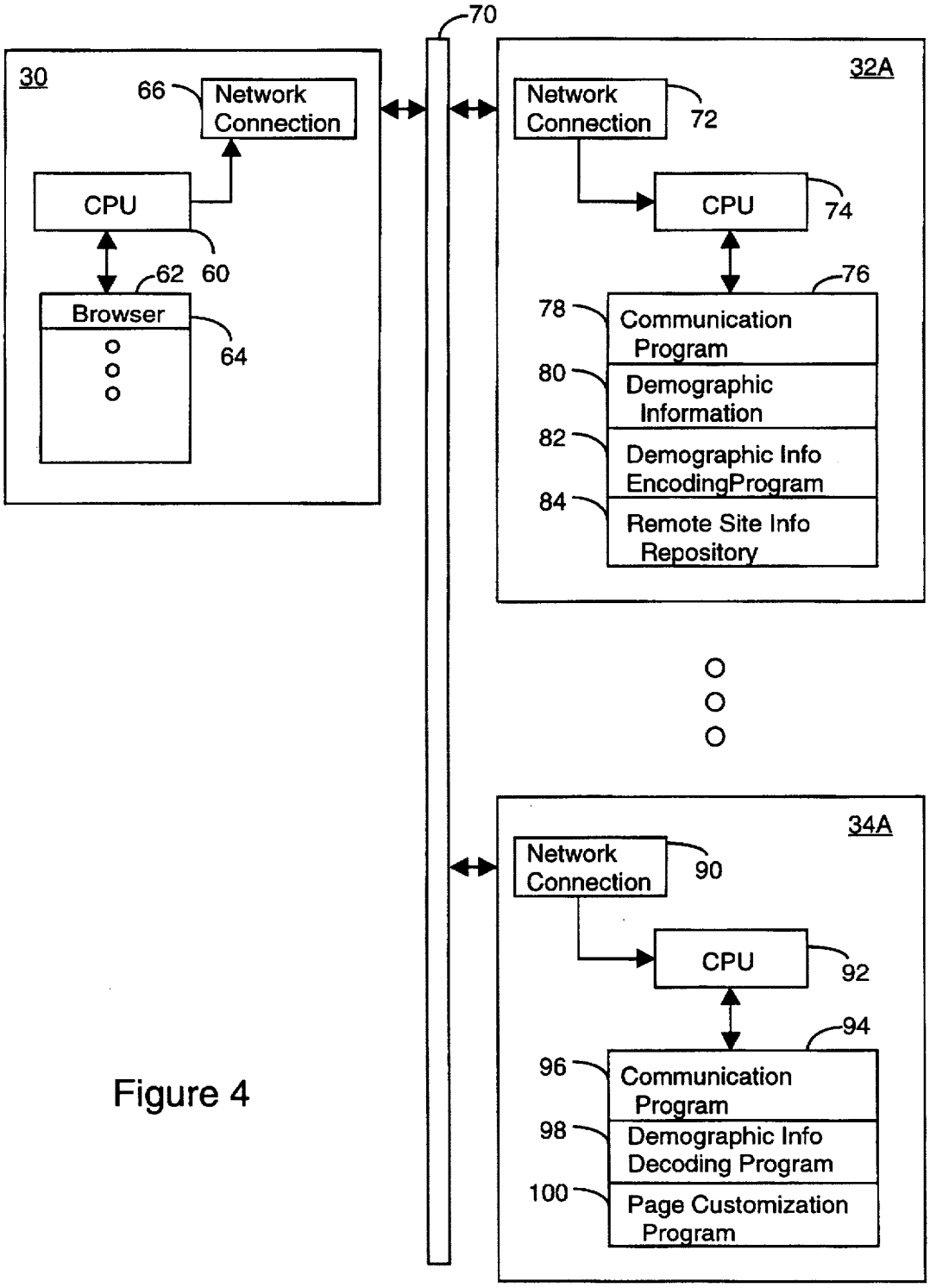

70
30
66
Network Connection
CPU
60
62
Browser
64
32A
Network Connection
72
CPU
74
76
78
Communication Program
80
Demographic Information
82
Demographic Info EncodingProgram
84
Remote Site Info Repository
34A
Network Connection
90
CPU
92
94
96
Communication Program
98
Demographic Info Decoding Program
100
Page Customization Program

