

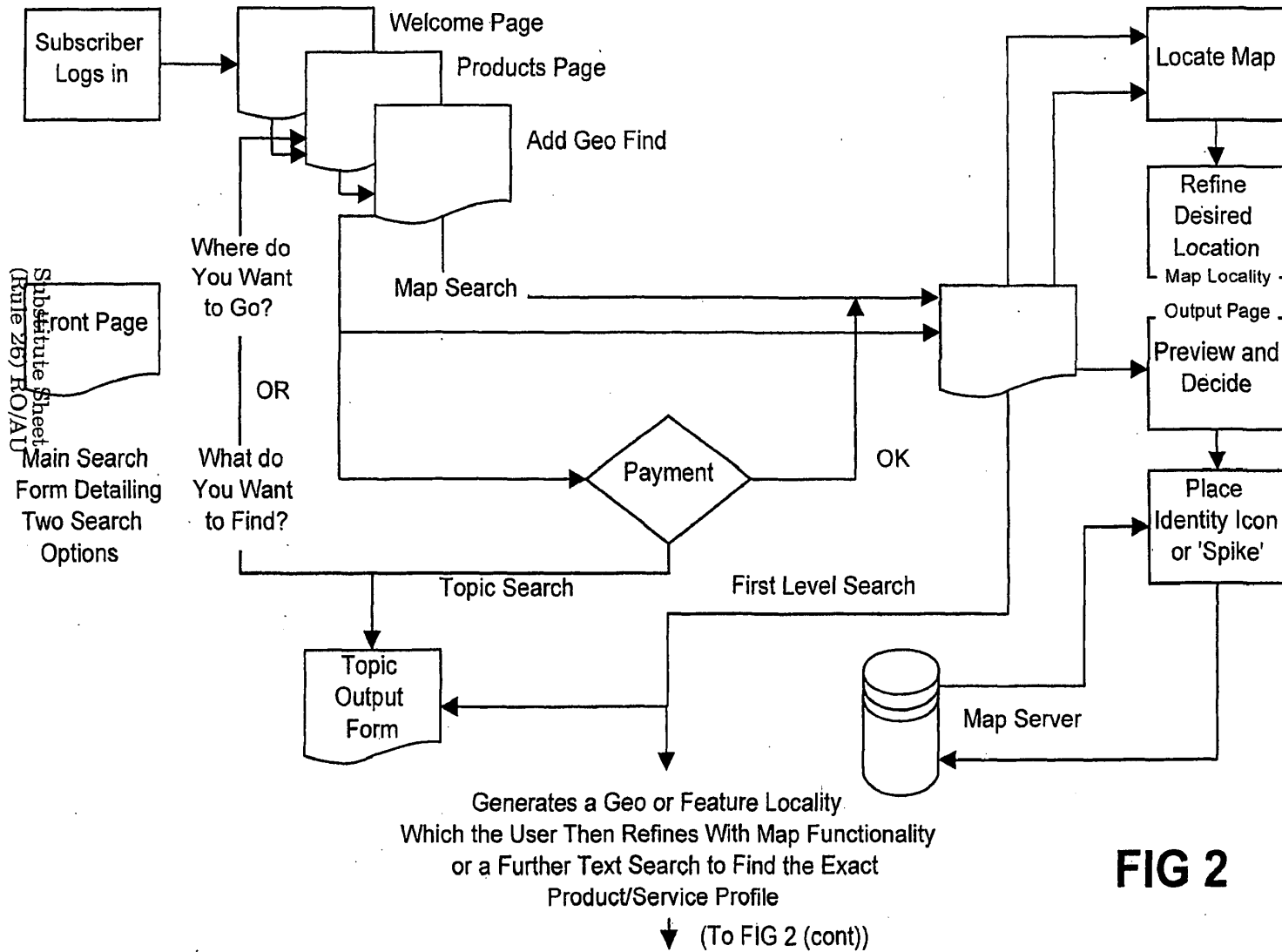
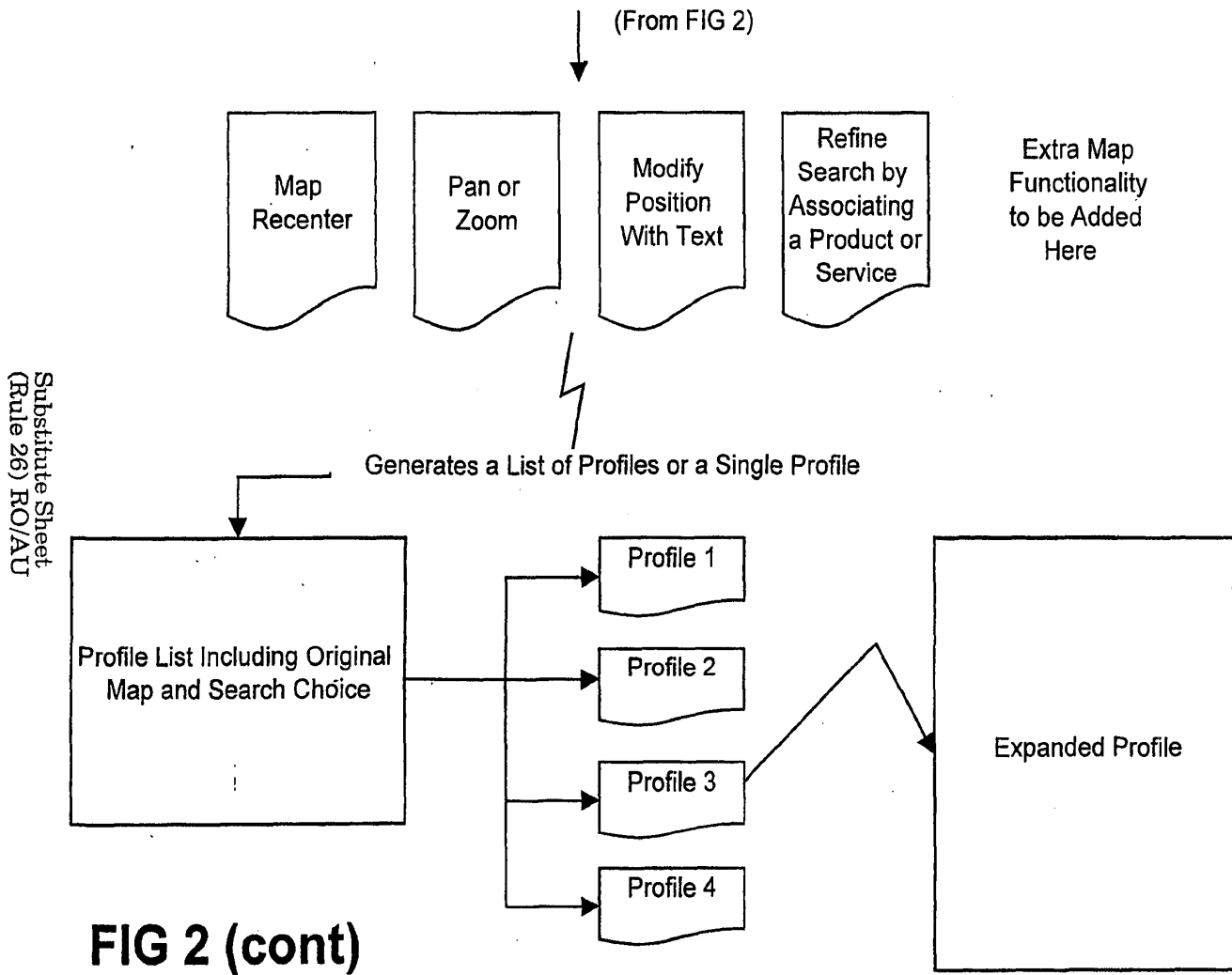


FIG 2



INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU01/00221

A. CLASSIFICATION OF SUBJECT MATTER												
Int. Cl. ⁷ : G06F 17/60, 17/30												
According to International Patent Classification (IPC) or to both national classification and IPC												
B. FIELDS SEARCHED												
Minimum documentation searched (classification system followed by classification symbols)												
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched												
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPAT, DELPHION - KEYWORDS: INTERNET, DATABASE, GEOCODE, LATITUDE, LONGITUDE, GEOGRAPH+ ... AND THE LIKE												
C. DOCUMENTS CONSIDERED TO BE RELEVANT												
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
X	US 5991739 A (CUPPS et al) 23 November 1999 See whole document	1-16										
X	US 5930474 A (DUNWORTH et al) 27 July 1999 See whole document	1,5,10,14,16										
☐ Further documents are listed in the continuation of Box C ☒ See patent family annex												
* Special categories of cited documents: <table border="0"><tr><td>"A" document defining the general state of the art which is not considered to be of particular relevance</td><td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td></tr><tr><td>"E" earlier application or patent but published on or after the international filing date</td><td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td></tr><tr><td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td><td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td></tr><tr><td>"O" document referring to an oral disclosure, use, exhibition or other means</td><td>"&" document member of the same patent family</td></tr><tr><td>"P" document published prior to the international filing date but later than the priority date claimed</td><td></td></tr></table>			"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed	
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Date of the actual completion of the international search 6 April 2001		Date of mailing of the international search report 18 April 2001										
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer Stephen Lee Telephone No : (02) 6283 2205										

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU01/00221

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member
US	5991739	NONE
US	5930474	NONE
		END OF ANNEX

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Application Number:		11452431		
Filing Date:		14-Jun-2006		
Title of Invention:		System and method related to generating an email campaign		
First Named Inventor/Applicant Name:		Michael G. Foulger		
Filer:		Timothy Aloysius Doyle/Natalie Kizou		
Attorney Docket Number:		2018.0040002		
Filed as Large Entity				
Utility Filing Fees				
Description		Fee Code	Quantity	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				180

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EFS ID:	2383817
Application Number:	11452431
International Application Number:	
Confirmation Number:	2713
Title of Invention:	System and method related to generating an email campaign
First Named Inventor/Applicant Name:	Michael G. Foulger
Customer Number:	26111
Filer:	Timothy Aloysius Doyle/Natalie Kizou
Filer Authorized By:	Timothy Aloysius Doyle
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Information:					
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Warnings:					
Information:					
3	Foreign Reference	WO9820434.pdf	2767563	no	57
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Warnings:					
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			bb443de95c5d15fd5836f234cf79b00d0cf2c147		
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	Information Disclosure Statement Letter		1	2	
	Information Disclosure Statement (IDS) Filed		3	15	
Warnings:					
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22	NPL Documents	ISReport12510.PDF	72600 02aa2528e80de5956fde8541c89a0859b100855a	no	2
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23		PVMMentalRaysoftimage.PDF	886265 a3fdc2d9796437f72dcd4601ebcd66b8c24ba296	yes	16
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	NPL Documents		11	14	
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24	NPL Documents	FoulgerAPPno09551746.pdf	2607062 31dbcfbbc0821e81d0776ba450379ae8 84813210	no	71
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25	Foreign Reference	EP989501A2.pdf	952232 bfeb75ffe29e7ec2862c1f5ac51c3ae6c8 248808	no	18
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26	Foreign Reference	JP08221479A.pdf	298813 1b123cfae153fde2399002ad1ed05514f e59f79e	no	6
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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/GB96/01996 (22) International Filing Date: 15 August 1996 (15.08.96) (30) Priority Data: 9516762.3 16 August 1995 (16.08.95) GB (71)(72) Applicant and Inventor: PHELAN, Sean [GB/GB]; 24 Merton Rise, London NW3 3EN (GB). (74) Agent: FLINT, Adam; W.H. Beck, Greener & Co., 7 Stone Buildings, Lincoln's Inn, London WC2A 3SZ (GB).		(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(54) Title: COMPUTER SYSTEM FOR IDENTIFYING LOCAL RESOURCES			
(57) Abstract			
A map of the area of a client computer (10) is requested from a map server (11). Information relating to a place of interest is requested from an information server (12) by the client computer (10). The information is superimposed or overlaid on a map image at a position on the map image corresponding to the location of the place of interest on the map. The information (or "overlay") server (12) may contain details of, for example, hotels, restaurants, shops or the like, associated with the geographical coordinates of each location. The map server (11) contains map data, including coordinate data representing the spatial coordinates of at least one point on the area represented by the map.			

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COMPUTER SYSTEM FOR IDENTIFYING LOCAL RESOURCES

This invention relates to computer systems, and to methods of operating computer systems. The invention has particular relevance to the so called "World Wide Web", which is part of the global computer network system known as the Internet.

The Internet and the World Wide Web ("WWW" or "The Web") have been described in great detail in a large number of publications in recent months. The Web consists essentially of an enormous number (at the last count, many millions, and expanding rapidly) of "host" or "server" computers which contain information of various types which users may wish to access. Users of the system employ a "client" computer, running "client" software, in order to access the information. Such client programs are usually known as "browsers".

Various standard protocols enable requests to be formulated by the many client computers, and passed via the Internet to whichever computer holds the relevant information, which then returns the information to the client, using the same protocols.

The protocol which is used on the World Wide Web is an agreed standard, known as the HyperText Transfer Protocol (HTTP).

The language in which "Web" pages are generated is known as "HyperText Markup Language" (HTML).

The success of HTML/HTTP is based to a large extent on the ability of HTTP to produce so called "hypertext links" in the form of some sort of displayable icon on the computer screen of the client. The icon may be a graphical icon, or, more commonly, simply text represented in a form which is visually distinct from the surrounding text. Activating the icon with a pointing device (for example, clicking on it with a mouse pointer) causes the browser software to formulate a request for further information to

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be sent to the "client". This further information may be simply a "page" of text data, or it may be graphical data, or sound or video data. It may reside on the same server computer as the page containing the hypertext link, but
5 need not do so, and will often reside on a computer many thousands of miles away.

The World Wide Web has recently attracted increasing attention as an advertising medium for various goods and services. The advantage of the Web as an advertising
10 medium is that a single connection allows access by millions of potential customers around the world, without any need for the customers to know or be interested in the physical location of the server computer which is providing the information. Links to the pages of interest may be
15 provided by hundreds or thousands of other pages, provided on other servers, throughout the world.

For many goods and services, the lack of a physical "place" on the Internet is an advantage. A consumer, no matter where his location, is presented with a familiar
20 interface, which makes access very straightforward. The very size of the World Wide Web however, means that, as presently constituted, it is not well suited to answering questions about places and proximity. For example, it is not possible, using existing Web search tools to answer
25 questions such as "where is the nearest hamburger restaurant?" in spite of the enormous benefit which would accrue to major restaurant chains and the like in providing their own answers to such questions, with the speed and ease for which the Internet is famous.

30 The present invention seeks to address the problem of facilitating access by Internet users, and in particular by users of the World Wide Web, to Internet resources, where the primary differentiator between different places of interest is geographical.

35 According to a first aspect of the present invention, there is provided a method of operating a computer system,

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the method comprising the steps of:

storing on a map server computer map data
representative of a map of a geographical area;

5 storing on the map server computer coordinate data
indicative of the spatial coordinates of at least one point
associated with the geographical area represented by the
map, so as to enable correlation of points on the map with
their corresponding geographical location;

10 storing on an information server computer information
data relating to at least one place of interest within the
geographical area, said information data including data
representative of the spatial coordinates of the place of
interest within the area;

15 transmitting a map request to the map server computer
from a client computer, and transmitting from the map
server computer to the client computer in response to the
map request the map data and the coordinate data associated
with the area represented by the map;

20 utilising the map data to display an image of the map
on a visual display unit associated with the client
computer;

transmitting an information request to the information
server computer from the client computer, and transmitting
from the information server computer to the client computer
25 in response to the information request the information data
relating to at least one place of interest within the
geographical area; and,

displaying the information data relating to at least
one place of interest on the visual display unit.

30 The map request may be transmitted before the
information request, the information request being
formulated by including coordinate data provided by the map
server.

35 The information request may be transmitted before the
map request, the map request being formulated by including
coordinate data provided by the information server.

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According to a second aspect of the present invention, there is provided a computer system, the computer system comprising:

5 a map server computer for storing map data representative of a map of a geographical area and coordinate data representative of the spatial coordinates of at least one point lying within the area represented by the map;

10 an information server computer for storing information data representative of at least one place of interest within the geographical area, said data including data representative of the spatial coordinates of the place of interest within the area; and,

15 a client computer, the client computer having a visual display unit;

wherein the client computer includes

means for transmitting a map request to the map server computer to request transfer to the client computer of the map data and the coordinate data associated with the area represented by the map,

20 means for displaying an image of the map on the visual display unit, and

means for transmitting an information request to the information server computer to identify places of interest known to it and lying within the geographical area,

25 wherein the information server computer includes means for transmitting to the client computer in response to the information request the data representative of at least one place of interest within the geographical area, and

30 wherein the client computer includes means for displaying said data associated with the place of interest on the visual display unit.

The order in which the map server and information server are mentioned above is not meant to imply any particular restriction as to the order in which the servers

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are accessed by the client. As with any Web search, either server could be accessed first. A link provided initially by the information server may link directly to a map server in accordance with the invention, for example.

5 In a preferred embodiment, a client device which has the capabilities of both a cellular telephone and a Web browser may pass the names and/or geographical coordinates of its surrounding cellular base stations to the map and/or overlay server computers. Such location information may be
10 utilised by the map server computer to deliver a map of the current location of the client device, and/or by the overlay server computer to identify facilities near to the current location of the client device.

The information relating to the place of interest may
15 be superimposed or overlaid on the map image at a position on the image corresponding to the location of the place of interest on the map. Thus, for example, the information (or "overlay") server may contain details of, for example, hotels, restaurants, shops or the like, associated with the
20 geographical coordinates of each location. The map server contains map data, including coordinate data representing the spatial coordinates of at least one point on the area represented by the map. Further data is also required, so as to enable correlation of points on the map with their
25 corresponding geographical location. Such further data may be, for example, the coordinates of an additional point on the map. Preferably, the map's scale and overall dimensions are included. Alternatively, coordinates of two opposite corners of the map are included. As a further
30 alternative, the said further data may include a simple scale factor and a direction factor.

In a further preferred embodiment, the map server may be provided with a list of categories of places of interest, together with details of the respective
35 information servers on which further information about each category is located. Each of these categories may be

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associated with a respective icon on the VDU of the client. In an alternative embodiment, such a list of categories may be provided on a further server.

5 In an embodiment, initially, the client computer may display the map as a simple outline, with no superimposed icons. When one of the "category" icons is activated (for example, by clicking with a mouse or other pointing device), the client computer formulates a request to the appropriate information server for the information server
10 to supply a list of locations known to it which lie within the rectangle defined by the said coordinates. The information supplied by the information server may include textual, graphical, sound, video or other information, and may include additional hypertext links to other locations
15 or facilities on the Web, which themselves may include textual, graphical, sound, video or other information.

It is a particular advantage of the system that the various information servers do not need to have knowledge of the map server software provided on the map server, and vice versa. All that is required in order for the relevant
20 data to be supplied to the client computer is a consistent protocol for providing the coordinates of the various places of interest.

Two or more information servers can provide "places of
25 interest" data independently, without either having any knowledge of the other. For example, one server may provide locations of hotels, a second may provide locations of restaurants, and a third may provide locations of print shops or the like. All of the data (for example, hypertext
30 links, icons etc.) can be overlaid on a single map on the screen of the client computer with hypertext links provided to the various source data on the different overlay or information server computers.

In a particularly preferred embodiment, the client
35 computer may include locating means for establishing the current geographical location of the client computer. This

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may be by means of a satellite system such as the Global Positioning System. The client computer preferably includes means for passing the said location information to the information server computer. Such location information
5 may be utilised by the information server computer to identify facilities within a given radius of the current geographical location of the client computer. This facility makes the method of the invention of particular usefulness to portable computer systems.

10 The client computer may include means for scrolling or zooming the map image, to display an image of a different geographical area, and means for varying the displayed data relating to the places of interest, so as to take account of the change in the display geographical area. This may
15 take the form simply of changing the position of the icon or hypertext data relating to particular points of interest, so as to take account of the change in the display geographical area. Preferably, however, the client computer may include means for formulating a further
20 request to an information server, to identify places of interest lying within the new geographical area.

An embodiment of the present invention will now be described by way of example with reference to the accompanying drawings, in which:

25 Figure 1 is a graphical representation of a client screen, showing a simple map with "category" icons;

Figure 2 shows the same map after retrieval of information relating to various places of interest (in this case, hotels and restaurants); and,

30 Figure 3 is a schematic representation of information flow between the map and overlay servers and the client computer.

Referring to Figure 1, the screen 1 of a client computer 10 is shown, as generated by an HTML document.
35 The screen 1 contains three windows or frames: a "map" frame 2, a "navigation" frame 3 containing buttons 4 for

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zooming and panning the map, and an "info" frame 5 which controls the display of overlay information on the map.

The overall information flow is indicated graphically in Figure 3. A map request to a map server computer 11 from the client computer 10 specifies the geographical coordinates of the map, which may be the bottom left corner of the map and the top right corner of the map or centre point and scale, for example. The coordinates may be supplied to the map server 11 as the latitude and longitude in degrees of the centre point of the map and its scale, for example.

The map is supplied by the map server 11 in a map response in any of the various conventional graphics formats, for example in "GIF" or "JPEG" format. In a preferred embodiment, the map server 11 will also return the coordinates covered by the map, but this is not essential as they may be inferred from the map request.

Also supplied by the map server 11 are the icons 6,7,8,9, which are displayed within the "info" frame 5. Icon 6 indicates banks, icon 7 restaurants, icon 8 hotels, etc. Information relating to each category of facilities (banks, restaurants, hotels, etc.) is held on an information server computer 12. The information server computers 12 for the different information categories may be the same or different.

Clicking with the mouse on a respective icon 6-9 causes the client computer 10 to formulate an information request, which may be in the form of a standard Web URL (Uniform Resource Locator) including additional protocol elements relating to the location which the user wishes to search.

An important feature of the present invention is the addition of a universally recognised standard for geographic reference (i.e. longitude and latitude) to the protocols and standards of the Internet and the World Wide Web, and its use to combine data from mutually independent

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sources.

Information requests produced by the client computer 10 may be of various forms, provided that a protocol is provided for the exchange of the geographical coordinate data.

Figure 3 shows the two key transaction types used by the client 10. One transaction type consists of the information request, which goes to a provider of information to be overlaid on a map, such as an information server computer 12, followed by a response from that provider 12. The other transaction type is a map request, which goes to a map server computer 11, followed by a map response back to the client 10.

Both request types take the form of Uniform Resource Locators (URLs) which are transmitted in the same way as any other WWW request. Unlike other URLs, the map and information requests contain longitude and latitude information which specify the request's geographical coverage.

In a preferred embodiment, the responses also contain longitude and latitude information, but this is not essential as they may be inferred from the requests.

In a simple embodiment, the information response from the overlay or information server 12 consists of an HTML document. This document contains HTML tags specifying one or more overlay icons and their screen positions. It also specifies the map to be displayed underneath the icons.

In a more advanced embodiment, suitable for client browsers capable of running Java or some other local processing capability, the response from the information server 12 specifies one or more overlay icons and associates a longitude and latitude with each. Longitude and latitude are resolved to screen position by a Java Applet or other locally executed program.

The most important difference between the simple embodiment and the advanced embodiment mentioned above is

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the point at which the longitude and latitude of overlay icons are resolved to positions on the screen 1 of the client 10. Advanced embodiments place this function within the client browser, where a Java Applet or some other local processing carries out the transformation. In simple
5 embodiments, the transformation is carried out in the information server. Simpler embodiments are therefore less powerful and have less platform-independence, but can be implemented on simple client browsers.

10 The "map request" shown in Figure 3 may take the following form:

```
http://www.multimap.com?lon="-0.1666"
    &lat="51.545"&scale="25000"&xp="500"&yp="300"
```

15

This map request contains parameters specifying the longitude, latitude and scale of the map, and also its dimensions in horizontal and vertical pixels (xp and yp).

An "information request" may be of the form:

20

```
http://mcdonalds.com/locations.cgi?lat="51.5449"
    &lon="-0.16658"&radius="1.6"
```

25 This is a search request to a server called mcdonalds.com requesting all locations within a one mile radius of a location in Hampstead, London.

The map requests and information requests may contain any number of elements from an expandable list of parameters, including the following examples:

30

lat=51.5449	Latitude in degrees, as a single real number
lon=-0.16658	Longitude in degrees, as a single real number
radius=1.6	Radius in kilometres
35 max=10	Maximum number of locations in search result
xp=500	Horizontal size of the map in pixels

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```
lon=-0.16658      Longitude in degrees, as a single real
                   number
radius=1.6         Radius in kilometres
max=10             Maximum number of locations in search result
5 xp=500           Horizontal size of the map in pixels
yp=300             Vertical size of the map in pixels
scale=25000        Map scale
vr=0               Virtual Reality level - 0 for "reality",
                   other values specify other "virtual worlds"
10                for testing, simulation or whatever
```

There are a number of other possible terms that may be included.

In simpler embodiments, the map response is an image file encoded in either GIF or JPEG format, for example. It is sent in the same format as other image files on the Web. In more advanced embodiments, the map response may be take the form of either a raster image or vector data, and may be rendered at the client by a Java Applet or other local processing.

The information response can take one of a number of different forms, depending on the capabilities of the client browser.

In a preferred implementation, the information
25 response takes the form of an HTML document which contains
references to one or more overlay icons, each with an
associated longitude and latitude, together with a call to
a Java Applet or some other form of local processing.

In a simpler implementation, the HTML document may contain the screen positions of the icons as pixel offsets rather than longitude and latitude. In this case the positioning of overlay icons on maps is achieved through the positioning capabilities of other HTML functions such as background images, frames, horizontal and vertical image offsets and others.

An example of such an information response is:

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```
<HTML> <BODY background="http://multimap.com?
lon=-0.1666&lat=51.545&scale=25000&xp=500&yp=300">
<imgsrc="icon.gif" hspace=240 vspace=140> </BODY></HTML>.
```

In this example, a map is requested from the map server
5 "multimap.com" and is displayed as a background image, and
the icon in the file "icon.gif" is overlaid at the centre
of the map. Preferably, in order to work correctly, this
"map as background" technique should be implemented within
a fixed-size frame.

10 When the user clicks on one of the subject buttons
6-9, the client 10 establishes a connection to the
information server whose URL is embedded in the button 6-9.
The client 10 sends an information request, as described
above.

15 The information server 12 generates a list of the
entries in its database having a longitude and latitude
within the bounds specified, and uses them to create an
information response, as described above. Each entry is
associated with a displayable name and/or icon and
20 optionally a longitude and latitude. The icons or text may
be highlighted to show further information such as levels
of availability, etc.

The client software normally overlays the displayable
names and/or icons on its map.

25 The user has the option of opening one or more icons
from the screen, normally by clicking on the displayable
name. This passes the URL to the Web browser which opens
it in the usual manner.

In Figure 2, the current location has been sent to
30 three servers: one run by a high street bank, which
returns the location of cashpoint machines, one by an
independent hotel reservation system and one by a well-
known fast food chain.

The result of the responses by the overlay servers 12
35 are shown in Figure 2, in which the same map is displayed
with icons 13 representing the various facilities reported

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by the second server 12, and hypertext links 14 to text pages or other Web facilities, in the usual way.

It should be noted that the client computer 10 may be used to transmit the information request with geographical data first. The overlay or information server 12 responds with information data, including coordinate data, relating to the requested services for example. This data, as well as being used to generate the display on the client computer 10, can be used to formulate the map request including coordinate data for transmission by the client computer 10 to the map server 11. The map server 11 then responds with the map data, which is then transmitted to the client computer 10. The map can then be displayed on the client computer visual display unit and overlaid with graphics representing the information data. In other words, either the map request or the information request can be formulated first for transmission to the appropriate server 11,12.

The architecture of the preferred system is such that it can support a movable map window. A user can scroll North, South, East or West on the screen and see more detail appear, and can zoom in and out for more detail or for a wider perspective using the zoom and move buttons 4. This also enables a moving display, such as a hand-held device or a rolling map installed in a car, to be dynamically updated with new locations as the displayable window moves over them.

Although the client computer 10 may be a stationary PC connected to the Internet, the architecture is designed to support mobile clients such as car navigation systems and personal digital assistants (PDAs). The client software preferably supports direct connection to Global Positioning System (GPS) receivers, and preferably implements the NMEA 0183 standard for exchange of navigational data. If the client is also a cellular telephone, it preferably supports the transfer of information derived from the cellular

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network. In a preferred embodiment, the client transfers its own position to the information server and map server within the HTTP protocol by adding an HTTP header line to its request messages. In the case that the client is

5 connected to a GPS receiver and therefore knows its exact location, it can add an HTTP header line as follows:
remote_position: lon="-0.1666"; lat="51.545". In the case that the client does not have its exact position, but does have access to the name of its nearest cellular base

10 station, it can add an HTTP header line as follows:
remote_cellname: LONDON-SW-5. A map server or information server which maintains data on the locations of cellular base stations can convert the cell name to a location and deliver the appropriate map and/or overlay information. In

15 the case that the client is not able to add HTTP header lines as described above, location and/or cell names may be transmitted within other HTTP headers or within the HTML protocol, but such embodiments are not considered preferable. It is important to note that the client will

20 often request information on a location other than its own current location, and that the location of interest is transferred within the Map Request/Information Request URLs, while the client's own location is transferred in the HTTP header. This combination allows the server computers

25 to implement a wide range of additional functions, such as displaying the distance from the current location to the location of interest. In the case that the client's location is known to be changing, such as a cellular phone connected to a GPS receiver, the screen display may be

30 refreshed on a regular basis to show the client's current location. This refresh may be achieved by using the "refresh" function within the HTTP/HTML protocols, or it may be achieved using the local programmability of the client.

35 It is particularly preferred that the additional functionality provided within the World Wide Web, and its

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architecture, is built within the extensible framework of HyperText Markup Language (HTML) and the HyperText Transfer Protocol (HTTP). The extensions to HTML/HTTP are thus preferably entirely compatible with existing Web standards and do not seek to modify or replace any part of the Web architecture.

In a preferred embodiment, the functionality described above is added to the client computer 10 by providing additional software for a known Web browser (for example, Netscape, Mosaic, etc.). This software may be implemented as separate programs (i.e. a "helper application"), or as plug-in programs that execute within a browser program, or as Java Applets which are downloaded and executed as required.

Alternatively, a subset of the full functionality may be implemented using the browser's standard display and positioning capabilities only. An implementation of the latter case requires greater functionality in the information server, and is a preferred implementation in circumstances where it is difficult or impossible to add functionality to the client browser.

The server computers 11,12 may employ well-known standard database tools in conjunction with known Web server packages, in order to recognise the requests and generate the responses described above.

Another important feature of the present invention is that maps and overlay information can be "persistent". That is, pointers to maps or places can be stored in databases on the client computer 10 and become a permanent feature of displays. A typical use of this feature would be to store the user's home location and display it on any map covering that location.

In a preferred embodiment, persistent locations are stored using the extensions to HTTP known as "magic cookies". The magic cookie parameters used are based upon the request parameters listed above, i.e.:

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Set-Cookie: Home="lon=-0.1666&lat=51.545";

Software may be provided for the conversion of postal codes (zip codes) into longitude and latitude information. Software may be provided for the conversion of full or partial addresses into longitude and latitude information. This software is normally provided on the map server 11; in this case, the user enters an address or postcode in a form and sends this to the map server. The map server responds with an HTML document containing longitude and latitude, and the user receives a map of the locality of the address or postcode. Alternatively, such software can be provided on the client computer 10.

The system and method of the present invention avoids the classic problems of Geographic Information Systems (GISs) by imposing a single, standardised geographic reference model, and restricting data exchanges to those classes of geographic information which can conform to the reference model.

Because of this, servers providing information do not have to deal with maps, map ownership issues or mapping software, and information from several different sources can be integrated on a single screen.

It is of course envisaged that the invention may be implemented in ways which are different from the ways specifically exemplified above. For example, the coordinate data embodied in the map and facility information may be presented in ways other than in absolute latitude and longitude format.

Embodiments of the present invention have been described with particular reference to the examples illustrated. However, it will be appreciated that variations and modifications may be made to the examples described within the scope of the present invention.

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CLAIMS

1. A method of operating a computer system, the method comprising the steps of:
 - 5 storing on a map server computer (11) map data representative of a map of a geographical area;
storing on the map server computer (11) coordinate data indicative of the spatial coordinates of at least one point associated with the geographical area represented by
10 the map, so as to enable correlation of points on the map with their corresponding geographical location;
storing on an information server computer (12) information data relating to at least one place of interest within the geographical area, said information data
15 including data representative of the spatial coordinates of the place of interest within the area;
transmitting a map request to the map server computer (11) from a client computer (10), and transmitting from the map server computer (11) to the client computer (10) in
20 response to the map request the map data and the coordinate data associated with the area represented by the map;
utilising the map data to display an image of the map on a visual display unit (1) associated with the client computer (10);
 - 25 transmitting an information request to the information server computer (12) from the client computer (10), and transmitting from the information server computer (12) to the client computer (10) in response to the information request the information data relating to at least one place
30 of interest within the geographical area; and,
displaying the information data relating to at least one place of interest on the visual display unit (1).
2. A method according to claim 1, wherein the map request
35 is transmitted before the information request, the

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information request being formulated by including coordinate data provided by the map server (11).

3. A method according to claim 1, wherein the information request is transmitted before the map request, the map request being formulated by including coordinate data provided by the information server (12).

4. A method according to any of claims 1 to 3, including the step of superimposing information relating to the place of interest on the image on the visual display unit, at a position on the image corresponding to the location of the place of interest on the map.

5. A method according to claim 4, wherein the information superimposed on the image is a hypertext link.

6. A method according to claim 4 or claim 5, wherein the client computer (10) includes means for scrolling the map image to display an image of a different geographical area, and means for varying the displayed data relating to the at least one place of interest on the visual display unit (1) so as to take account of the change in the displayed geographical area.

7. A method according to claim 6, wherein the varying of the displayed data includes the step of shifting the position of the superimposed information in response to scrolling of the map image.

8. A method according to claim 7, wherein the client computer (10) includes means for formulating a further request to the information server (12) to identify places of interest lying within the different geographical area.

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9. A method according to any of the preceding claims, wherein the client computer (10) includes means for zooming the map image in or out to display an image of, respectively, a smaller or larger geographical area, and means for varying the displayed data relating to the at least one place of interest on the visual display unit so as to take account of the smaller or larger geographical area.
10. A method according to claim 9, wherein the client computer (10) includes means for formulating a further request to the information server (12), to identify places of interest lying within the smaller or larger geographical area.
11. A method according to any of the preceding claims, including the steps of:
- storing on the map server computer (11) a list of categories of places of interest;
 - retrieving the list with the map data; and,
 - displaying on the visual display unit (1) a respective icon (6,7,8,9) for each said category.
12. A method according to any of the preceding claims, wherein the request is effected by activation of a respective icon on the visual display unit (1).
13. A method according to any of the preceding claims, wherein the client computer (10) includes locating means for establishing the current geographical location of the client computer (10), and including the step of passing the current geographical location of the client computer (10) to at least one of the map server computer (11) and the information server computer (12).