Figure 4

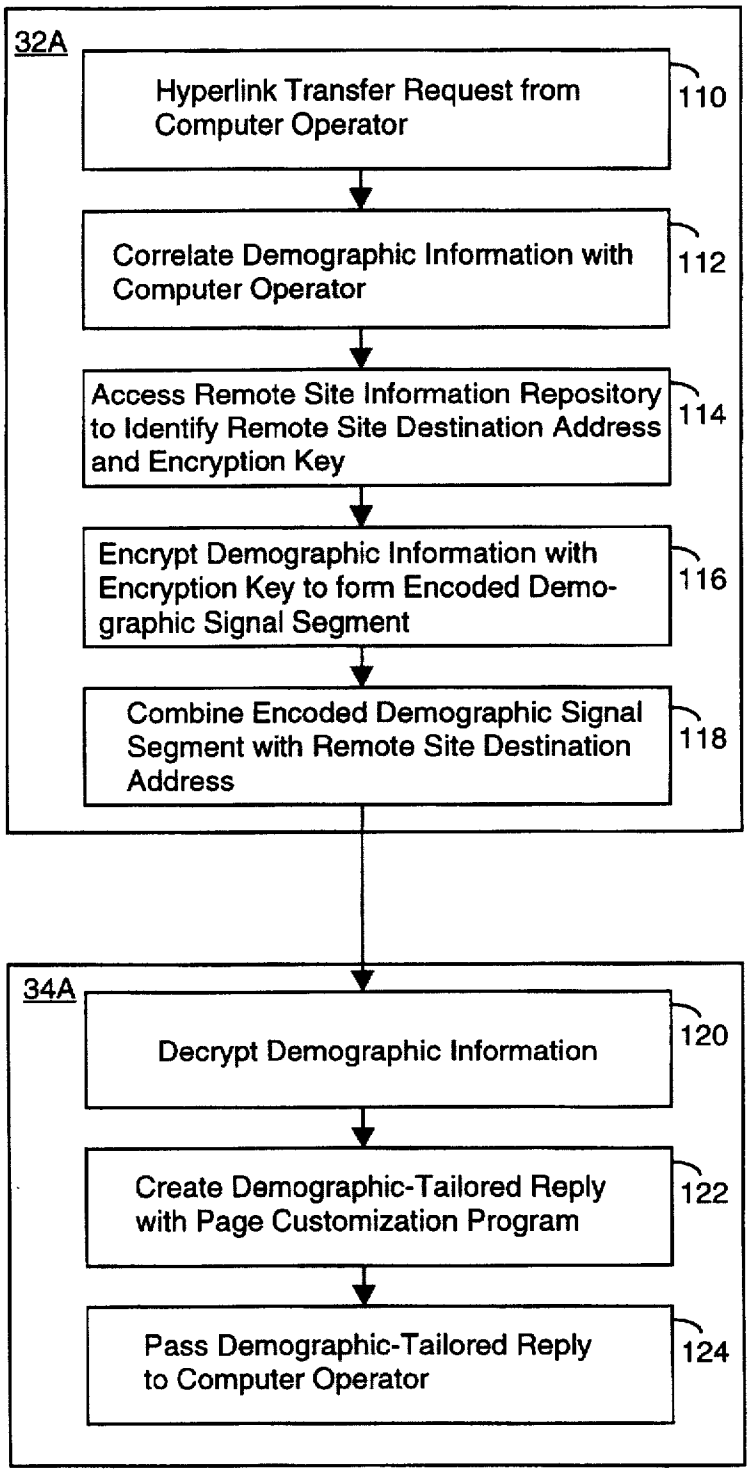

32A
Hyperlink Transfer Request from Computer Operator
110
Correlate Demographic Information with Computer Operator
112
Access Remote Site Information Repository to Identify Remote Site Destination Address and Encryption Key
114
Encrypt Demographic Information with Encryption Key to form Encoded Demographic Signal Segment
116
Combine Encoded Demographic Signal Segment with Remote Site Destination Address
118
34A
Decrypt Demographic Information
120
Create Demographic-Tailored Reply with Page Customization Program
122
Pass Demographic-Tailored Reply to Computer Operator
124