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14. A method according to claim 13, wherein the locating means uses the Global Positioning System.
15. A method according to claim 13, wherein the locating means includes a cellular telephone.
16. A method according to any of claims 13 to 15, wherein the client computer (10) includes means for superimposing on the image an icon indicative of the current geographical location.
17. A computer system, the computer system comprising:
a map server computer (11) for storing map data representative of a map of a geographical area and
coordinate data representative of the spatial coordinates of at least one point lying within the area represented by the map;
an information server computer (12) for storing information data representative of at least one place of interest within the geographical area, said data including data representative of the spatial coordinates of the place of interest within the area; and,
a client computer (10), the client computer (10) having a visual display unit (1);
wherein the client computer (10) includes
means for transmitting a map request to the map server computer (11) to request transfer to the client computer (10) of the map data and the coordinate data associated with the area represented by the map,
means for displaying an image of the map on the visual display unit (1), and
means for transmitting an information request to the information server computer (12) to identify places of interest known to it and lying within the geographical area,

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wherein the information server computer (12) includes means for transmitting to the client computer (10) in response to the information request the data representative of at least one place of interest within the geographical area, and

wherein the client computer (10) includes means for displaying said data associated with the place of interest on the visual display unit (1).

- 10 18. A computer system according to claim 17, wherein the client computer (10) includes means for formulating the information request by including coordinate data provided by the map server (11).
- 15 19. A computer system according to claim 17, wherein the client computer (10) includes means for formulating the map request by including coordinate data provided by the information server (12).
- 20 20. A computer system according to any of claims 17 to 19, wherein the client computer (10) includes means for superimposing information relating to the place of interest on the image on the visual display unit (1), at a position on the image corresponding to the location of the place of interest on the map.
- 25 21. A computer system according to claim 20, wherein the information superimposed on the image is a hypertext link.
- 30 22. A computer system according to claim 20 or claim 21, wherein the client computer (10) includes means for scrolling the map image to display an image of a different geographical area, and means for varying the displayed data relating to the at least one place of interest on the visual display unit so as to take account of the change in
- 35 the displayed geographical area.

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23. A computer system according to claim 22, wherein the client computer (10) includes means for varying the information from the information server computer (12) which is displayed, in response to scrolling of the map image.

5

24. A computer system according to claim 23, wherein the client computer (10) includes means for formulating a further request to the information server computer (12), to identify places of interest lying within the different geographical area.

10

25. A computer system according to any of claims 17 to 24, wherein the client computer (10) includes means for zooming the map image in or out to display an image of, respectively, a smaller or larger geographical area, and means for varying the displayed data relating to the at least one place of interest on the visual display unit so as to take account of the smaller or larger geographical area.

15

20

26. A computer system according to claim 25, wherein the client computer (10) includes means for formulating a further request to the information server computer (12), to identify places of interest lying within the smaller or larger geographical area.

25

27. A computer system according to any of claims 17 to 26, wherein the client computer (10) includes locating means for establishing the current geographical location of the client computer (10) and means for passing the current geographical location of the client computer (10) to at least one of the map server computer (11) and the information server computer (12).

30

28. A computer system, substantially as described with reference to the accompanying drawings.

35

29. A method of operating a computer system, substantially as described with reference to the accompanying drawings.

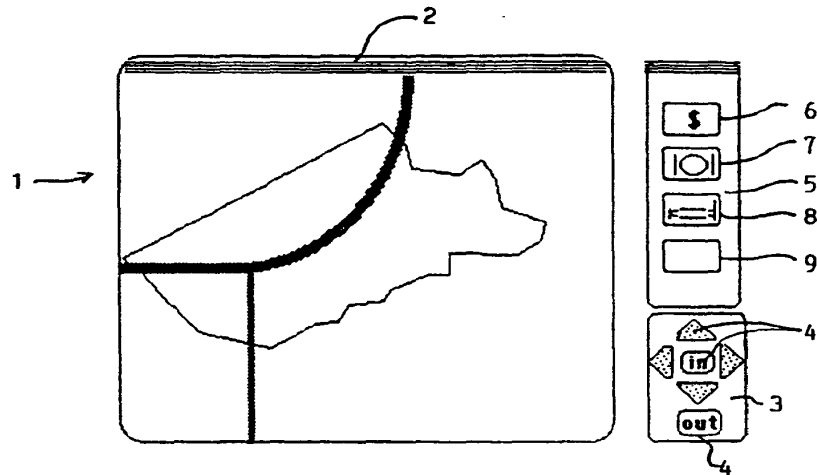


FIGURE 1

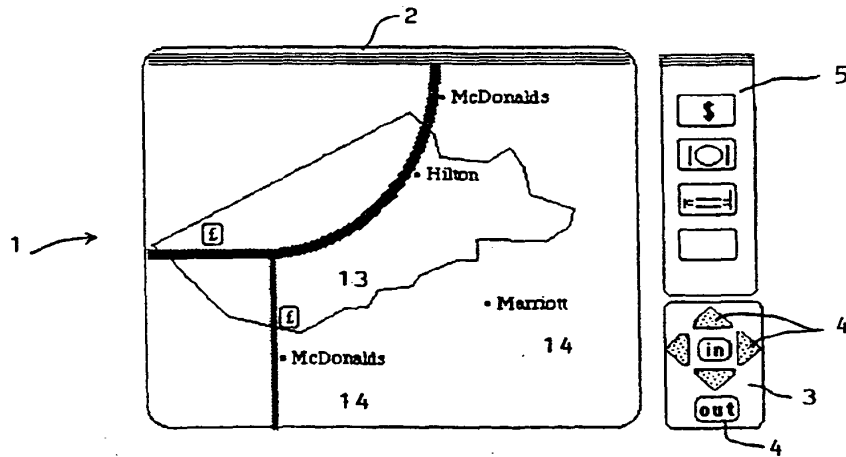


FIGURE 2

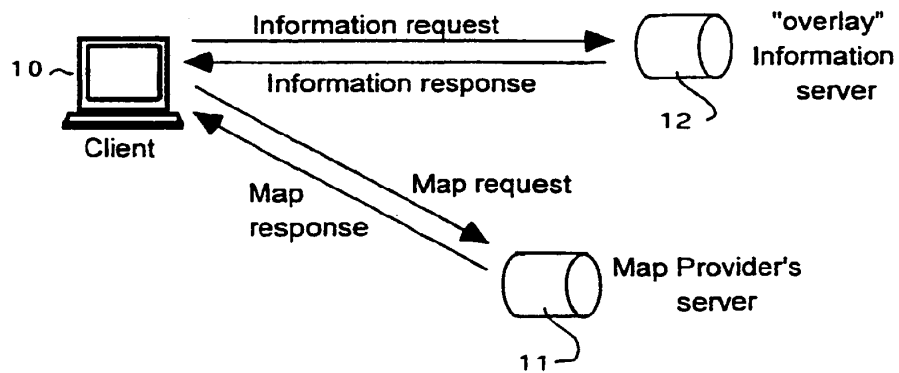


FIGURE 3

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 96/01996

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 G06F17/30 G01C21/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 G06F G01C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	1994 VEHICLE NAVIGATION AND INFORMATION SYSTEMS CONFERENCE PROCEEDINGS (CAT. NO.94CH35703), PROCEEDINGS OF VNIS'94 - 1994 VEHICLE NAVIGATION AND INFORMATION SYSTEMS CONFERENCE, YOKOHAMA, JAPAN, 31 AUG.-2 SEPT. 1994, ISBN 0-7803-2105-7, 1994, NEW YORK, NY, USA, IEEE, USA, pages 591-596, XP000612712 ARIKAWA M: "Personal dynamic maps based on distributed geographic information servers" see page 591, left-hand column, line 1 - page 593, left-hand column, paragraph 2.2 see page 593, right-hand column, paragraph 3.2 see page 596, left-hand column, line 9 - line 44 --- -/--	1-27

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

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OCID: <WO_9707467A1_1>

INTERNATIONAL SEARCH REPORT

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C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DATABASE, APRIL-MAY 1995, USA, vol. 18, no. 2, ISSN 0162-4105, pages 65-67, XP000612268 DAVIS P: "An interactive hypermedia map viewer (the Xerox PARC map server)" see the whole document ---	1-27
A	EP,A,0 539 143 (PIONEER ELECTRONIC CORP) 28 April 1993 see abstract; claims; figures 1,7-12 ---	1-27
A	EP,A,0 379 198 (SHARP KK) 25 July 1990 see column 2, line 26 - column 3, line 13; claims -----	1-27

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DOCID: <WO___9707467A1_1_>

American Airlines, Ex. 1008, p.433
American Airlines v. Advanced Transactions
IPR2023-01370

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 96/01996

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
EP-A-0539143	28-04-93	JP-A-	5113752	07-05-93
		JP-A-	5113753	07-05-93
		JP-A-	5113754	07-05-93
		EP-A-	0747670	11-12-96

EP-A-0379198	25-07-90	JP-A-	2189488	25-07-90
		JP-A-	2206900	16-08-90
		AU-B-	614893	12-09-91
		AU-A-	4799790	26-07-90
		DE-D-	69021900	05-10-95
		DE-T-	69021900	18-04-96
		US-A-	5025261	18-06-91

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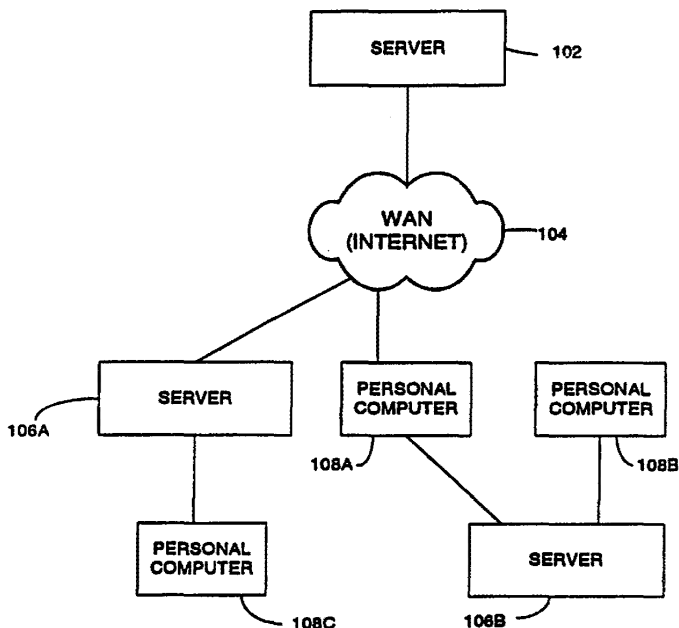
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(54) Title: SYSTEM AND METHOD FOR DISPLAYING INFORMATION AND MONITORING COMMUNICATIONS OVER THE INTERNET

(57) Abstract

A system and method for creating, transmitting, and receiving web pages from a web server. The present invention enables a user to create a new web site by either creating new web pages or extracting information from previously created web pages. The invention enables a web site master to control the entire presentation of data to the user. In one embodiment of the present invention, a web site can include a first web page having a main menu. The present invention then permits the web site master to prepare a preset sequence of web pages that are displayed to the user for each menu item. The user of the web page selects one menu item from a menu display and then can passively receive information in a logical sequence. The control of the web page sequence can be used by advertisers, for example, to effectively present all information deemed helpful in attempting to convince the user to use the advertised product or service. In contrast to conventional web sites, a user accessing a web site developed according to the present invention will have a predefined sequence of web pages displayed in order to maximize the benefit to the web site master, e.g., to increase the behavioral modifications of the client due to controlled advertising. The present invention also increases the effectiveness of web sites having multiple web pages by using an artificial intelligence preloading methodology to reduce the delay in displaying a web page on the user's computer.



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CROSS REFERENCE TO RELATED APPLICATION

10 BACKGROUND OF THE INVENTION

The present invention relates generally to the field of Internet communication and more specifically to a system and method for generating and displaying world wide web site information.

The volume of traffic on and the number of users using the Internet and the world wide web (WWW) have increased significantly since the early 1990s and such increases are expected to continue. Previously, many users of the Internet and world wide web were technically sophisticated. Many, if not most, of the users in the future are expected to be technical novices.

20 That is, many current and future users of the WWW will not understand "hyperlinks" and
"applets." Many technically unsophisticated users of the Internet and WWW are intimidated by
the current techniques required to move between pages in a web site. For example, one
conventional technique for moving between pages in a web site involves searching through the
text of a web page for one of many hyperlinks that may be of interest to the user and then
25 selecting one hypertext or hypergraphic that is associated with the hyperlink to proceed to the
page addressed by the hyperlink. While many technically sophisticated users do not have
trouble understanding this web page addressing technique, less technically sophisticated users
have trouble understanding hyperlinks and this web page navigation technique.

American Airlines, Ex. 1008, p.439
American Airlines v. Advanced Transactions
IPR2023-01370

18 minutes to download by the typical home computer, and only if the server that is sending the data is transmitting the data at the maximum permitted rate. While the data is being downloaded, conventional web sites display partial information on the screen of the users display monitor.

5 One growing use of the Internet and WWW is the creation of web sites for advertising. Advertisers are drawn by the low cost of the WWW. However, a significant drawback for advertisers is the slow rate of data transfer to typical home users. If an advertiser creates a web site where one page of the web site has a large size, e.g., two megabytes, then, as described above, a typical user having a 14.4 kbps modem will require over 18 minutes to download the
10 single web page. A significant number of users will be reluctant to download such large advertisement web pages due to the large time commitment.

Another significant drawback for advertisers is that conventional web sites require the user to search hypertext and hypergraphics in each web page in order to proceed to what the user thinks is of interest. Therefore, an advertiser operating a web site having several pages
15 frequently has users browse the web pages in a haphazard manner. However, successful advertisers prefer more control of the presentation sequence of an advertisement.

Accordingly, what is needed is a system and method for operating a web site that: (1) decreases the complexity of current web sites to reduce the intimidation of less sophisticated users of the web site; (2) decreases the waiting time between web page displays without
20 increasing the data transmission rate; and (3) enables a web site owner to have more control over the presentation of web pages to a user.

SUMMARY OF THE INVENTION

The present invention is a new model for creating, transmitting, and receiving web pages
25 from a web server. The present invention enables a user to create a new web site by either creating new web pages or extracting information from previously created web pages. The invention enables a web site master to control the entire presentation of data to the user. In one embodiment of the present invention, a web site can include a first web page having a main menu. The present invention then permits the web site master to prepare a preset sequence of
30 web pages that are displayed to the user for each menu item. The user of the web page selects one menu item from a menu display and then can passively receive information in a logical sequence. The control of the web page sequence can be used by advertisers, for example, to effectively present all information deemed helpful in attempting to convince the user to use the

advertised product or service. In contrast to conventional web sites, a user accessing a web site developed according to the present invention will have a predefined sequence of web pages displayed in order to maximize the benefit to the web site master, e.g., to increase the behavioral modifications of the client due to controlled advertising.

5 The present invention also increases the effectiveness of web sites having multiple web pages by using an artificial intelligence preloading methodology to reduce the delay in displaying a web page on the user's computer.

BRIEF DESCRIPTION OF THE DRAWINGS

10 Figure 1 is an illustration of a communication system in which the preferred of the present invention resides.

 Figure 2 is a more detailed illustration of the server of the preferred embodiment of the present invention.

15 Figure 3 is a more detailed illustration of the server storage device of the preferred embodiment of the present invention.

 Figure 4 is a flow chart describing the method performed by the server module according to one embodiment of the present invention.

 Figure 5 is a flow chart describing the step of analyzing a web site according to one embodiment of the present invention.

20 Figure 6 is an illustration of a computer screen display showing information extracted from the web pages of the web site during the analyze web site 408 process according to one embodiment of the present invention.

 Figure 7 is flow chart describing the step of configuring a modified web site according to one embodiment of the present invention.

25 Figure 8 is an illustration of a computer screen display for use in the web site configuration process according to one embodiment of the present invention.

 Figure 9 is an illustration of an edit transition display according to one embodiment of the present invention.

30 Figure 10 is an illustration of a configuration image menu display according to one embodiment of the present invention.

 Figure 11 is an illustration of a client computer storage device according to one embodiment of the present invention.

Figure 12 is a flow chart describing the method performed by the Vayu Web client module according to one embodiment of the present invention.

Figure 13 is a flow chart describing the method performed by the web page preload module according to one embodiment of the present invention.

5 Figure 14 is an illustration of a web page control panel according to one embodiment of the present invention.

Figure 15 is an illustration of a first menu web page according to an alternate embodiment of the present invention.

10 Figure 16 is an illustration of a second web site menu page according to an alternate embodiment of the present invention.

Figure 17 is an illustration of a site repository information according to an alternate embodiment of the present invention.

15 Figure 18 is an illustration of a screen display of the web site presentation properties of various web site sequences developed by the web site designer according to an alternate embodiment of the present invention.

Figure 19 is an illustration of a web page sequence properties screen display according to an alternate embodiment of the present invention.

Figure 20 is an illustration of a web page property screen display according to an alternate embodiment of the present invention.

20 Figure 21 is an illustration of a sequence optimizer screen display according to an alternate embodiment of the present invention.

Figure 22 is an illustration of the site layout screen display that is displayed to the web site designer according to an alternate embodiment of the present invention.

25 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A preferred embodiment of the present invention is now described with reference to the figures where like reference numbers indicate identical or functionally similar elements. Also in the figures, the left most digit(s) of each reference number correspond(s) to the figure in which the reference number is first used.

30 Figure 1 is an illustration of a communication system in which the preferred embodiment of the present invention resides. The communication system includes a web server 102, a wide area network 104, destination servers 106A, 106B, and personal computers 108A-C. The personal computers 108A-C are conventional personal computers, e.g., an Apple computer

or a Compaq computer. The personal computers 108 can be independent or part of a network, for example. The personal computers 108 can be connected directly to the WAN, using a modem, for example, or can be connected to the WAN 102 via a server 106A that uses a leased line, for example. The server 106A can operate using a conventional operating system, for example, UNIX or Windows NT. In order for a user of a computer, e.g., destination computer 108A to access data representing world wide web pages (web pages) from a web server 102, the user of the personal computer 108A identifies a uniform resource locator (URL) address to a web page in the web server 102 and transmits a request signal to the WAN 104. The WAN 104 is conventional, e.g., the Internet, and can use routers to route the request signal to the web server 102. A conventional web server receives a request and transmits the requested web page to the destination computer 108A. The destination computer 108A receives the web page data and displays the web page. This process can repeat several times for each web page requested by the user. The multiple requests per page are to obtain each multimedia object embedded in the page, e.g., pictures, sounds, and videos.

The present invention is a new model for creating, transmitting, and receiving web pages from a web server 102. The invention includes a server module and a client module. The server module is stored and implemented by the web server 102. The client module is stored in the web server 102 and is transmitted from the web server 102 to the destination computer 108A after the web server 102 receives a request from the destination computer 108A. The client module is executed by the destination computer 108A when displaying the web pages of the web site. A more detailed discussion of the server module and the client module is set forth below.

Figure 2 is a more detailed illustration of the web server 102 of the preferred embodiment of the present invention. As stated above, the web server is conventional and includes a conventional central processing unit 202, e.g., a Pentium Pro processor that is commercially available from Intel Corporation, Santa Clara, California, a conventional input/output system 204, conventional random access memory 206, and a conventional storage device 208 having unconventional computer application programs stored therein. The computer application programs stored in the storage device 208 are described in detail below.

Figure 3 is a more detailed illustration of the web server storage device 208 of the preferred embodiment of the present invention. The storage device 208 includes a server web site module 302, a web site project database 304 having menu information 308 and web page information 306, a web site analyzer 310, and a web site configuration module 312. The server

web site module 302 includes web site data including MIME files. MIME files can include MIME types that provide a technique for enabling web browsers, e.g., Netscape Navigator, to automatically launch a viewing program associated with a received file, hypertext markup language (HTML) data, and common gateway interface (CGI) data. The web site project
5 databases 304 includes menu information 308 and data from web pages 306 extracted from the web page by the web site analyzer 310. A more detailed description of the web site project database is set forth below. The web site analyzer 310 analyzes each web page of the web site, extracts data from each web page, and stores the data in the web site project database 304. The web site configuration module 312 enables a user to create a menu and to create an ordered
10 sequence of web pages that can be presented to a user (client) when a menu item is selected.

Figure 4 is a flow chart describing the method performed by the server module 102 according to one embodiment of the present invention. If the desired web pages of a web site do not yet exist 402 then the web pages are created 404 using conventional web page creation techniques. A web site creation description is provided in Chandler, Running a Perfect Web
15 Site, Que Corporation (1995) that is incorporated by reference herein in its entirety. If the web pages that will be part of the web site exist 402 then the server 102 defines 406 a new site project, analyzes 408 the web pages of the web site, configures 410 the new web site, and saves 412 the web site. A more detailed description of steps 406, 408, 410, and 412 is set forth below. Alternatively, web pages for the web site can be developed concurrently using the present
20 invention.

As stated above, the web server 102 defines 406 a new site project. In one embodiment a new site project is a data structure that is stored in the server storage module 208. When fully defined, the new site project includes or references all of the information about a web site. The information stored about each web site includes general information about the web site and a list
25 of the web pages in the web site. The general information includes information such as: (a) the company's name where the company can be the party to which the web site information is directed, e.g., the company who is advertising on the web site; (b) the webmaster name, e.g., the creator of the web site; (c) the webmaster electronic-mail (e-mail) address. The list of web pages includes information about each web page, such as: (1) the URL of the web page; (2) a list
30 of links out of the page; (3) a list of links into the page from other web pages in the web site; (4) the title of the web page; (5) the content type of the page, e.g., text, html, and image; (6) a list of pictures/videos/sounds in the page; and (7) the size of the web page. The size (in bytes) of the web page can be determined using any of a variety of techniques. In one embodiment, the size

of the web page is the sum of the number of bytes in the page's HTML, the size of all image , sound <BGSOUND>, object <OBJECT>, applet <APPLET>, and script <SCRIPT> tag files. The information stored about each web page is determined during the steps of analyzing 408 the web site and configuring 410 the web site as described below.

5 Figure 5 is a flow chart describing the step of analyzing 408 a web site by the web site analyzer 310 according to one embodiment of the present invention. The web site analyzer determines the size of the web page and determines the links into and out of the page as described below. The web site analyzer 310 determines 502 if more web pages need to be analyzed. The web site analyzer 310 selects a web page by selecting one of the hyperlinks of a
10 previously analyzed web page. The web page analyzer 310 analyzes the web page and sets a flag indicating that the web page has been analyzed. If the web site analyzer 310 determines that the web page has already been analyzed, then the web site analyzer sets a pointer to the memory location in the server storage 208 containing the information previously extracted during the web page analysis.

15 The web page analyzer 310 extracts 504 the title of the web page. In one embodiment, the title of the web page is extracted by identifying the text associated with the title tag (<TITLE>). The title can be displayed in order to identify the web page to the user. The web page analyzer 310 then extracts 506 the hyperlinks of the web page. In one embodiment, the hypertext links are extracted by identifying the anchor tags (<A>), the frame tags (<FRAME>),
20 and map tags (<MAP>) in the web page. The web page analyzer 310 extracts 510 image file names by, for example, identifying the file associated with the image tag (), and the web page analyzer 310 determines the size of the image file by (a) reading the HTTP size header or (b) downloading the file. In one embodiment, the HTTP size header is read since it is typically faster than downloading the file. The web page analyzer 310 also extracts 512 embedded file
25 names in the web page by, for example, identifying the file associated with the embedded tag (<EMBED>). Then the web page analyzer 310 determines the size of each embedded file by (a) reading the HTTP size header or (b) downloading the file. The web page analyzer 310 also extracts 512 object files in the web page by, for example, identifying the file associated with the object tag (<OBJECT>). Then the web page analyzer 310 determines the size of each object file
30 by (a) reading the HTTP size header or (b) downloading the file. The web page analyzer 310 also extracts 512 sound files in the web page by, for example, identifying the file associated with the bgsound tag (<BGSOUND>). Then the web page analyzer 310 determines the size of each sound file by (a) reading the HTTP size header; or (b) downloading the file. The web page

analyzer 310 extracts 514 class file names by, for example, identifying the file names associated with a class file name tag, e.g., <APPLET> in the Java programming language commercially available from Sun Microsystems, Inc., Santa Clara, California. The web page analyzer then determines a list of links out of the web page by downloading and scanning the contents of each class file. The web page analyzer 310 also extracts 516 additional information from the web page. For example, the web page analyzer 310 identifies scripts, e.g., Javascripts and VBScripts, associated with a script tag (<SCRIPT>), downloads the scripts and scans the scripts for links out of the web page. After extracting the above identified information, the web page analyzer 310 determines 518 the size of the web page by summing the number of bytes in (1) the HTML of the web page, and (2) all of the image/embed/class/bgsound/object/script tag files. Steps 504-518 are repeated for each web page.

Figure 6 is an illustration of a computer screen display showing information extracted from the web pages of the web site during the analyze web site process 408, described above, according to one embodiment of the present invention. The computer display illustrated in Figure 6 displays web page information including the web site name 602 "http://McJava/sampletree/morelink.htm", and the status of the analysis 612, a current page identifier 614, the total number of pages 616, the total number of links found in all of the analyzed pages 618. In addition, the display includes information concerning the parsed pages 620 and parsing details 622. The parsed pages 620 shows the list of web pages as they are being parsed. The pages are displayed in a tree structure format that shows the hierarchical nature of the web site. The parsing details 622 shows a detailed list of the links and files found in the page being currently parsed. The site name 602 is the URL of the web site being analyzed. Host information (not shown) can also be displayed. The host is the name of the host machine on which the web site resides. Similarly, a tree level indicator (not shown) can also be displayed. The tree level represents the hierarchical level of the web page in the web site. Any web page may exist at a number of levels (e.g., it may appear as a hyperlink in many different pages in the web site). The level represented here is the level closest to the top of the tree that the page appears. It will be apparent to persons skilled in the art that more or less information can be available to the webmaster when configuring the web site.

After the web site analyzer 310 analyzes 408 the web site, the web site configuration module 312 configures the web site. Although the web site analyzer 310 has searched and analyzed each web page in the web site, the web site analyzer 310 does not modify the original web site. The web site configuration module 312 enables the web site developer, e.g., a

webmaster, to construct a menu. In one embodiment of the present invention this menu is typically approximately 8-10 items, although it is envisioned that any number of items can be part of the menu. Each item will consist of a sequence of web pages that are displayed in a fixed order. In one embodiment of the present invention the web pages themselves are not
5 modified except for the web page having the menu. In other embodiments the web pages are modified to, for example, ensure that all links out of the web page are deactivated, except for the links defined by the user. Figure 7 is a flow chart describing the step of configuring a modified web site by the web site configuration module 312 according to one embodiment of the present invention. The web site configuration module 312 enables the webmaster to create a menu
10 structure that can be the first web page displayed in the web site. For example, Figure 8 is an illustration of a computer screen display for use in the web site configuration process according to one embodiment of the present invention. The display includes a menu configuration portion 802, a current web site structure portion 804, a status portion 814, and various control buttons that can be selected by the webmaster using a conventional mouse or other pointing device, for
15 example. The control buttons in one embodiment include a menu shuffle up button 806, a menu shuffle down button 808, an add image button 810, an add transition button 812, and a status display 814.

The webmaster determines 704 if any more menu selections need to be modified. If the webmaster decides to modify or define a menu selection, the webmaster selects a menu, and
20 defines 706 a sequence of web pages that will be displayed when the menu is selected. One process for assigning a web page to a menu is: (a) a user highlights the menu in the menu configuration portion 802 using the mouse or keyboard; (b) the user then highlights the web page in current web site structure portion 804; and (c) the user selects the Add button 816. The chosen web page will be added to the menu and will be displayed in the menu configuration
25 portion 802 of the display. For example, a first menu is identified as "Luxury Vehicles" 820 in the menu configuration portion 802 of the display. The menu configuration portion 802 also includes information about the web pages that the webmaster has associated with the menu. For example, the top menu item is "Luxury Vehicles" 820. There are two web pages 822/824 associated with this menu item. These two web pages will be displayed in this order, i.e., web
30 page 822 and then web page 824, when the user ultimately views this web site with their client PC and browser.

The shuffle up button 806 and the shuffle down button 808 enable a user to modify the web site structure by moving a web page up or down in the displayed menu configuration

portion 802 of the display. These buttons simplify the web site editing procedure for the web master. For example, a web page can be selected by the webmaster and associated with one of the menu items. The webmaster can then move, add, delete, or copy web pages in order to develop a suitable web site presentation sequence. The webmaster can also introduce transitions
5 that can control the transition between web pages by selecting the "Add Transition" button 812. For example, a transition may be a timer of 10 seconds, or a keyclick from the user. In one embodiment the webmaster ensures that the user will view the web pages associated with each menu (if any) only in the predefined sequence by automatically showing the next page in response the transition event. For example, if a timer of 10 seconds has been selected by the web
10 master then after 10 seconds has elapsed the next page will automatically be displayed. The user does not need to perform any action. In alternate embodiments, a limited number of page links are included that enable the user to advance to the next page, return to the previous page, or return to the main menu, for example.

As noted above, conventional web sites are created such that a client who accesses the
15 web site can view the various pages in the web site in almost any sequence. One potentially significant use of the Internet and the WWW is in advertising. In one embodiment, the present invention can be utilized to create a web site having advertisement as a significant purpose of the web site. For example, an automobile company, e.g., General Motors, can develop a web site that advertises its currently available cars and trucks. One important aspect of advertising is
20 the process of creating a need that can be satisfied by the advertiser. In order to efficiently and successfully accomplish this, it is helpful if the advertiser is able to control the sequence of information presented to the user. For example, if a car manufacturer developed a web site, they may not want the client to immediately jump to the web page having the cost of the vehicles. Instead, the advertiser could be more successful and effective if a description of the features and
25 benefits of one or more car models were first shown to the user in order to familiarize the client with the cars and to therefore help persuade the client that the cars offered by the manufacturer will satisfy the needs of the client. After providing the information to the user, the web page having pricing information can be presented to the user. It will be apparent to persons skilled in the art that the above example is merely one example of how the current invention could be used
30 and that many alternatives exist for developing and strategically planning the web page presentation sequence in a web site. The present invention provides the necessary tools to enable a webmaster to quickly, efficiently, and effectively generate a web site that gives control of the web site presentation to the web site owner instead of the client.

The page link can be displayed as a "Next Page" button or the webmaster can select to have one or more of the web pages transition automatically. Figure 9 is an illustration of an edit transition display 902 according to one embodiment of the present invention. In the example illustrated in Figure 9 the user has the ability to define the event that will trigger a web page transition for any particular web page, e.g., the "Leasing Information" web page as displayed in the menu item display area 904. The available types of transitions are displayed in the available transition portion 906 of the display. The webmaster selects one of the available transition types and activates the Add button 912, and the selection is displayed in the current transition portion 908 of the display. If the webmaster selects the timer option, the webmaster can set the delay between pages by entering the delay in the delay definition portion 910 of the display. To remove a selection from the Current Transition 908 display the web master uses the Remove button 914.

The webmaster also has the opportunity to provide 708 additional information concerning the web site and the individual web pages. For example, some of the information stored in the new site project data structure is defined by the webmaster, e.g., information concerning the company name, webmaster name, webmaster e-mail, and the URL of the main menu page or one or more web pages in the web site, for example. The webmaster has the opportunity to provide this information before or after the defining 706 the web page display sequence for the web site.

Figure 10 is an illustration of a configuration image menu dialog box display 1002 according to one embodiment of the present invention. The dialog box 1002 enables the user to generate a menu display by selecting a menu, e.g., Menu_4, and defining the active regions in the display portion 1006 for the selected menu. In Figure 10, the active region for Menu_4 ("New for '97") is defined in the active region definition dialog box 1008. In some embodiments of the present invention the webmaster does not create an initial menu page, instead only one web page sequence is defined and when the client selects the first page the sequence of the remaining web pages of the web site are displayed to the client in the predefined sequence.

After the webmaster defines the menus and defines the web page sequence associated with each menu, the modified web site is saved 412. In one embodiment of the present invention, the web site is saved as a series of files that are used when web site information is transferred to a client accessing the web site. In one embodiment these files are used to transfer the information gathered by the server tool to the client. The files include a stub Java Applet that is inserted into the home page of the site. One example of such a file is set forth in Table 1.

```
<APPLET CODE="browser.class" WIDTH="10" HEIGHT="10">

<PARAM NAME="menu_1" VALUE="[MENU_ITEM NAME='Luxury
5 Vehicles' AUTO=TRUE RECT=199,92,230,34 IMG=menu.gif]">

    <PARAM NAME="menu_1_1" VALUE="[LINK
    URL=http://www.xyzmotors.com/L2_N2.HTM SIZE=3514
    TRANSIT=TIMER DELAY=10]">
10
        <PARAM NAME="menu_1_1_1" VALUE="[LINK OBJECT
        URL=http:// www.xyzmotors.com /Images\I_1_9.GIF
        SIZE=1059 CONTENT=image/gif]">

15
    <PARAM NAME="menu_1_2" VALUE="[LINK_FILE
    NAME=xyzmotors_menu_1.brw]">

    <PARAM NAME="menu_2" VALUE="[MENU_ITEM NAME='Sport Utility'
    RECT=199,129,229,39 IMG=menu.gif]">
20
        <PARAM NAME="menu_2_1" VALUE="[LINK URL=http://
        www.xyzmotors.com /L1_N1.HTM SIZE=12117
        TRANSIT=MENU]">

25
        <PARAM NAME="menu_2_1_1" VALUE="[LINK OBJECT
        URL=http:// www.xyzmotors.com /Images\I_1_1.GIF
        SIZE=1257 CONTENT=image/gif]">

30
        <PARAM NAME="menu_2_2" VALUE="[LINK_FILE NAME=
        xyzmotors _menu_2.brw]">

        <PARAM NAME="menu_3" VALUE="[MENU_ITEM NAME='Trucks and
        Vans' RECT=198,173,230,47 IMG=menu.gif]">
35
            <PARAM NAME="menu_3_1" VALUE="[LINK URL=http://
            www.xyzmotors.com /L1_N1.HTM SIZE=12117 TRANSIT=TIMER
            DELAY=10]">

            <PARAM NAME="menu_3_1_1" VALUE="[LINK OBJECT
            URL=http:// www.xyzmotors.com /Images\I_1_1.GIF
            SIZE=1257 CONTENT=image/gif]">
40
            <PARAM NAME="menu_3_2" VALUE="[LINK_FILE NAME=
            xyzmotors _menu_3.brw]">
45
        <PARAM NAME="menu_4" VALUE="[MENU_ITEM NAME='Family Fare'
        RECT=195,224,232,40 IMG=menu.gif]">

            <PARAM NAME="menu_4_1" VALUE="[LINK URL=http://
            www.xyzmotors.com /L1_N1.HTM SIZE=12117 TRANSIT=TIMER
            DELAY=10]">
50
            <PARAM NAME="menu_4_1_1" VALUE="[LINK OBJECT
            URL=http:// www.xyzmotors.com /Images\I_1_1.GIF
            SIZE=1257 CONTENT=image/gif]">
55
            <PARAM NAME="menu_4_2" VALUE="[LINK_FILE NAME=
            xyzmotors _menu_4.brw]">
```

```

5      <PARAM NAME="menu_5" VALUE=" [MENU_ITEM NAME='New For
      '97'] ">
      <PARAM NAME="menu_5_1" VALUE=" [LINK URL=http://
      www.xyzmotors.com /L1_N1.HTM SIZE=12117 TRANSIT=TIMER
      DELAY=10] ">
      <PARAM NAME="menu_5_1_1" VALUE=" [LINK_OBJECT
10     URL=http:// www.xyzmotors.com /Images\I_1_1.GIF
      SIZE=1257 CONTENT=image/gif] ">
      <PARAM NAME="menu_5_2" VALUE=" [LINK_FILE NAME=
      xyzmotors _menu_5.brw] ">
15     </APPLET>

```

Table 1

20 These parameters in Table 1 contain specific information about each link on the menu illustrated in the display portion 1006 of Figure 10, and the contents of the pages linked thereto. The menu items are passed as parameters. In the example set forth in Table 1, a naming convention is used to determine the order and structure of the menu. The data is structured with a format that is similar to HTML, but uses square brackets ([and]) instead of angle brackets (< and >). The first parameter (PARAM) is for the first item in the menu, named *menu_1*. Its type is *MENU_ITEM*, and the item's name is *Sport Utility*. The next *PARAM* is a page assigned to the *menu_1*, and its name is *menu_1_1*. The type is *LINK*, its *URL* is

25 http://McJava/dealers/dealers.html, the *TRANSIT* is *TIMER*, and the *DELAY* is 10 seconds. The third *PARAM* is also assigned to the *menu_1* item, but it points to a file that contains the rest of

30 the links for *menu_1*. The file name is *McJava_menu_2.brw*. There are one of these files for each menu item that has more than one link assigned to it. These files are used to limit the amount of information that is transmitted from the server to the client in the initial transmission. Since the number of web pages that could be assigned to all of the menu items could range into the hundreds and thousands, it is generally more efficient to send down a portion of menu

35 information, and then retrieve more menu information as needed. The file structure design is extensible such that as new information is needed new name/value pairs are added. Older version of the software will ignore name/value pairs they do not understand. Newer version of the software will have reasonable defaults if they encounter an older file with missing name/value pairs.