Figure 5

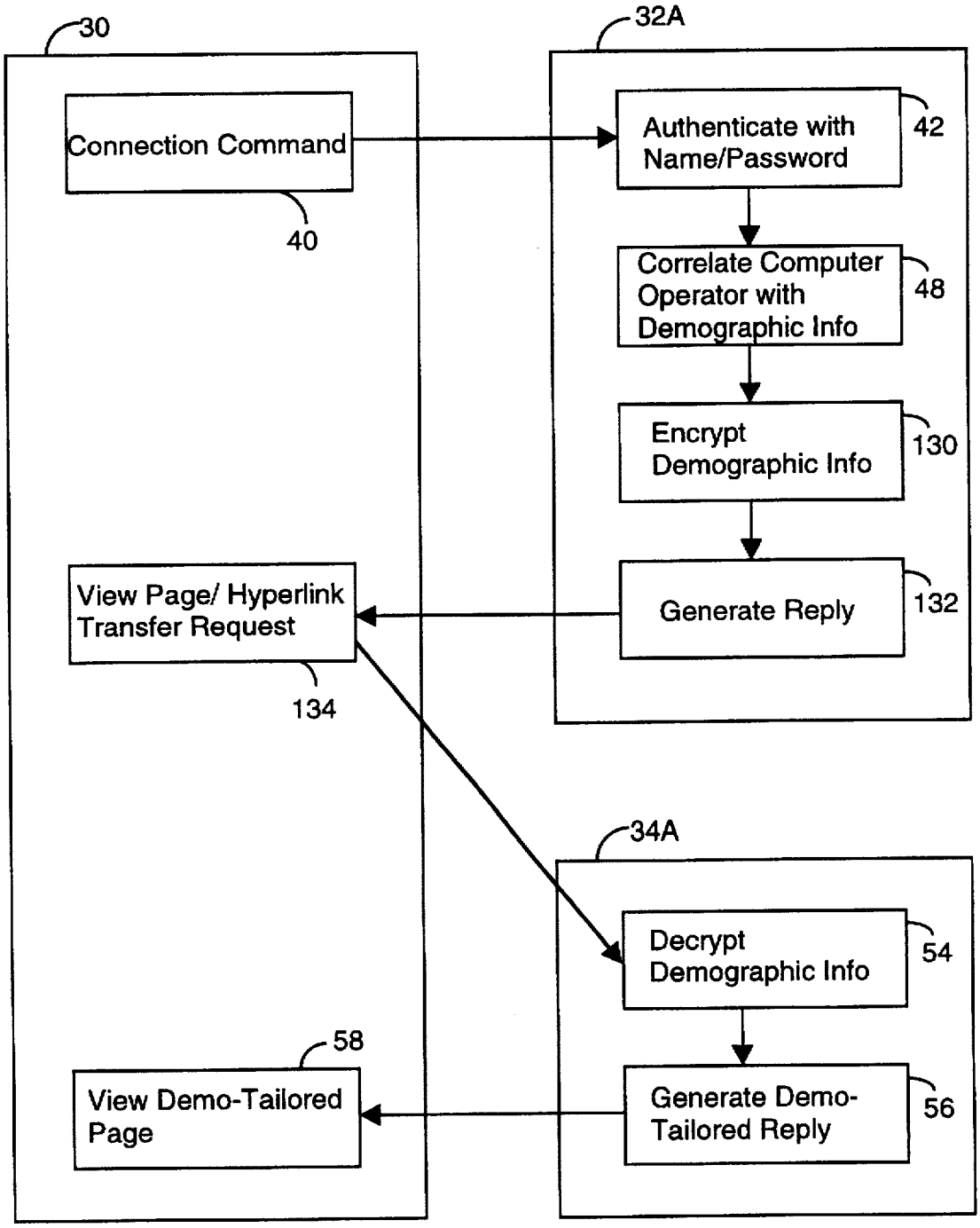

30
32A
Connection Command
40
Authenticate with Name/Password
42
Correlate Computer Operator with Demographic Info
48
Encrypt Demographic Info
130
View Page/ Hyperlink Transfer Request
134
Generate Reply
132
34A
Decrypt Demographic Info
54
58
View Demo-Tailored Page
Generate Demo-Tailored Reply
56

Figure 6

APPARATUS AND METHOD FOR PASSING PRIVATE DEMOGRAPHIC INFORMATION BETWEEN HYPERLINK DESTINATIONS

BRIEF DESCRIPTION OF THE INVENTION

This invention relates generally to hyperlink connections on computer networks. More particularly, this invention relates to a technique for appending private demographic information to a hyperlink transfer request used to move from one hyperlink computer to another hyperlink computer of a computer network.

BACKGROUND OF THE INVENTION

The term "hypertext" is used to describe documents with links to other documents. For example, a first document may include the word "Keats"; this word could then have a link to another document with the title "English Poets". These links are referred to herein as "hyperlinks". Hyperlinks are used between computers in computer networks.

A notable use of hyperlinks is on the World Wide Web (WWW) of computers. In this context, the operator of an end-user computer uses a "browser" to view a published page received from a first web computer. The published page may have a "hyperlink hot spot", which, when activated, results in a call to a second web computer. More particularly, the published page may have the hyperlink hot spot "Keats", which, when activated, causes the transfer of control to a specified university computer with a file providing information on "English Poets".