40 As described above, a client utilizes a computer, e.g., a destination computer 108A, to access the defined web site stored on the server 102. The personal computer used by the client

can be a conventional personal computer, e.g., an IBM personal computer that is commercially available from IBM Corporation, Armonk, NY. The destination computer 108A includes a conventional CPU, conventional RAM, and a conventional storage device, that can be similar to the server 102 described above. Figure 11 is an illustration of a client computer storage device 1100 according to one embodiment of the present invention. The storage device 1100 includes a conventional Internet browser 1102, a Vayu Web client module 1104, a web page preload module 1106, menu files 1108, and a TCP/IP Internet connection protocol module 1110. The conventional Internet browser provides an Internet gateway to the destination computer 108A. The client uses the Internet browser 1102 to request access to the web site stored in the server storage module 208. The menu files 1108 include the files received from the server 102 in response to the access request. In addition, the personal computer storage module 1100 receives the Vayu Web client module 1104 and the web page preload module 1106 from the server 102. The operation of these modules is described in greater detail below.

In one embodiment, the Vayu Web client module has been implemented using three different techniques. These three techniques allow the client module to operate across the wide variety of client machines currently in use across the Internet, e.g., IBM PC, Apple Macintosh, Sun Microsystems Sparcstation, and across the wide variety of WWW Browsers currently in use, e.g., Netscape versions 2.n and 3.n, and Microsoft Internet Explorer versions 2.n and 3.n. The three techniques are: (1) as a Java Applet; (2) as a Javascript script where Javascript is a Internet language developed by Netscape Corporation; (3) as a Client-Pull mechanism using a <META> tag in the HTML file, that causes the browser itself to automatically load pages on a timed basis. The CONTENT argument contains the time in seconds. The URL contains the target URL. The <META> tag can be:

```
<META HTTP-EQUIV=REFRESH CONTENT="1 URL=target_url">
```

Figure 12 is a flow chart describing the method performed by the Vayu Web client module according to one embodiment of the present invention. As described above, the client requests information from the web site server 102 and the destination computer 108A downloads 1202 web site server information. The web site server information initially downloaded includes the Vayu Web client module 1104, the web page preload module 1106, and the new site project data structure that is stored in the menu files 1108. As described above, the new site project data includes information about the web site and includes references to web pages in the web site but does not include all of the web page data. The destination computer 108A implements 1204 a web page preload routine that is executed concurrently with the

remaining functions performed by the Vayu Web client module, as described below. Figure 13 is a flow chart describing the method performed by the web page preload module 1106 according to one embodiment of the present invention. The web page preload module 1106 gathers local environmental information concerning the client personal computer. This information includes the speed of the modem, the time of day, Internet service provider service level, browser type and version, and operating system type and version. This information is used by the artificial intelligence expert system to dynamically select a preload strategy to optimize the performance of the presentation of web pages to the client. The web page preload module 1106 preloads 1304 the first web page from each of the menus.

While the web page preload module 1106 is preloading the first web page associated with each of the menus, the Vayu Web client module 1104 displays 1206 the menu page and waits for the user to select a menu. When the user selects 1208 a menu item, the Vayu Web client module 1104 identifies 1210 the first web page in the predefined sequence of web pages associated with the menu item and displays 1212 the first web page. Before the user selects a menu item, the web page preload module 1106 preloads the first web page associated with each menu item, as stated above, and then determines the web page loading sequence for subsequent web pages based upon a determination of the most likely menu item selection. The web page preload module 1106 determines the most likely menu item selection based upon the selections of previous clients or, if no clients have previously accessed the web page, the webmaster may indicate which menu item to show first, or the first menu item is selected as the most likely to be selected. The web page preload module 1106 preloads web pages from the sequence of web pages associated with the most likely menu item selection by implementing the rule based expert system of the present invention, described below.

After the client selects a menu item, the Vayu Web client module 1104 and the web page preload module 1106 receive the web page sequence and web page information from the new site data structure in the menu files 1108. Specifically, the new site data structure includes the overall size of the web page, the number of embedded objects in each web page, and the size of the embedded objects in each web page, as described above. In one embodiment of the present invention, the web page preload module 1106 determines a priority for each web page in the web page sequence based upon the environmental parameters of the destination computer 108A, described above, a queue location of the web page in the predefined sequence, the size of the web page, the number of embedded objects in the web page, and the size of the embedded objects in the web page, for example. In addition, the web page preload module is keeping track

of how long it actually takes to load each page. From this information it calculates the actual throughput that the current client is getting. This throughput is used by the expert system to make decisions about preload strategies. For example, if the throughput falls below a certain value, the preload module may stop preloading certain types of MIME files (e.g., video, sound).

- 5 The trigger value would be set by the web master during the menu configuration stage. described above. One example of a rule based expert system is set forth in Table 2.

```

; Set preload strategy based upon throughput
10 IF      system.throughput < 6kpbs
    THEN  preload.order = STRATEGY_7
    ENDIF

15 ; Set preload strategy based upon throughput
    IF      system.throughput < 2kpbs
    THEN  mime.image = NOLOAD
    ENDIF

20 ; Set priority based upon size of an embedded object
    IF      object1.size > 250000
    THEN  object1.preload_priority = 5
    ENDIF

25 ; Set priority based upon size of an embedded object
    IF      object1.size > 500000
    THEN  object1.preload_priority = 7
    ENDIF

30 ; Set priority based upon size of an embedded object
    IF      object1.size > 1000000
    THEN  object1.preload_priority = 10
    ENDIF

35 ; Set priority based upon the number of embedded
    ; objects in a page
    IF      page1.objects > 5
    THEN  page1.preload_priority = 3
    ENDIF

40 ; Set priority based upon the number of embedded
    ; objects in a page
    IF
50

```

```

        pagel.objects > 10
    THEN
        pagel.preload_priority = 8
    ENDIF
5
    ; Set preload order based upon browser type and time
    of
    ; day
    ; MSIE_3x is Microsoft's Internet Explorer Version 3.x
10
    IF
        ; night time hours
        browser.type = MSIE_3x AND (env.timeofday > 20:00
    AND env.timeofday < 08:00)
    THEN
15
        preload.order = SEQUENTIAL
    ENDIF

    ; Set preload order based upon browser type and time
    of
20
    ; day
    ; STRATEGY_7 is load page 1, then 2, then largest to
    ; smallest
    IF
        ; business hours
25
        browser.type = MSIE_3x AND (env.timeofday >
    08:00 AND env.timeofday < 20:00)
    THEN
        preload.order = STRATEGY_7
    ENDIF
30

```

Table 2

After determining the preloading priority for each web page, the web page preload module 1106 preloads 1308 the web pages having the highest priority. The web page preload module 1106 monitors 1310 the preloading procedure to reduce any delay in displaying web page to the client. The monitoring function of the web page preload module 1106 permits the preload function to be dynamic in that if a problem occurs 1312 in the web page loading process, the web page preload module 1106 sorts and reorganizes 1314 the data. Examples of problems include: (a) when a page is needed to be displayed and has not yet been preloaded or (b) when the preloading is sufficiently ahead of the display so that the local PC web page cache is full, and pages must be discarded (and reloaded). When a problem occurs the expert system is re-initialized with the current data (including the throughput and modified menu files without the web pages that have already been displayed). A modified preload strategy is then determined 1306.

The client continues navigating 1210 through web pages while the destination computer 108A continues displaying 1212 web pages. As described above, in one embodiment of the present invention, the client can passively watch the sequence of web page displays. In alternate

embodiments, the user has the option of selecting a next page button. Within each web page the client also has the option of manipulating a control panel. Figure 14 is an illustration of a web page control panel 1400 according to one embodiment of the present invention. In this embodiment, the user has the option of returning to the beginning of the web page by selecting
5 control panel button 1402, proceeding to the end of the web page (for example, a video clip embedded in the web page may be skipped) by selecting control panel button 1404, continuing or beginning the execution of the web page display by selecting control panel button 1406, pausing the execution of the web page by selecting control panel button 1408, decreasing the speed of web page execution by selecting control panel button 1410, increasing the speed of
10 web page execution by selecting control panel button 1412, or stopping web page execution by selecting control panel button 1414.

An alternate (preferred) embodiment of the present invention is described below with reference to Figures 15-22. This alternate embodiment includes a standard structure and navigation for the menus (pages containing buttons) and menu items (buttons), allowing the user
15 a set of options at each web page. One benefit of using the standard structure is to make the web site easier to use by the end user and to offer the web site designer more control over what is displayed to the user.

Figure 15 is an illustration of a first menu web page according to an alternate embodiment of the present invention. The first menu page 1500 illustrated in Figure 15
20 includes a single large button 1502 that includes the name of the company that is the subject of the advertising, e.g., "Vayu Web". The user can select the button 1502 to continue or the user can exit from the web site. In addition, the present invention enables the company to add a graphic display to the button or to the background to enhance the screen display.

The first menu web page can include a tool bar 1504 having various control buttons
25 thereon. These control buttons are enabled and disabled for each web page based upon the web site definitions defined by the webmaster. When the user selects the button 1502, a sequence of pages may automatically be presented after which another menu page appears containing more items. Alternatively, the sequence can be skipped and the next menu page can be presented immediately. While the user is viewing a dynamic sequence, the control functions are typically
30 disabled. The control functions include pause, fast forward, reverse, and exit. In alternate embodiments these control functions are enabled during the presentation of dynamic sequences. While a dynamic sequence is playing the user typically watches the display until the next menu page is reached.

Figure 16 is an illustration of a second web site menu page according to an alternate embodiment of the present invention. At the next web site menu page 1600, the user has three options, (1) return to the previous menu page, (2) select one of the menu items 1602, or (3) select the auto-play button 1604 to automatically cycle through the sequences following each menu item, for example. The order of cycling through the menu items is determined by the web site designer (web site master). Some items can be excluded from this "autoplay". A menu page can comprise any number of items. In this alternate embodiment the number of items is typically between 1 and 10. The web site designer can add their own graphics to the items or to the page background.

Certain web pages can be static, i.e., they do not automatically display another web page. Frequently, for static web pages, the "pause" and "forward" buttons on the tool bar 1504 are enabled. In this case, the page may include a description of a product and/or ordering information, for example. A maximum viewing time can be specified by the web site designer to proceed to the next page after some amount of time has elapsed, or the web site designer can permit the user to continue to the next web page by selecting a next page control button.

In this alternate embodiment, the tool bar 1504 is located at the top of the screen. The web site designer may choose not to display the tool bar 1504 for certain screens when, for example, the user has no other options within these screens but to wait for the next page. The tool bar 1504 can also include status indicators 1606 to show the remaining time left to view this page. This tool bar 1504 can be used for every page displayed using the present invention.

Another feature of the present invention is that the user is permitted to create multiple versions of each web site where the present invention permits optimization of each web site for different internet throughput rates. For example, the throughput range for different types of Internet access devices commonly used today varies from 14.4 kbps (modem) to 56 kbps (ISDN) to 1.5 megabits/sec (T1). This variation exceeds a factor of 100. Furthermore, users of the present invention on Intranets, e.g., local area networks (LANs) can reach data transfer rates exceeding 10 megabits/sec. Due to transfer rate constraints at the lower throughput speeds, the web site designer may include several versions of a web page, or several versions of a sequence, where a sequence includes a series of pages which are automatically displayed, with each version being a different size to optimize the web site display for different throughput environments. The database can include information about the various page and sequence versions. The artificial intelligence module of the present invention that was described above with respect to the expert system and is described in greater detail below, can automatically

select the appropriate page version depending on the throughput environment it has determined for a user. The Virtual Design Studio, which is the tool that the web site designer uses to assemble the web pages into advertisement sequences, is designed to assist the web designer in creating optimal sequences for various throughput environments. The Virtual Design Studio
5 will also allow the web site designers to preview the web pages of the web site using a simulator of the present invention in order to simulate environments having various data throughput rates.

It will be apparent to persons skilled in the art that the use of different versions of the web pages is not required to operate the present invention. However, if the web site designer is expecting users with different throughput environments to access the web site, it may be
10 advantageous to create versions of certain web pages that contain videos, sound, etc., so users with faster connections can view web pages having greater detail, while users with lower connections can still get the full benefits of this web site by viewing pages of a smaller size.

The present invention permits different versions of web pages and web sites by providing the web site designer with the option of providing high-quality (larger) pages for
15 users connected at higher throughput rates and lower-quality (smaller) pages for users connected at lower throughput rates. The present invention enables the web site designer to easily mix the smaller pages with the larger pages when the throughput is fast. However, adding larger pages to a low-throughput connection requires the designer to carefully sequence the pages so a large page is preloaded while several smaller ones are being viewed. In addition, some pages take
20 longer to view, for example if they contain detailed textual information that takes longer to read. This longer viewing time can be used to preload larger files. The Virtual Design Studio of the present invention includes modules which assist in the intelligent sequencing of pages in this manner not only to reduce the user's waiting time but also to improve the quality of the pages that can be viewed with slower connections.

25 Another factor to consider is that the actual throughput rate during an Internet connection session can vary greatly. For example, with a nominal connection speed of 28.8 kbps, the actual transfer rate can easily vary between 10 kbps and 28.8 kbps. Therefore, the artificial intelligence (AI) module of the present invention makes real-time adjustments during a connection session to keep the presentation flowing and prevent waiting time for the user. One
30 of the techniques implemented by the AI module is to leave out certain pages that the designer has identified as being large but with low impact or information content. Another technique is to dynamically switch a higher-quality presentation to a lower one when the throughput slows

down, and then to switch back to the higher-quality one if the throughput picks up again. The artificial intelligence unit is described in greater detail below.

Figures 6, 8, 9, and 10 are illustrations of screen displays during the analyze web site process 408 and the configure web site process 410 for one embodiment of the present invention as described above. Figures 17-22 are illustrations of screen displays displayed to the web site designer during the analyze web site process 408 and the configure web site process 410 according to an alternate embodiment of the present invention. The Virtual Design Studio is stored in the web site analyzer 310 and enables a web site designer to: (1) construct presentation sequences from pre-existing and newly created web pages; (2) optimize the presentation sequences for different throughput environments and specify alternatives to be used by the artificial intelligence module to compensate for throughput variations in real time; and (3) create menu structures and user navigation through the web site. The virtual design studio includes a site repository information screen that is illustrated in Figure 17. The site repository information screen allows a web site designer to view, insert, delete and edit web page information and web page sequences. For example, the site repository information screen allows the web site designer to assemble pages into the sequences which form the basis of the automated web site content. The site repository information screen also enables the web site designer to modify and maintain the web site.

Figure 18 is an illustration of a screen display of the web site presentation properties of various web site sequences developed by the web site designer. Figure 18 illustrates two alternate web sites, the first web site 1802 is defined to be accessed by clients having a high data transmission connection, e.g., a client having a T1 line. The second web site 1804 is defined to be access by clients having a low data transmission connection, e.g., a client having a 14.4 or a 28.8 kbps modem connection.

Figure 19 is an illustration of a web page sequence properties screen display 1900. The web page sequence properties screen display 1900 identifies the optimal data connection rate for a particular web site sequence. In Figure 19, the optimal user has a connection rate between 14.4 kbps and 33.3 kbps. The web page sequence properties screen display also enables the user to identify a slower alternate web page sequence and a faster alternate web page sequence that can be selected by the artificial intelligence unit, as described below.

Figure 20 is an illustration of a web page property screen display according to an embodiment of the present invention. The web page property screen display 2000 includes information about various components of each web page including the size and download time

of each component, whether the web page is static or dynamic, as defined above, and defines various timing features of the web page including the nominal load time, the ideal viewing time, the minimum viewing time and the maximum viewing time. In addition the page property enables the user to select various options including the display of control buttons, e.g., the forward and pause button, and enables the user to identify web pages that can be skipped if the actual data throughput is slower than the anticipated data throughput, as determined by the artificial intelligence unit, described below.

Figure 21 is an illustration of a sequence optimizer screen display according to an alternate embodiment of the present invention. The sequence optimizer screen display allows the user to optimize the arrangement of web pages within a web site and to optimize the length of time each web page is displayed. The sequence optimizer screen display is an easy-to-use graphical interface that displays the ideal and estimated viewing times for each page. The sequence optimizer is part of the web site configuration module 312 illustrated in Figure 3. The sequence optimizer of the present invention calls a web page display simulator that is also part of the web site configuration module 312 which provides feedback to the web site designer regarding the presentation of the sequence of web pages to the user under different network throughput conditions. The present invention determines the ideal and estimated viewing times based upon the amount of text in the web page, the level of detail in visual objects, and the length of video objects, for example. The user can modify the viewing time for each page.

Using this ideal viewing time and the estimated page loading time under various network throughput conditions, the Sequence Optimizer graphically displays for each page the amount of credit time, i.e., the time differential between the viewing time and the time at which the page has been preloaded, or the amount of debit time, the time differential between the time at which the page will be preloaded and the viewing time. The user can adjust the parameters for each page and see this credit/debit value change for each page. The parameters that can be set for each page include: the ideal view time, which is the amount of time the designer wants page to display, and the optional view flag, which indicates whether a page can be skipped over if the system is too busy, for example.

In addition the Virtual Design Studio unit automatically computes for each page the estimated minimum view time, which is the minimum time estimate that the page must be displayed before the next page is ready for display, and the normal load time, which is an estimate of the amount of time it will take to download a page in the throughput environment that the designer has set for this sequence.

The site layout-studio unit is part of the web site configuration module 312 and enables the web site designer to create menus and define the web page sequence of the web site. The site layout studio unit displays a site menu page display and a menu item that displays the name of the site. When a user selects the menu item, one of at least two things happen: (1) a sequence of pages will play, or (2) another menu will appear, each of which can contain up to ten menu items. Using this model, sequences and menus can be nested infinitely. Figure 22 is an illustration of the site layout screen display that is displayed to the web site designer according to an alternate embodiment of the present invention. The site layout screen display 2200 includes a menu portion 2202, a menu layout portion 2204, and a control portion 2206. The menu portion 2202 includes the tree of menus and menu items within a site and the links there between. Selecting an object expands it and shows the menus and items linked hierarchically below it. The menu layout portion 2204 displays the screen layout of the menu items on each menu. Selecting a menu in the upper screen causes that menu to be displayed in the menu layout portion 2204. The user has the option of changing the menu style, by selecting the menu style button 2208 in the control portion 2206 in terms of the types of standard menu styles supported by the present invention, e.g., by modifying the displayed graphics and colors.

The virtual design studio unit includes a relational database that resides on the same computer the Virtual Design Studio is on, which can be the web site designer's computer. This database contains all the information regarding the automated web site except for the pages themselves, which are stored in files on the web server. A conventional HTML Generator module of the Virtual Design Studio creates an encoding of the database contents into a format that can be easily read by the client-side software on the user's computer. When the web site designer has completed defining the menus, pages, and sequences for the automated web site, the web site designer runs the HTML generator to create a file which is placed on the web server computer. These generated files contain the HTML code which the client-side processor and AI processing module uses to perform.

The web page preload module 1106 is described above with reference to Figures 11-13. In an alternate embodiment the web page preload module includes an artificial intelligence (AI) module that performs the functions described below. The artificial intelligence module supports the selection of different page versions and additional real-time decisions on page preloading. In other embodiments the artificial intelligence module can be stored on the server instead of the client computer.

After a user connects to the server having the web site, the AI module is downloaded to the client computer and collects information about the client computer environment including the operating system, processor capacity, Java support capabilities, types of video and audio formats that are supported, and the current throughput rate of the Internet connection. Using
5 this information the AI module makes decisions regarding which version of Java to use and which version of the page sequence to use. Since network conditions can change during the session, the AI module continually monitors the network conditions, e.g., the rate of data throughput, and can modify the web page sequence by skipping a web page, for example, in order to reduce the waiting time for the user. The AI module periodically assesses the state of
10 the session, and makes decisions accordingly. The functions performed by the AI module includes: (1) preloading pages; (2) canceling the preloading process; (3) modifying the rate of play of the current sequence; (4) inserting an additional page, e.g., a message, into the sequence; (5) skipping a page in a sequence being presented; (6) replaying one of the components, e.g., sound or video; and (7) switching to presenting another sequence of pages with a different ideal
15 throughput requirement. A more detailed description of the AI module operation is described below.

In the alternate embodiment the AI module is downloaded to the client computer. Specifically, when the user contacts the web site, a client module is downloaded on the first page and the HTML code output by the HTML generator module of the virtual design studio,
20 described above is also downloaded. This HTML code is used by the client code module and the AI module, and contains the complete description of the web site in terms of the menus, menu items, sequences, and pages found in each sequence. The client module performs three major functions: (1) probing the client machine to determine the client environment and the throughput rate, and uploading the HTML code; (2) displaying menus and pages; and (3)
25 processing user toolbar input.

The client module implements the site template as designed by the web designer. The first menu page is displayed, and the user can choose one of the available options. When the user selects an option, the sequence of web pages associated with that option is displayed in sequence on a display device, e.g., a computer monitor, coupled to the client computer. Each
30 web page can be displayed for a certain period of time, and the client module is responsible for switching pages after the view time has expired.

As stated above, some web pages may have an active toolbar. For example, some pages with a great deal of text may require that the user indicate when the user has finished reading the

text. It is possible to have a single view time that would work for all users, however fast readers may become frustrated if the view time is too long since the view time would need to be long enough to accommodate slower readers.

5 The client-server interaction and processing on the Internet World Wide Web is complex, and is greatly affected by factors such as network traffic, the number of clients accessing a particular site, the amount of content the client requested, the computer hardware speed, and the software efficiency. While some of these factors (e.g. modem speed) stay the same during an Internet session, other ones, such as network traffic, varies constantly.

10 To deliver an uninterrupted or nearly uninterrupted presentation to the user, the AI module frequently monitors the network, the server, and the client environment during a session, and makes complex decisions regarding how to proceed with the presentation. The AI module accounts for processes happening both on the server and on the client computer. The AI module synchronizes these processes while gathering information and while making decisions. The AI module constantly performs "what-if" scenarios, examining different options for
15 preventing interruptions to the pages appearing on the user's display screen.

The AI module relies on the sequences being constructed in an optimal manner for nominal throughput for a particular environment. For example, if the nominal throughput for the sequence is 20 kbps, the AI module presumes that the sequence was constructed to flow smoothly as long as the connection uniformly maintains this throughput. However, the present
20 invention is designed to work under various network conditions, under different server responsiveness, and with a variety of client computer environments, e.g., low-end personal computers with basic web browsers or high-end workstations supporting more powerful web browsers.

As described above, at the beginning of the client session, the AI module determines the
25 client's environment and the current state of the Internet connection. Some of the parameters which will affect the decisions of the AI module are: (1) the processing and Input/Output (I/O) speed of the server machine; (2) the throughput capabilities of the Web Server software; (3) the operating system on the client machine; (4) the client computer's support of Java applets; (5) the client computer's support of JavaScript; (6) the client computer's support of Client Pull
30 technology; (7) the types of video and audio formats that can be played by the browser or plug-in components of the client computer; (8) the maximum number of simultaneous connections to the Server that the client permits; (9) the browser cache size of the client computer; (10) the

number of users currently communicating with the Web Server; and (11) the current throughput rate of the Internet connection.

In one embodiment of the present invention, the AI module determines the following parameters at the beginning of a session and monitors the following parameters throughout the session: (1) the number of users currently communicating with the Web Server; (2) the current throughput rate of the Internet connection; and (3) the volatility of the network throughput rate.

At the beginning of each presentation, the AI module, based on the parameters of the session: (1) selects the versions of the requested presentation that are supported by the client environment, e.g., Java, JavaScript, ClientPull, or Generic; and (2) selects the starting version of the presentation. As described above, since network conditions may change during the presentation, the present invention can utilize all of the selected versions by, for example, switching between web page sequence versions in response to a variations in network conditions. In addition, the present invention sets the following parameters: (1) the maximum number of simultaneous connections the present invention utilizes; (2) the rate of change of the speed of the presentation sequence in response to change in network conditions; and (3) the types of filler pages, filler applications and special effects to be used during the presentation. In addition, as the session progresses, the AI module preloads new pages, graphics, sound, video and other presentation components. The AI module uses the information obtained during its network monitoring operation to determine whether the original sequence still can be played without interruptions. The AI module also monitors the progress of each component being preloaded from the Web Server, in order to make decisions about when to cancel preloading, or initiate new component preloading, as described above.

Appendix A includes a psuedo-code representation used to implement the AI module and is incorporated by reference herein.

The following is an example of the operation of the AI module. After the client connects to a server, the present invention determines, for example, that the client computer utilizes the Windows 95 Operating System, supports Java applets, supports running QuickTime videos, permits a maximum of two simultaneous connections to the server, and has a browser cache size of 10 megabytes. The AI module determines that versions of the top-level presentation can utilize Java applets and QuickTime video technology.

A probe page is downloaded to the client computer, and the present invention determines that the number of users currently communicating with the web server is at about half of Server's capacity and the current throughput rate of this Internet connection is 1000 kbps.

The present invention then selects the starting version of the presentation that corresponds to network throughput rate of 1000 kbps, and preloads the first page of the web site. The AI module determines that there are two components currently being downloaded, one from the next page, and one from the following page.

5 The presentation begins, and the present invention starts presenting selected sequence of pages, while continuing to monitor the presentation and network conditions.

 During the presentation, and as a result of the network monitoring performed by the AI module, the present invention detects a drop in network connection's throughput, for example down to 100 kbps.

10 The AI module of the present invention sets up a virtual scenario of canceling the process of preloading the second component because even though the first component would download sooner, the timing for the next page would still be late.

 The AI module determines that current page has an animated GIF component that can be replayed at the end of the page and adds this replay to the scenario being considered. However,
15 invoking a what-if analysis still results in unacceptable timing. Therefore, the expert system consults a presentation script, and determines that at this point a "Skip page", or "Special Effect" actions are not available and, accordingly, rejects this scenario.

 The expert system then runs through some other viable "what-if" scenarios, and rejects all of them except the one requiring switching to the sequence corresponding to a 56 kbps
20 throughput.

 The AI module then instructs the Vayu Web client module 1104 to modify the selected sequence of pages. The AI module then continues monitoring the presentation and network conditions.

 Later in the presentation, the AI module detects an increase in network connection's
25 throughput up to 900 kbps. The expert system sets up a virtual scenario of switching to the sequence corresponding to 1000 kbps throughput, and runs a what-if analysis on that scenario, whose result is acceptable. The AI module then switches back to the sequence of pages corresponding to 1000 kbps throughput, and continues with the presentation.

 While the present invention has been particularly shown and described with reference to
30 a preferred embodiment, it will be understood by persons skilled in the relevant art that various changes in form and details can be made therein without departing from the spirit and scope of the invention.

Appendix A

5 The following is Java-based pseudo-code for the AI module
for an embodiment of the present invention.

Class Definitions

```

10 class PrSite
{
    //describes the site (e.g. "General Goods")
    //for which presentations are built
    string      name;
15 PrSiteViewVec &   siteViewVec; //presentation projects
};

class PrSiteView
20 {
    //hierarchical tree of presentations accessible to user logging-in
    string      name;
    PrSite &    site;
    PrPage &    rootMenuPage;      //top-level menu
25 Presentation &   rootPresentation; //top-level presentation
};

typedef Vector<Presentation> PresVec

30 class Presentation
{
    //describes a presentation corresponding to a menu item
    string      name;
    string      type;      //sequence, white-paper, order-form
35 PrSiteView &   siteView;
    Presentation &   parent;      //parent in the pres. tree
    PresVec &      childVec;      //first child in the pres. tree
    SequenceVec &   sequenceVec; //list of alternate page-sequences
    PrPage &        tailMenuPage; //menu to display after presentation
40 PrPageVec &      tailPageVec;  //list of pages tacked-on (e.g. order-
                                //form)
};

45 class PrSequence
{
    //sequence of pages making up a presentation
    //a presentation may have several alternative sequences
    //for different communication speed, Java support, plug-in support
50 string      name;
    string      type;
    string      environmentType; //e.g. for Java-supporting browsers
    Presentation &   presentation; //back pointer to presentation owning
    PrSeqItemVec &   itemVec;      //list of items (pages) comprising this
55 };

class PrSequenceItem
{
    //item of the presentation sequence
    PrSequence &    sequence;
60 PrPage &         page;      //page (usually HTML)
    long          idealViewTime; //prescribed under normal state
    long          minViewTime;
    long          maxViewTime;
65 long          loadTime;      //expected load time at throughput
                                //for which sequence was designed

```

```

    int          pauseAllowed; // user pauses when this item is displayed
    int          forwardAllowed; //enable "forward" button when displayed
    int          skipAllowed; //allow skipping this page
5   PrPage &     preloadPage; //when displaying this item, start preloading
                                //preloadPage before preloading next page
    PrFxVec &     fxVec;        //list of available "special effects"
                                //to be used when timing is Late
    PrSequence & upSequence;    //another sequence to switch to
                                //when Internet conditions improve
10   PrSequenceItem & upItem;    //item within sequence to switch to
                                //when Internet conditions improve
    PrSequence & downSequence; //another sequence to switch to
                                //when Internet conditions degrade
15   PrSequenceItem & downItem;  //item within sequence to switch to
                                //when Internet conditions degrade
};

class PrPage
20 {
    //HTML page, or special effect page, or applet
    string        name;
    string        type; //HTML, VRML, Applet, FX
    string        url;  //locator
25   long         size; //file size (for download monitoring)
    PrComponentVec & componentVec; //list of components (images, sound, video)
};

class PrComponent
30 {
    //image, video, sound, applet and other non-text components of a page
    string        name;
    string        mime_type; //image, sound, etc.
    long         size; //file size
35   long         playTime; //play (display) time; for timing
    string        url; //locator
};

class PrFx
40 {
    //special effect (filler to smooth out the presentation at changing conditions)
    string        name;
    string        type; //text msg, applet, animation clip
    string        selectionType; //random, by priority, specific
45   PrPageVec &  pageVec; //page containing this FX
};

class PrEnvironment
50 {
    //class of browser environment
    //for which sequences can be created
    string        name;
55 };

#include "VauyWebPresSmooth.h"

60 class PresentationManager : public Applet
{
    int ProbePage()
    {
65         //spawn a separate thread to gauge throughput rate
        spawnThread( "ThroughputTest");
    }
};

```

```

5      //get maximum number of simultaneous connections
      //the browser is allowed to open
      maxConnectionCnt = Browser.getMaxConnectionCnt();

      //get browser's buffer size
      netBufferSize = Browser.getNetBufferSize();

10     //inquire what kinds of plugins the browser has
      Browser.getPlugins(pluginVec);
      for( plugin = pluginVec.firstElement;
          plugin != NULL;
          plugin = plugin.nextElement())
15     {
        switch plugin.type
        {
          case pluginStreamingVideo:
            streamVideoType = StreamVideoTypeVec[plugin.vendor];
            break;
20          case pluginVirtualReality:
            vrPlayer = Yes;
            break;
          }
        //switch
      }

25     // wait for completion of the throughput test thread
      waitFor( finish, "ThroughputTest");

30     //now we have all parameters needed to determine
      //which of the presentation environment to choose
      environ = determineEnvironment();

35     //preload the top-level menu, and display it
      spawnThread( "PreloadPage", presView.rootMenuPage);
      curPage = presView.rootMenuPage;
      displayPage( curPage);

40     //determine which sequences will potentially be used
      //in the presentation, as well as starting sequence
      rootPresentation.startSequence = DetermineSequences( sequenceVec);

      //preload first page of the chosen sequence
45     spawnThread( "PreloadPage", "Fx", presView.rootPresentation);

      //spawn controlling thread
      spawnThread( "rootSequenceManager");

      //spawn a separate thread to monitor throughput rate
50     spawnThread( "PeriodicThroughputTest");

      } //ProbePage()

55
int Presentation::SequenceManager()
{
    curSequence = startSequence;
    curEnv = startEnv;

60     //go through all items of the sequence
    seqItem = mainSequence.pageVec.firstElement;
    while( true)
    {
65         //reassess the state of the network (since prev. page)

```

```

curState = assessState();
switch curState
{
case stThroughputDidNotChangeDramatically:
5      //can we preload one more component?
      if( preloadedCount >= MaxPreloadedCount)
      {
          break;
10      }
      nextPreloadSeqItem =
          curSequence.getNextPreloadSeqItem();
      nextPreloadComp =
          curSequence.getNextPreloadComponent();
15      //check if this comp is already cached
      nextPreloadComp.calcDownloadTime( curEnv);
      nextDownloadOK = true;

      //for each comp being downloaded,
      //see if starting new download will thwart timing
20      for(i = 0; i < MaxPreloadedCount; ++i)
      {
          comp = componentBeingDownloaded[ i];
          if( comp.status != stInProgress)
          {
              continue;
25          }
          comp.calcTimeToStart();
          comp.calcRemainingTimeToDownload();

          if( comp.timeToStart <
30              comp.remainTimeDL +
              nextPreloadComp.totTimeDL)
          {
              //timing = Late; it is not OK to download
              nextDownloadOK = false;
              break;
35          }
      }
      if( !nextDownloadOK)
          break; //switch
      //OK to download this component; do it
      spawnThread( nextPreloadComp.preload);
      break; //switch

case stUrlNotFound:          //file not found
45      //can we skip this page?
      if( nextPreloadSeqItem.skipAllowed)
          //yes: skip it
          nextPreloadSeqItem.setSkip();
      else
          //no: try to switch sequences
50      nextPreloadSeqItem.setJumpSequence();

case stThroughputIncreased:
      //keep count of how steady is the increase
      ThroughputIncreasedCount++;
55      ThroughputDecreasedCount = 0;
      nextSequence.nextItem = curSequenceItem.upSeqItem();
      //can we afford (timing-wise) to go up the sequence
      nextSequence.nextItem.calcTiming();
      if( nextSequence.nextItem.timingOK)
      {
          //yes: switch
          setNextItem(nextSequence.nextItem);
60      }
      else
          //no: act as if no change
          setStatus(stNormal);
65