Thus, each hyperlink hot spot knows the name of its associated file and on which computer that file is stored. The name of the computer and the file are combined into a Uniform Resource Locator (URL). A typical URL is http://SU/123. This URL is an instruction to retrieve the file 123 from the State University computer "SU" using a method called Hypertext Transport Protocol "HTTP". A URL may also be used to invoke a specified function on a remote computer, with the remote computer returning the results of the invoked and executed function.

Thus, when the hyperlink hot spot is selected, control is transferred across the WWW to the computer specified in the URL instruction. The computer then returns to the end-user computer the file specified in the URL instruction. Subsequently, the browser on the end-user computer is used to display the information associated with the file.

It is known in the art to use demographic information so that a reply to an inquiry from an end-user computer is tailored to the computer operator's interests. This technique is especially relevant in a commercial setting where a computer operator is accessing different computers to identify products of interest. For example, a computer operator may have relied upon hyperlink hot spots to connect to an on-line computer catalog. In this context, it can be appreciated that the owner of the on-line computer catalog would like to have demographic information on the computer operator so that the information sent to the computer operator is particularly relevant. For example, the information should only relate to Apple architecture computers and peripherals if the relevant demographic information specifies that this is the type of system that the computer operator uses.

One way to obtain demographic information is for a computer operator to register the demographic information at each web site that is visited. The obvious problem with this approach is that a user does not want to take the time to repeatedly provide demographic information.

A more sophisticated technique of utilizing demographic information is shown in FIG. 1. FIG. 1 illustrates a technique in which an operator of an end-user computer **20** registers demographic information at a web site demographic database **24A**. After the registration process is completed, the web site demographic database **24A** passes a unique identifier to the end-user computer **20**. Subsequently, when the end-user computer **20** requests information from another computer on the WWW, say web site B, the unique identifier is passed to the computer with the request. In response to the request, the web site **24B** establishes a communication link with the demographic database web site **24A**. The unique identifier is then passed from the web site **24B** to the demographic database website **24A**. The demographic database website **24A** uses the unique identifier as an address to locate the demographic information associated with the computer operator of end-user computer **20**. This information is then passed back to the web site **24B**. The web site **24B**, relying upon the demographic information, then supplies a customized reply to the original request from the end-user computer **20**.

There are a number of problems associated with the system of FIG. 1. First, the operator of the end-user computer **20** must pass a unique identifier to each web site that is called. Consequently, without the knowledge of the computer operator, it is possible to coordinate every web site that a computer operator visits. This potentially provides a great deal of information regarding the computer operator and his or her interests. Moreover, the demographic information about the individual is passed over communication links where it can be accessed, thereby providing more information on the computer operator. Most individuals view each of these scenarios as a potential invasion of privacy.

Another problem with the system of FIG. 1 is that a communication link must be established with the demographic database web site **24A** each time a new web site is visited. Consequently, the system of FIG. 1 can be relatively slow.

In view of the foregoing, it would be highly advantageous to provide a simple technique for efficiently passing private demographic information between hyperlink destinations in a computer network.

SUMMARY OF THE INVENTION

The method of the invention passes demographic information between computers by associating a computer operator with a set of demographic information. When the computer operator requests a transfer to another computer, a remote site information repository is accessed to identify a remote site destination address and a remote site encryption key. The demographic information is then encrypted using the remote site encryption key to form an encoded demographic signal. The encoded demographic signal is then combined with the remote site destination address to form an encoded demographic hyperlink transfer request, which is used to access the remote computer specified by the remote site destination address. The remote computer decrypts the encoded demographic information.

There are a number of benefits associated with this technology. First, computers in a network are able to receive and process demographic information. This is achieved without requiting the computer operator to register at each site on the network. In addition, the demographic information is encoded when it is on public transmission channels. Thus, the information remains private. The encoding operation also promotes privacy to the extent that the information can only be processed by a computer that can decode the information.

The disclosed system avoids several of the pitfalls associated with the prior art system of FIG. 1. First, the disclosed system does not rely upon a unique identifier that can be used to trace the different locations that a computer operator visits. In addition, since demographic information is directly passed to a computer in the present invention, a separate communication session need not be initiated with a demographic database to obtain the information.

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the nature and objects of the invention, reference should be made to the following detailed description taken in conjunction with the accompanying drawings, in which:

FIG. 1 illustrates a prior art system that uses demographic information to create a customized reply to a request for information.

FIG. 2 illustrates a system for appending demographic information to a hyperlink transfer request, in accordance with one embodiment of the invention.

FIG. 3 is a more detailed illustration of the processing associated with the system of FIG. 2.

FIG. 4 illustrates a computer system configuration that may be used in accordance with the invention.

FIG. 5 illustrates the processing associated with the demographic information encoding and decoding programs used in accordance with an embodiment of the invention.