```

```

        break;

    case stThroughputDecreased:
        //keep count of how steady is the decrease
        ThroughputDecreasedCount++;
        ThroughputIncreasedCount = 0;

        calcCurTiming();
        if(curSequenceItem.timingOK)
            //we are still OK for this and next page
            break;

        //try different ways to handle oncoming delay
        //(returns success if we can handle it)
        if( (status = handleLateTiming()) == Success)
            break;

        //cannot handle delay with any other method
        //try to switch to lower sequence
        curSequence = curItem.lowSequence;
        nextItem = curItem.getLowSeqItem();

        break;

    case stThroughputLow:
        //keep count of how steady is the decrease
        ThroughputDecreasedCount++;
        ThroughputIncreasedCount = 0;
        calcCurTiming();
        if(curSequenceItem.timingOK)
            //we are still OK for this and next page
            break;
        else
        {
            setStatus(stThroughputDecreased);
            continue; //next iteration picks it up and handles
            it
        }
    } //switch
} //while
//manager()

int handleLateTiming()
{
    //if we currently are displaying text,
    //increase viewing time by 20%
    //(whether it helps or not)
    if(curItem.page.mimeType == "text")
    {
        increaseViewTime(curItem, percentIncreaseForText);
        calcCurTiming();
        if(curSequenceItem.timingOK)
        {
            return Success;
        }
    }
}

//can we replay any components already loaded?
if( curItem.replayCompVec != NULL)
{
    //rule: if comp i is replayed,
    //then i+1, i+2, ... must be replayed
    comp = curItem.replayCompVec.lastElement();
}

```

```

5         while (comp != NULL)
        {
            virtualAddComp( comp);
            calcCurTiming();
            if(curSequenceItem.timingOK)
            {
                curItem.setReplay(comp);
                return Success;
            } else
            //try one more replay-components
            comp = comp.PreviousElement();
        }
    }
    //are we preloading two pages ahead?
    //see if stopping that will help
    //if it does not help, do NOT stop preloading it yet!
    while(1)
    {
        seqItem = getLatestItemForWhichCompBeingPreloaded();
        if( seqItem != curItem
            && seqItem != curItem.nextElement)
        {
            virtualStopDownload(seqItem.downloadingComponents);
            calcCurTiming();
            if(curSequenceItem.timingOK)
            {
                //we will be OK for this and next page
                stopDownload(seqItem.downloadingComponents);
                return Success;
            }
        } else
        break;
    } //while
    //can we skip next page (or couple)?
    while( curItem.nextElement.skipAllowed)
    {
        curItem.nextElement.setSkip();
        calcCurTiming();
        if(curSequenceItem.timingOK)
        {
            //we will be OK for this and next page
            return Success;
        }
    }
    //try FXs available
    if( curItem.FxVec != NULL)
    {
        fx = curItem.FxVec.firstElement();
        while( fx != NULL)
        {
            virtualApplyFx( fx);
            calcCurTiming();
            if(curSequenceItem.timingOK)
            {
                //we will be OK for this and next page
                return Success;
            }
        }
    }
    return Fail;
} //handleLateTiming()
} //class

```

CLAIMS

What is claimed is:

- 5 1. A computer based method for generating a web site having a plurality of web pages, the computer having a storage module and having a wide area network interface, the method comprising the steps of:
- designing a menu web page having one or more menu items;
- designing a sequence of web pages, including a first and second web page, for each of
- 10 said menu items, said first web page only capable of accessing one of said second web page and said menu web page, said second web page only capable of accessing the immediately subsequent web page in said sequence of web pages and said menu web page, said sequence of web pages;
- identifying each menu item with one of said sequence of web pages; and
- 15 storing said menu web page and web page sequence information in the storage module.
2. The method of claim 1, wherein said sequence of web pages is designed by a webmaster, said sequence of web pages enables the webmaster to control the content and sequence of information displayed to the client.
- 20 3. The method of claim 2, further comprising the step of:
- receiving a request signal from a destination computer via the wide area network interface, for requesting access to the web site;
- transmitting said menu web page and said web page sequence information to said
- 25 destination computer via the wide area network;
- displaying said menu web page to a client on a display device coupled to said destination computer;
- preloading additional web pages before said client selects a menu item;
- receiving a menu item selection from a client;
- 30 preloading said sequence of web pages associated with said selected menu item, using a dynamic preload algorithm; and
- displaying said sequence of web pages to the client without permitting the client to alter said sequence.

4. The method of claim 3, wherein said step of preloading said sequence of web pages includes the steps of:

determining a data receiving rate of the destination computer;

5 determining the size of two or more web pages in said sequence of web pages;

setting a priority value for each of said two or more web pages in said sequence of web pages based upon said data receiving rate, said size of said web page, and the position in said sequence of said web page;

10 preloading one of said two or more web pages into said destination computer storage module, based upon said priority value; and

dynamically modifying said priority value of one or more web pages to reduce any delay in displaying one of said web pages to the client.

1/20

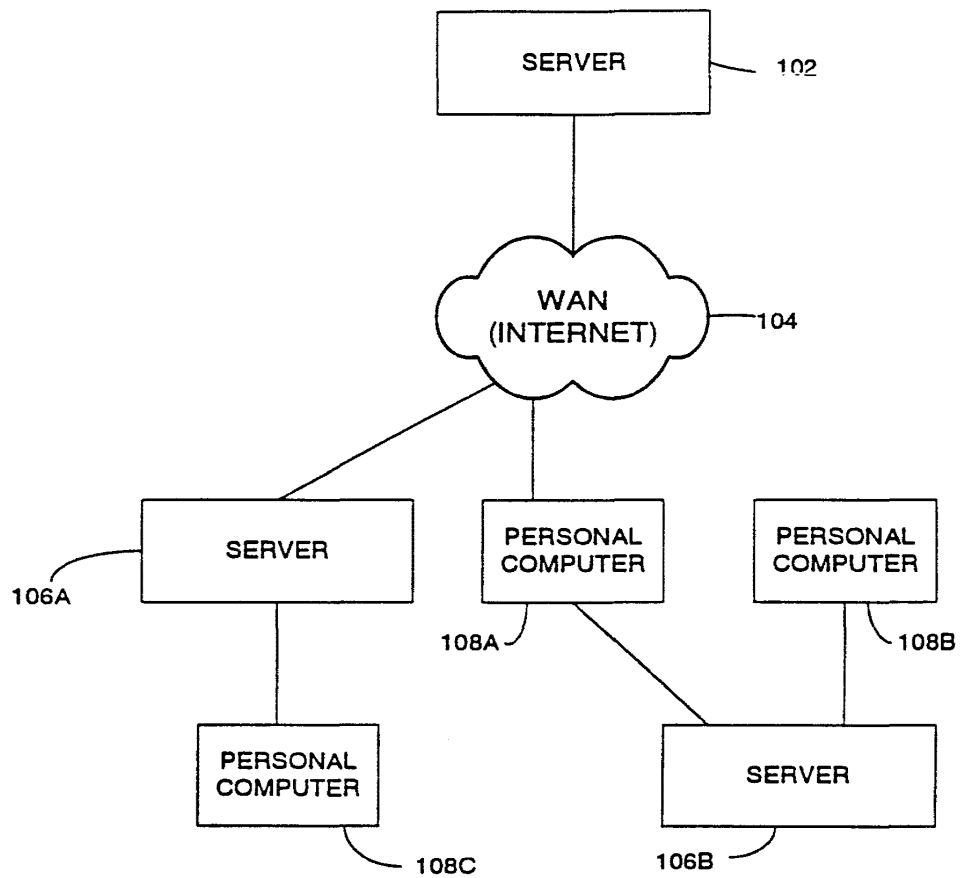


FIGURE 1

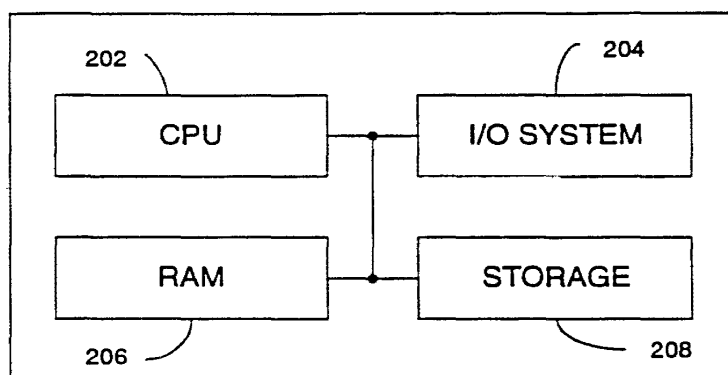


FIGURE 2

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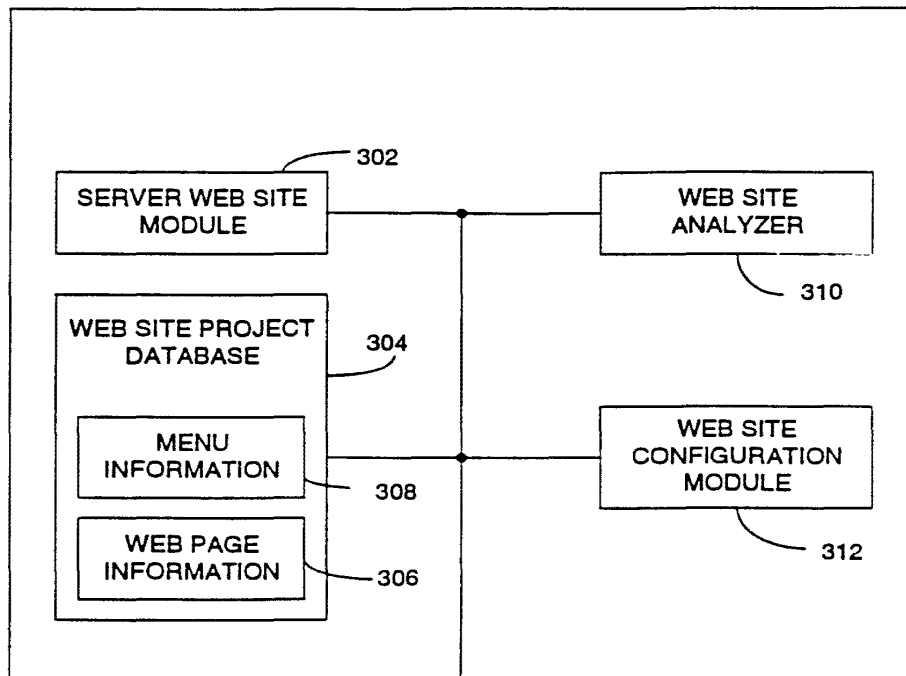


FIGURE 3

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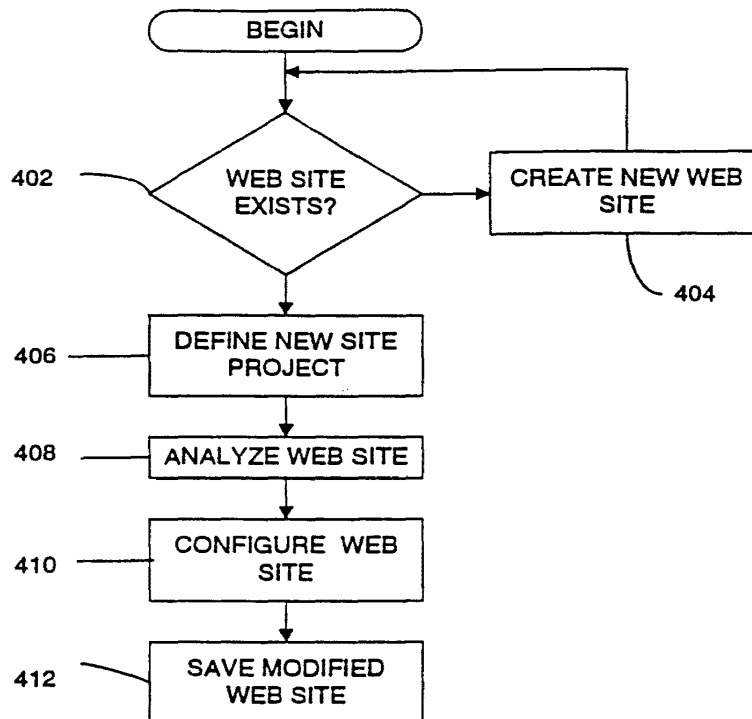


FIGURE 4

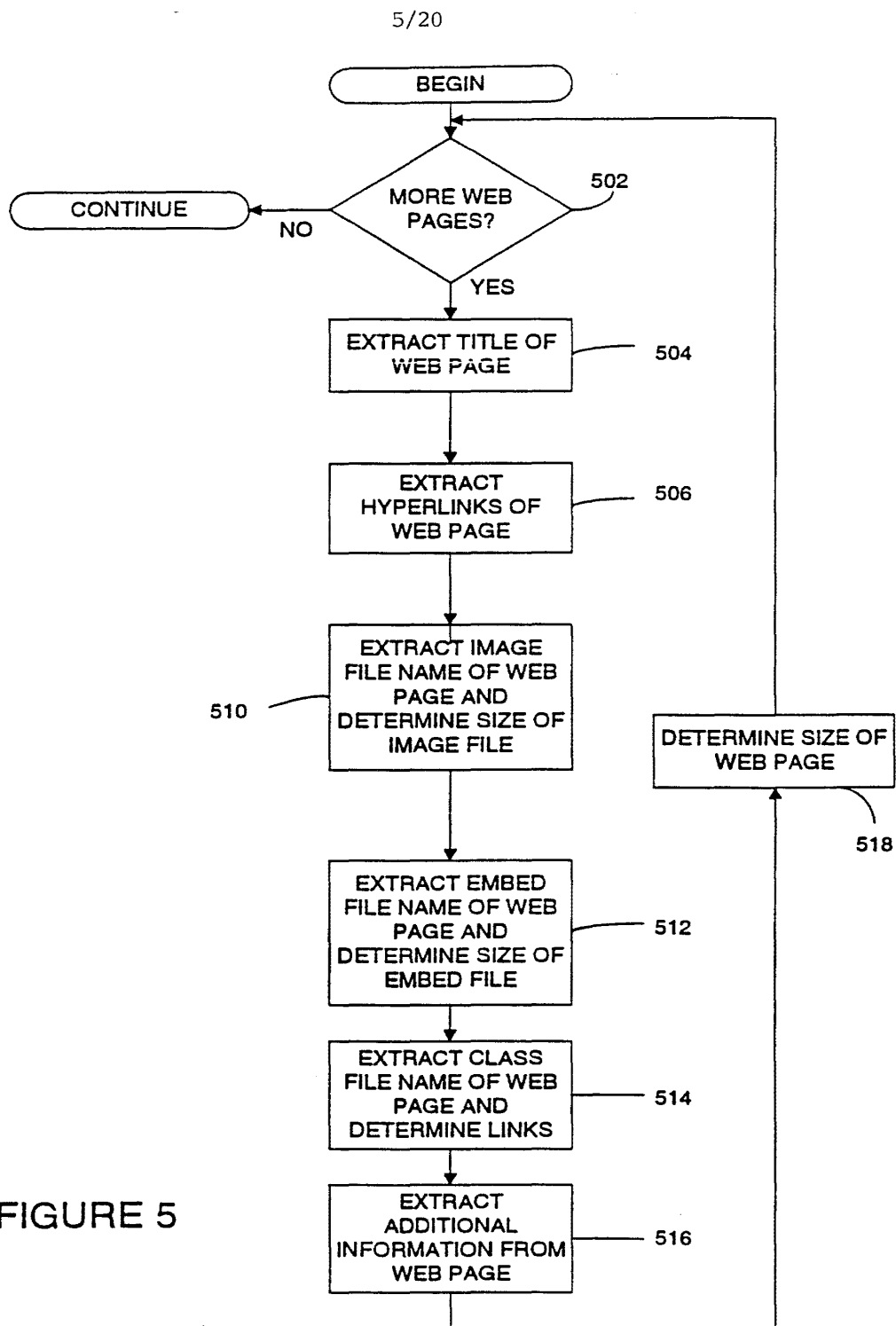


FIGURE 5

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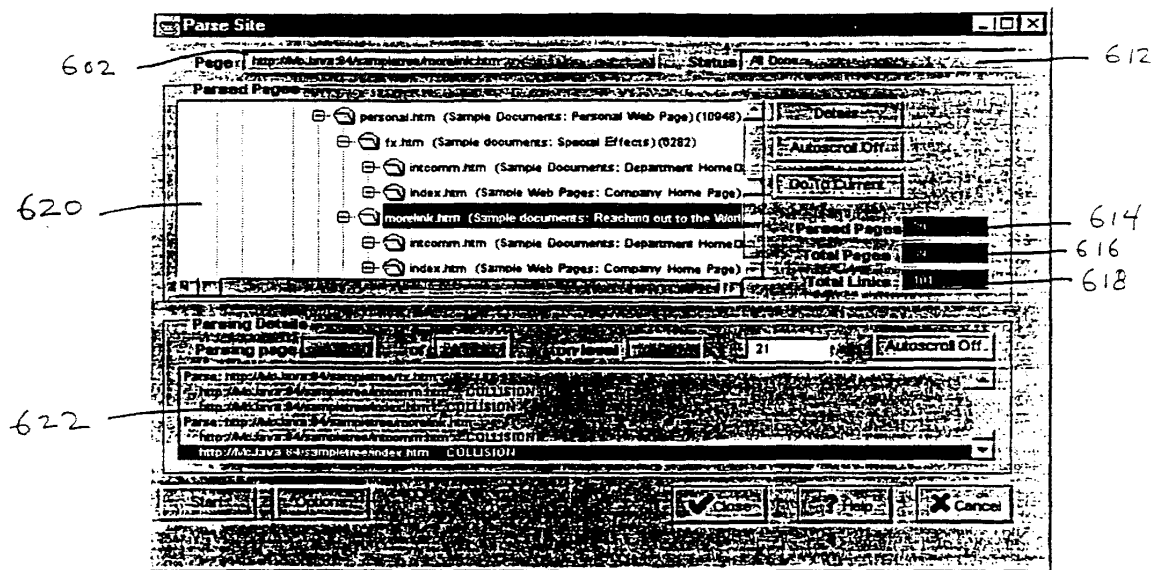