FIG. 6 is a detailed illustration of alternate processing steps that may be used in accordance with the system of FIG. 2.

Like reference numerals refer to corresponding parts throughout the several views of the drawings.

DETAILED DESCRIPTION OF THE INVENTION

FIG. 2 is a general illustration showing the architecture and methodology of the system of the present invention. The system architecture includes an end-user computer **30** that generates a request that reaches an entry web site **32A**. The request uses a Uniform Resource Locator (URL) address to specify a computer (entry web site **32A**) and information (a file) at that computer.

The entry web site **32A** is used to obtain demographic information about the computer operator at the end-user computer **30**. That is, the entry web site **32A** provides a set of inquiries or a graphical interface to obtain demographic information about the computer operator. Typical demographic information includes name, age, zip code, income level, employment information, type of computer used, other purchasing preferences, etc. This session also prompts the computer operator to select a password for use in future communications. The demographic information is then stored in a database at the entry web site **32A**. In subsequent accesses to the entry web site **32A**, the computer operator need not register again, instead the computer operator is recognized by providing authenticating information, such as a name and password.

After authentication or an initial registration session, the entry web site **32A** provides a reply to the original inquiry. That is, the entry web site **32A** passes back to the end-user computer **30** the file specified by the URL command. A browser running on the end-user computer **30** is used to display the file.

When the computer operator views the received file he or she may activate a hyperlink hot spot in the displayed document. This causes a new request **16** by sent to the entry web site **32A**. The request is a hyperlink transfer request to a new computer, say remote web site **34A**. The entry web site **32A** correlates the request with the computer operator and then fetches the previously accumulated demographic information regarding the computer operator. The entry web site **32A** also accesses a remote site information repository stored within the entry web site **32A**. The remote site information repository includes a list of remote site destination addresses and corresponding remote site encryption keys. The remote site destination addresses include the URL addresses for the different computers within the system that may receive demographic information. Each remote site destination address has a corresponding remote site encryption key. The encryption key is used to encode the demographic information that is sent to a computer. When the information is received at the computer, the inverse key is used at the computer to decrypt the demographic information.

Thus, the reply from the entry web site **32A** to the end-user computer **30** is a remote site destination address and demographic information encrypted by the selected remote site encryption key. This response is referred to as a demographic hyperlink transfer request. As shown in FIG. 2, the end-user computer **30** passes the returned demographic hyperlink transfer request to a remote web site **34A**. The remote web site **34A** has the address specified by the remote site destination address within the encoded demographic hyperlink transfer request.

The remote web site **34A** is an associated web site in the system of FIG. 2. It is associated in the sense that it can process the demographic information that is passed to it. As indicated above, the entry web site **32A** stores the address for each associated computer in the system.

The remote web site **34A** uses the inverse of the same encryption key specified at the entry web site **32A** to decrypt the received demographic information. That is, since it is an associated computer in the system of FIG. 2, it has a specified encryption key that is also stored at the entry web site **32A**. Thus, when the remote web site **34A** receives information, it can use the encryption key to decrypt the information that was encoded at the entry web site **32A**.

Subsequently, the demographic information may be used to supply a demographic-tailored reply to the end-user computer **30**. A demographic-tailored reply is a reply to a request from another computer that relies upon at least one piece of demographic information supplied by an encoded demographic hyperlink transfer request. The demographic-tailored reply relies upon this information by providing information that is consistent with the interests of an individual with the specified demographic information. The demographic information may also be used to obtain a profile of the type of computer operators that are accessing a particular computer.

In view of the foregoing general description of the invention, those skilled in the art will recognize a number of benefits associated with the disclosed technology. First, computers in a network are able to receive and process demographic information. This is achieved without requiting the computer operator to register at each site on the network. In addition, the demographic information is encoded when it is on public transmission channels. Thus, the information remains private. The encoding operation also promotes privacy to the extent that the information can only be processed by a computer that can decode the information. Thus, computers that are not registered at the entry web site **32A** cannot process demographic information.

The disclosed system avoids several of the pitfalls associated with the prior art system of FIG. 1. First, the disclosed system does not rely upon a unique identifier that can be used to trace the different locations that a computer operator visits. In addition, since demographic information is directly passed to a computer, a separate communication session need not be initiated with a demographic database to obtain the information.

The general nature and benefits of the invention have now been disclosed. Attention presently turns to a more detailed discussion of the system of the invention. FIG. 3 illustrates end-user computer **30**, entry web site **32A**, and remote web site **34A**. In particular, the figure shows the processing steps that are performed at each location. It should be appreciated that a system in accordance with the invention may have a large number of end-user computers **30**, entry web sites **32A** (say **32A–32N**), and remote web sites **34A** (say **34A–34N**).

An entry web site **32** refers to a site at which demographic information is received. Otherwise, an entry web site **32** can be considered to be interchangeable with the remote web sites **34**. That is, in a preferred embodiment, the entry web site **32** passes and receives encoded demographic information, just any other remote web site **34** in the system.

The first processing step shown in FIG. 3 is to make a connection (step **40**) with the entry web site **32A**. This is a standard connection step between an end-user computer **30** and a server computer **32**. The first operation performed on the entry web site **32A** is to authenticate the user with a name and password (step **42**). This step may include a registration process, as discussed above. However, in this example, it will be assumed that the computer operator has already visited the entry web site **32A** and therefore only an authentication operation is required.

The next operation performed by the computer **32A** is to generate a reply (step **44**). The reply is the file or other information requested from the computer **32A** by the end-user computer **30**. The reply is passed back to the end-user computer **30**, where it is viewed (step **46**). The reply, typically one or more pages displayed on a browser, includes one or more hyperlink hotspots. Activating a hyperlink hotspot causes a return of control to the entry web site machine **32A**.

At this point, the entry web site machine **32A** knows that there has been a request to access another computer. Thus, operations are performed so that when control is passed to the other computer, demographic information regarding the computer operator is available to the other computer. Specifically, a correlation operation is performed to match the computer operator with his or her corresponding demographic information (step **48**). This correlation operation is executed by relying upon the information obtained during the authentication operation (block **42**).

The next processing step is to encrypt the demographic information (step **50**). The demographic information is encrypted by relying upon a remote site encryption key that is stored with a remote site destination address in a remote site information repository. Thus, the remote site information repository includes an address for each computer in the system and an encryption key for each address.

After the demographic information is encrypted with the retrieved encryption key, a transparent hyperlink request is sent to the end-user computer **30**. The transparent hyperlink request includes the remote site destination address and the encoded demographic information. The end-user computer **30** automatically, without computer operator participation, processes the remote site destination address by calling the remote site computer specified by the remote site destination address, in this case, remote web site **34A**. This automatic passing of information from a first server (**32A**), to an end-user computer (**30**), and to a second server (**34A**) is sometimes referred to as a "redirect".

The remote web site **34A** decrypts the demographic information using the encryption key that it stores locally (step **54**). Thus, the same encryption key is stored at the remote web site **34A** and in the remote site information repository of entry web site **32A**. The decrypted demographic information can be used in any number of ways. For instance, it can be used to gather profile information on computer operators accessing the remote web site **34A**. FIG. 3 illustrates that the information is used to generate a demographic-tailored reply (step **56**). As shown in FIG. 3, this reply is passed back to the end-user computer **30**, where it is viewed by the computer operator (block **58**).

FIG. 4 illustrates the hardware elements that are used in practicing the invention. In the figure, it is seen that the end-user computer **30** includes a Central Processing Unit (CPU) **60** which is attached to a memory **62**. The memory **62** stores a set of executable programs, including a browser program **64**. As known in the art, the browser program **64** is used to access, communicate, and display information from other computers. The other computers are accessed through a network connection **66**, which is linked to a transmission channel **70**. The transmission channel **70** may be any wire or wireless communication network. The entry web site **32A** is connected to the transmission channel **70**. The entry web site **32A** includes a network connection **72**, which communicates with a CPU **74**. The CPU **74** is connected to a memory **76**, which stores a set of executable programs and data. The memory **76** stores a communication program **78** that is used to communicate with other computers connected to the transmission channel **70**. The memory **76** also stores demographic information **80** on the different computer operators that have registered at the computer **32A**. A demographic information encoding program **82** and a remote site information repository **84** are also stored in the memory **76**. As will be described below, the demographic information encoding program **82** accesses the remote site information repository **84** for remote site destination addresses and remote site encryption keys. The program then uses this information to encrypt the demographic information **80** stored on a particular computer operator.

The system of FIG. 4 also includes a remote web site computer **34A**. The remote web site computer **34A** includes a network connection **90**, a CPU **92**, and a memory **94**. The memory **94** stores a communication program **96** of the type previously described. In addition, the memory **94** stores a demographic information decoding program **98**. This program uses the same encryption key and an inverse encryption operation to decode the incoming encrypted information. The remote web site computer **34A** may also include a page customization program. As its name implies, this program uses the decoded demographic information to create a demographic-tailored reply to the incoming request for information.

Turning now to FIG. 5, depicted therein is a more detailed representation of the processing performed by the entry web site **32A** and remote web site **34A**. The first step associated with this processing is that a hyperlink transfer request is obtained from a computer operator (step **110**) at an end-user computer **30**. For example, assume that a computer operator, U, at end-user computer **30** has previously been authenticated at an entry web site **32A** called "cnet". Thereafter, the computer operator views, at the end-user computer **30**, a

page, provided by cnet, containing ads for computer peripherals. Each ad is associated with a different computer vendor running a separate server (remote web site). The computer operator then decides to obtain information from one of those servers, say the Internet Shopping Network (ISN), by clicking on the hyperlink hot spot for this location. This selection causes the following request: "http://www.cnet.com/cgi-bin/goto?isn" to be sent from the end-user computer **30** over the transmission channel **70** to the entry web site **32A** (the cnet computer).

The entry web site **32A** then uses the information received during the authentication operation to correlate demographic information with the computer operator (step **112**). That is, demographic information, referred to as D, is correlated with the computer operator U.

Subsequently, the remote site information repository **84** is accessed (step **114**) to identify the remote site destination address corresponding to the "isn" string. By way of example, this location is specified as "www.isn.com".

The repository **84** is also accessed (step **114**) for the remote site encryption key (referred to as "K") corresponding to the "isn" string. Standard techniques are used to encode the demographic information using the remote site encryption key (step **116**). This results in an encoded demographic signal segment, referred to as K(D). The encoded demographic signal segment is combined with the remote site destination address (step **118**) to form an encoded demographic hyperlink transfer request, for example, of the following form: "Location:http://www.isn.com/new-user?K(D)".

The end-user computer **30** receives the encoded demographic hyperlink transfer request. The first term in the request is the word "Location" so the end-user computer **30** knows that a new location has been specified. The request also indicates that the "http" protocol should be used to connect with the computer "www.isn.com". With this information, standard techniques are used to access the remote web site **34A**. At this site, processing is passed to the demographic information decoding program **98**. The program **98** identifies the "new-user?" designation as a command to process the encoded demographic information "K(D)". The question mark symbol "?" is used in the HTTP protocol to indicate that additional information is appended to a command. In this case, the information is the encoded demographic information "K(D)".

The demographic information decoding program **98** decrypts the demographic information (step **120**) by using the inverse of K to decrypt the information "D". This results in demographic information in a predetermined format. For example, the predetermined format may specify that the first bytes define a zip code, the next byte defines an age, etc. The demographic information can then be used to create a demographic-tailored reply (step **122**) using the page customization program **100**. The page customization program **100** may incorporate any set of instructions to process the demographic information, and in response thereto, select information for the tailored reply. The remote web site **34A** then passes the demographic-tailored reply to the computer operator (step **124**) at end-user computer **30**.

FIG. **6** illustrates the processing associated with an alternate embodiment of the invention. In particular, FIG. **6** illustrates that each reply sent to an end-user computer **30** may include a page with all the information necessary to compute a hyperlink transfer request at the end-user computer **30**. That is, the end-user computer **30** receives a page with a set of information embedded therein. The embedded information includes the remote site destination address for each hyperlink hot spot appearing in the page. In addition, the remote site destination address has a corresponding remote site encryption key to encrypt the demographic information which is also embedded into the page. Consequently, when a hyperlink hot spot is activated, an encoded demographic transfer request may be routed from the end-user computer **30**, without returning to the entry web site **32A**. The problem with this approach is that for each hyperlink hot spot in a page, the remote site destination address and remote site encryption key must be fetched. This requires more processing time. Moreover, since only one hyperlink hot spot can be activated on a page, information is gathered, but never used.

It will be clear to those skilled in the art that a variety of alternate configurations may be used in accordance with the disclosed technology. For instance, it is not important whether the remote site destination address is obtained before correlating the computer operator with the demographic information. In addition, the designation between an entry web site **32** and a remote web site **34** is somewhat arbitrary. An entry web site **32A** may include a demographic information decoding program **98** and a page customization program **100**. Similarly, it should be appreciated that a remote web site **34A** may have a remote site information repository **84** and a demographic information encoding program **82** so that it can reconvey demographic information that it has received.

The foregoing descriptions of specific embodiments of the present invention are presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise forms disclosed, obviously many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated. It is intended that the scope of the invention be defined by the following claims and their equivalents.

We claim:

1. A method of passing demographic information between computers, said method comprising the steps of:

accessing, in response to a hyperlink transfer request generated by a computer operator at an end-user computer, a remote site information repository to identify a remote site destination address;

associating said computer operator with demographic information characterizing said computer operator;

combining said demographic information with said remote site destination address to form a demographic hyperlink transfer request;

passing said demographic hyperlink transfer request to said end-user computer; and

redirecting said demographic hyperlink transfer request from said end-user computer to the remote computer specified by said remote site destination address.

2. The method of claim **1** wherein said accessing step includes the step of accessing said remote site information repository to identify a remote site encryption key.

3. The method of claim **2** further comprising the step of encrypting, after said associating step, said demographic information with said remote site encryption key to form an encrypted demographic signal.

4. The method of claim **3** wherein said combining step includes the step of combining said encrypted demographic signal with said remote site destination address to form said demographic hyperlink transfer request.

5. The method of claim **4** further comprising the step of decrypting, at said remote computer, said encrypted demographic signal with said remote site encryption key to obtain said demographic information.

6. The method of claim 5 further comprising the steps of:

creating a demographic-tailored reply to said hyperlink transfer request based upon said demographic information; and

passing said demographic-tailored reply to said computer user at said end-user computer.

7. A method of passing demographic information between computers, said method comprising the steps of:

connecting an end-user computer to an entry site computer with an authentication operation identifying the computer operator on said end-user computer;

generating, at said end-user computer, a hyperlink transfer request to a remote site computer;

accessing, at said entry site computer, in response to said hyperlink transfer request, a remote site information repository to identify a remote site destination address and a remote site encryption key;

associating, at said entry site computer, demographic information characterizing said computer operator;

encrypting said demographic information with said remote site encryption key to form an encrypted demographic signal segment;

combining said encrypted demographic signal segment with said remote site destination address to form an encrypted demographic hyperlink transfer request;

delivering said encrypted demographic hyperlink transfer request to said end-user computer; and

redirecting said encrypted demographic hyperlink transfer request to the remote computer specified by said remote site destination address.

8. The method of claim 7 further comprising the step of decrypting, at said remote site computer, said encrypted demographic signal segment with said remote site encryption key to obtain said demographic information.

9. The method of claim 8 further comprising the steps of:

creating a demographic-tailored reply to said hyperlink transfer request based upon said demographic information; and

passing said demographic-tailored reply to said end-user computer.

10. The method of claim 8 further comprising, prior to said connecting step, the step of registering said computer operator at said entry site computer, said registering step including the step of said computer operator providing said demographic information to said entry site computer.

11. A method of passing demographic information between computers, said method comprising the steps of:

associating a computer operator from an end-user computer with demographic information;

preparing a data file with a selectable computer transfer instruction embedded therein;

combining said demographic information with a remote site destination address for said selectable computer transfer instruction to form a hyperlink transfer request associated with said selectable computer transfer instruction; and

passing said data file to said end-user computer to allow said end-user computer to select said selectable computer transfer instruction on said data file such that said hyperlink transfer request is passed to the remote computer specified by said remote site destination address.

12. The method of claim 11 wherein said combining step includes the step of encrypting said demographic information.

13. The method of claim 12 further comprising the step of decrypting said demographic information at said remote computer.

14. A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:

storing in said computer a list of remote site destination addresses;

receiving in said computer demographic information corresponding to a computer operator;

matching, in response to a hyperlink transfer request generated by said computer operator, a transfer address with an address in said list of remote site destination addresses to form a remote site destination address;

combining said demographic information with said remote site destination address to form a demographic hyperlink transfer request; and

passing said demographic hyperlink transfer request to said computer operator at an end-user computer, such that said end-user computer accesses the remote computer specified by said remote site destination address.

15. The method of claim 14 further comprising the step of storing in said computer a list of remote site encryption keys corresponding to said remote site destination addresses.

16. The method of claim 15 further comprising the step of encrypting, after said matching step, said demographic information with a selected remote site encryption key to form an encrypted demographic signal.

17. The method of claim 16 further comprising the step of combining said encrypted demographic signal segment with said remote site destination address to form said demographic hyperlink transfer request.

18. A computer readable memory to direct a computer to function in a specified manner, comprising:

a list of remote site destination addresses stored in said memory;

demographic information on a computer operator stored in said memory; and

executable instructions stored in said memory, said executable instructions including:

(1) instructions to match a transfer address from a hyperlink transfer address with a selected remote site destination address in said list of remote site destination addresses;

(2) instructions to combine said demographic information with said selected remote site destination address to form a demographic hyperlink transfer request; and

(3) instructions to pass said demographic hyperlink transfer request to said computer operator at an end-user computer, so that said end-user computer can access the remote computer specified by said remote site destination address.

19. The computer readable memory of claim 18 further including a list, stored in said memory, of remote site encryption keys corresponding to said remote site destination addresses.

20. The computer readable memory of claim 19 further including instructions to encrypt, after step (1), said demographic information with a selected remote site encryption key to form an encrypted demographic signal.

21. The computer readable memory of claim 20 further including instructions to combine said encrypted demographic signal segment with said remote site destination address to form said demographic hyperlink transfer request.

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