Figure 6

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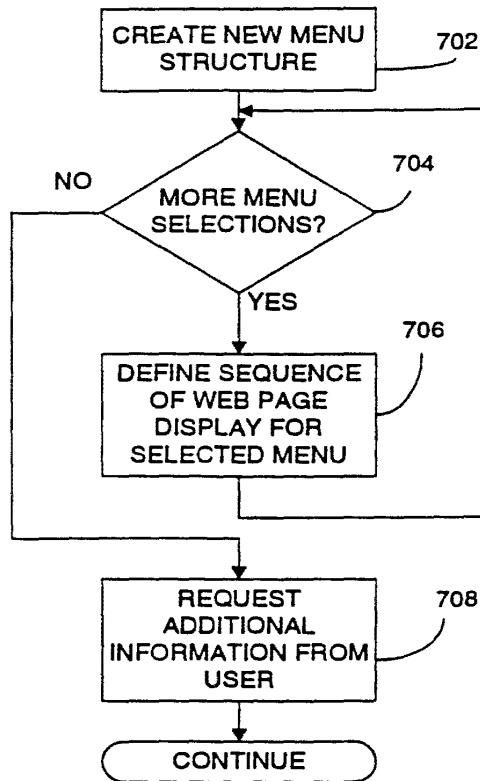
410

FIGURE 7

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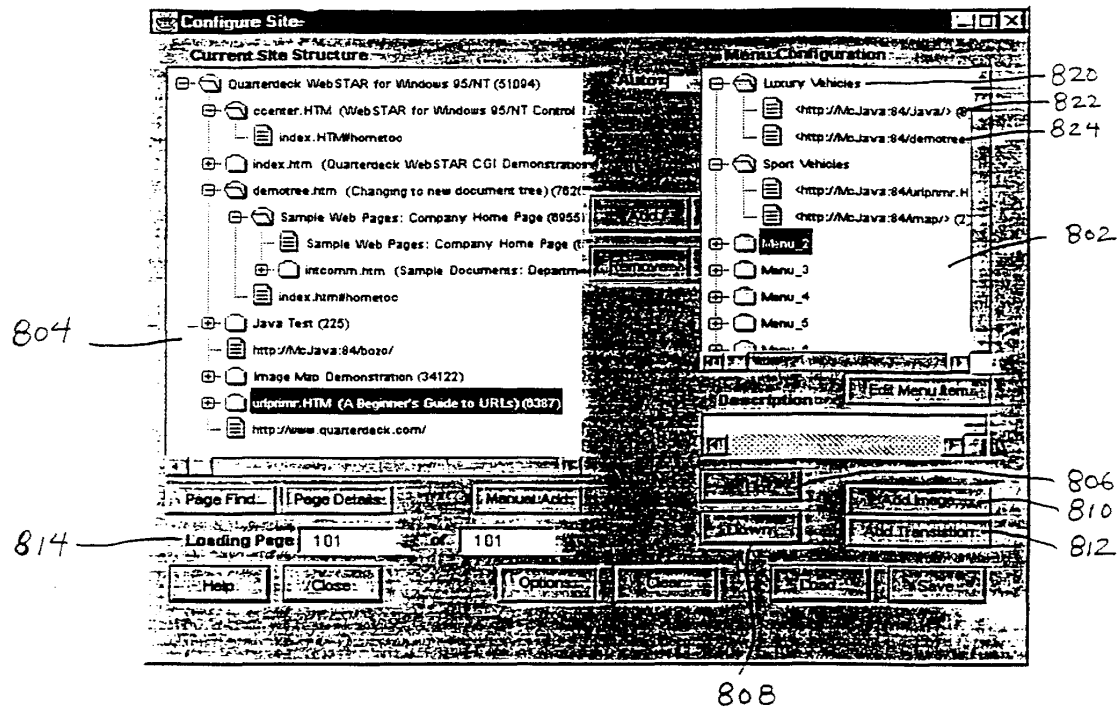


Figure 8

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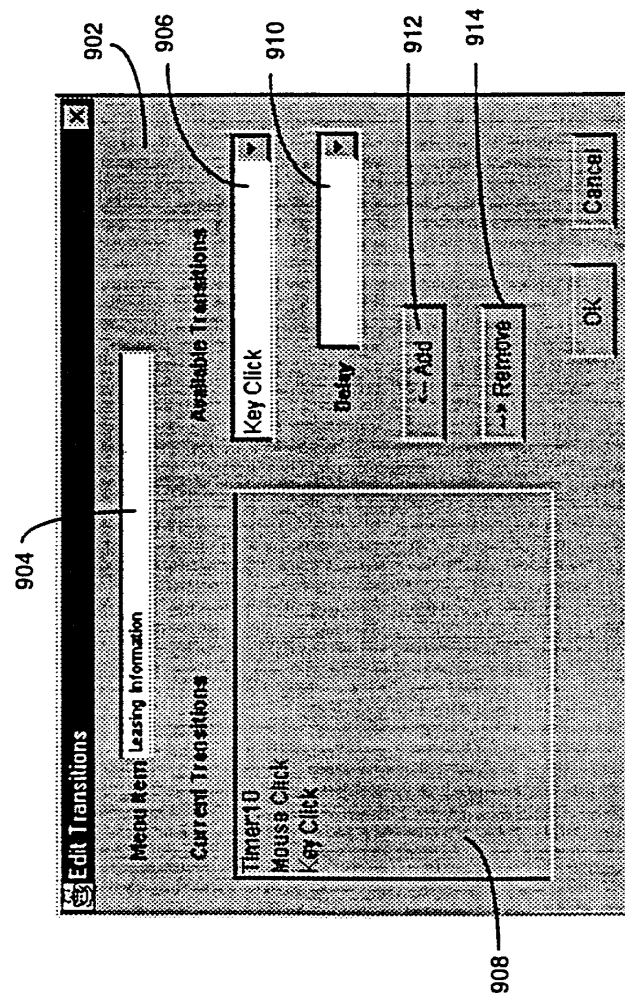


Figure 9

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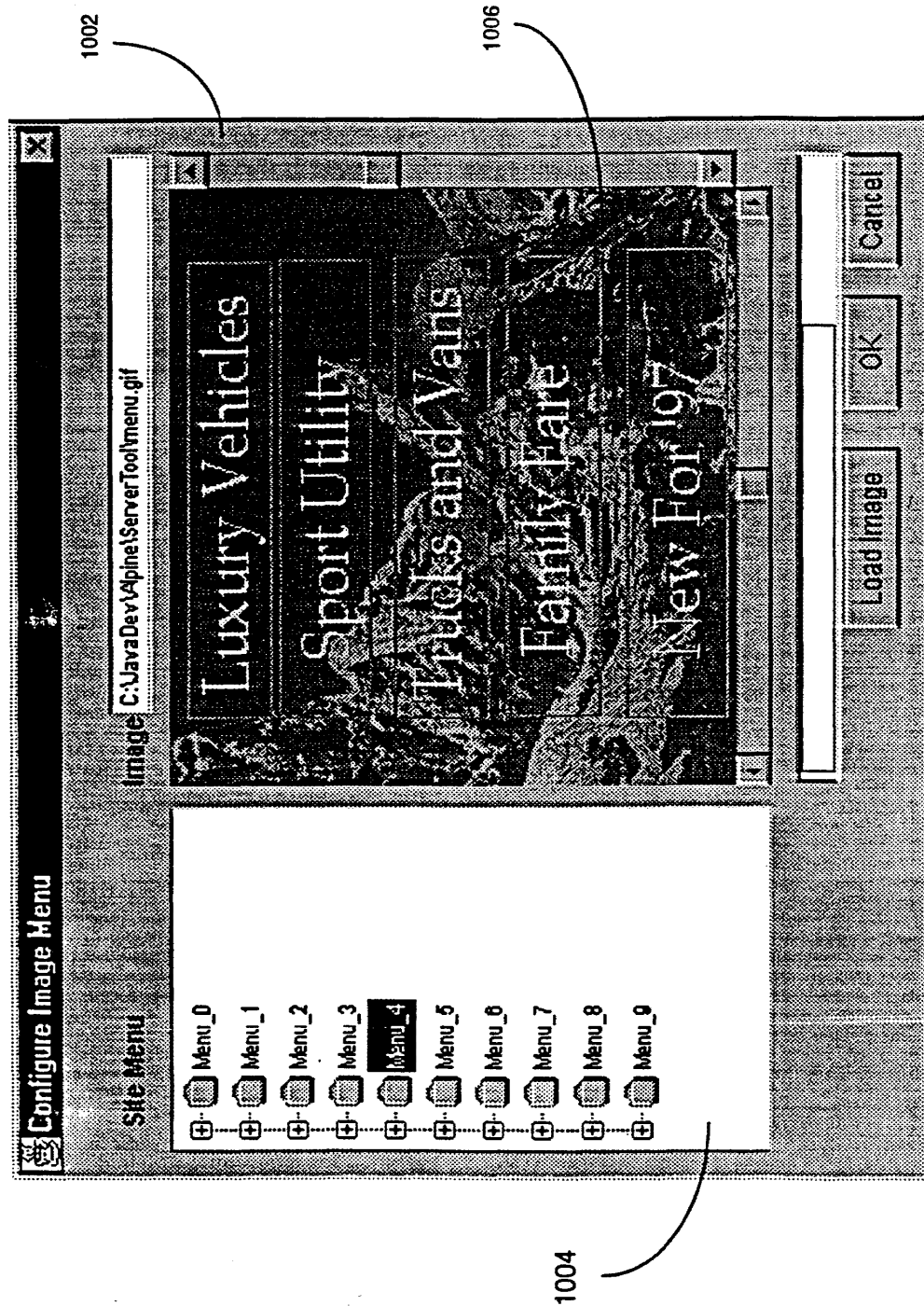


Figure 10

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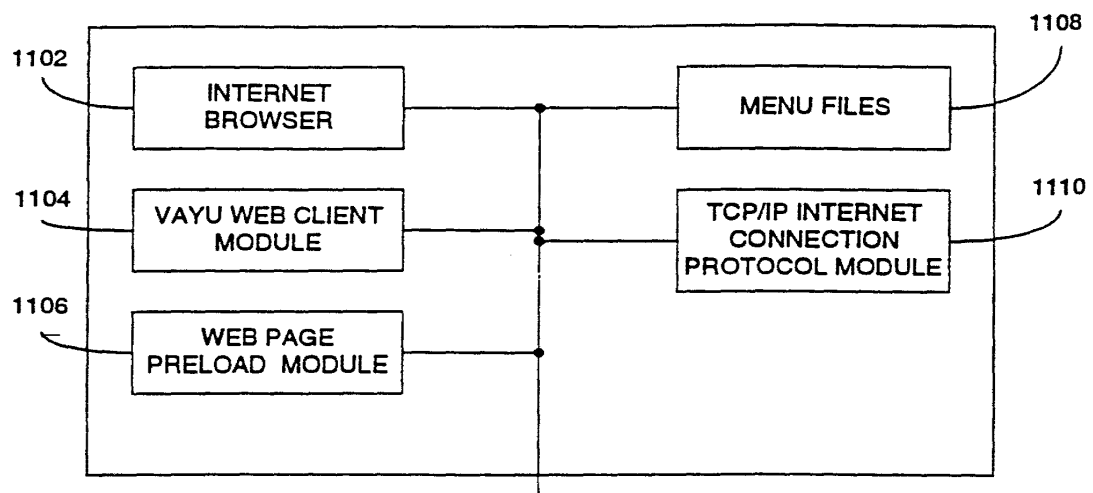


FIGURE 11

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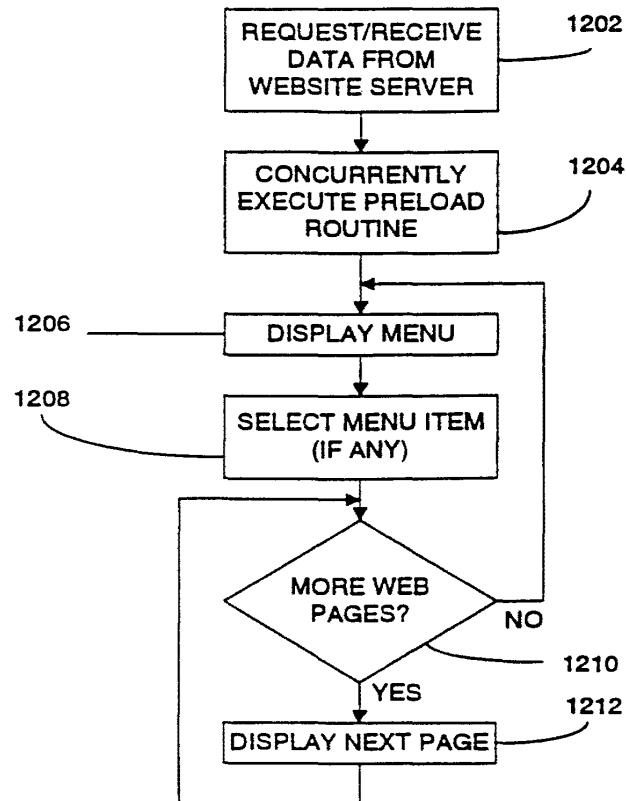


FIGURE 12

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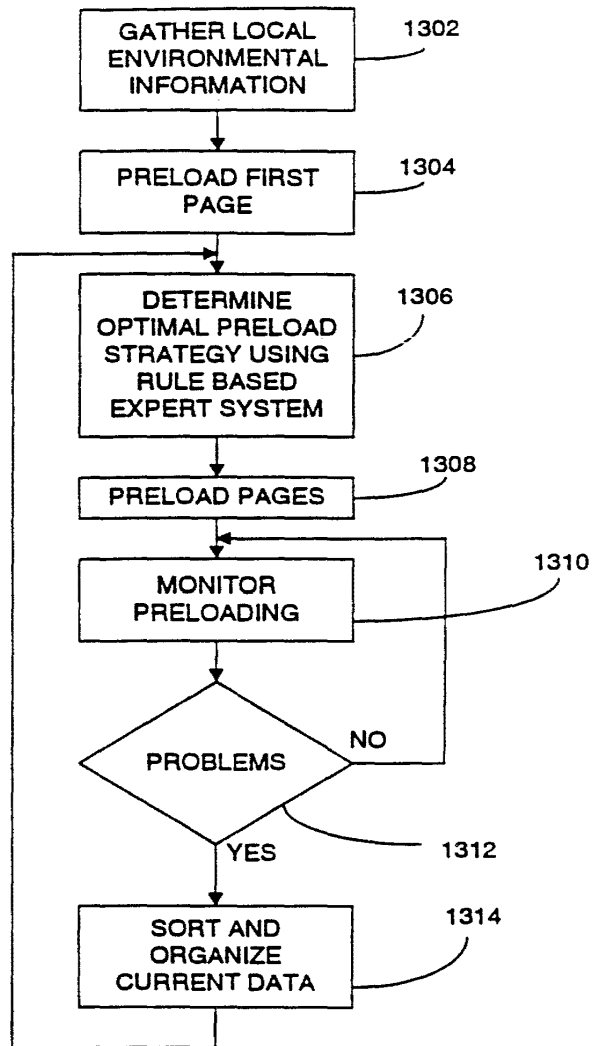


FIGURE 13

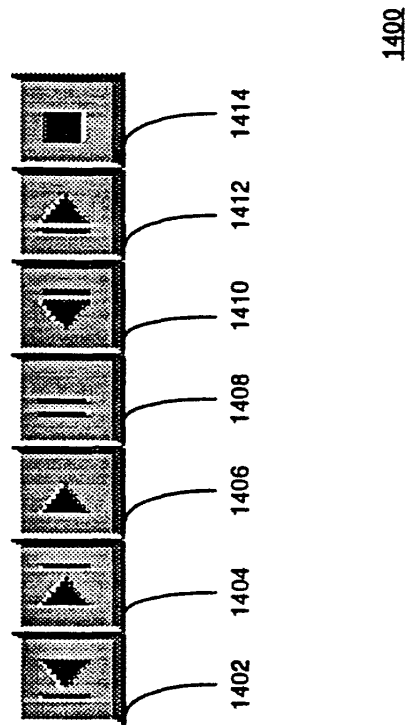


Figure 14

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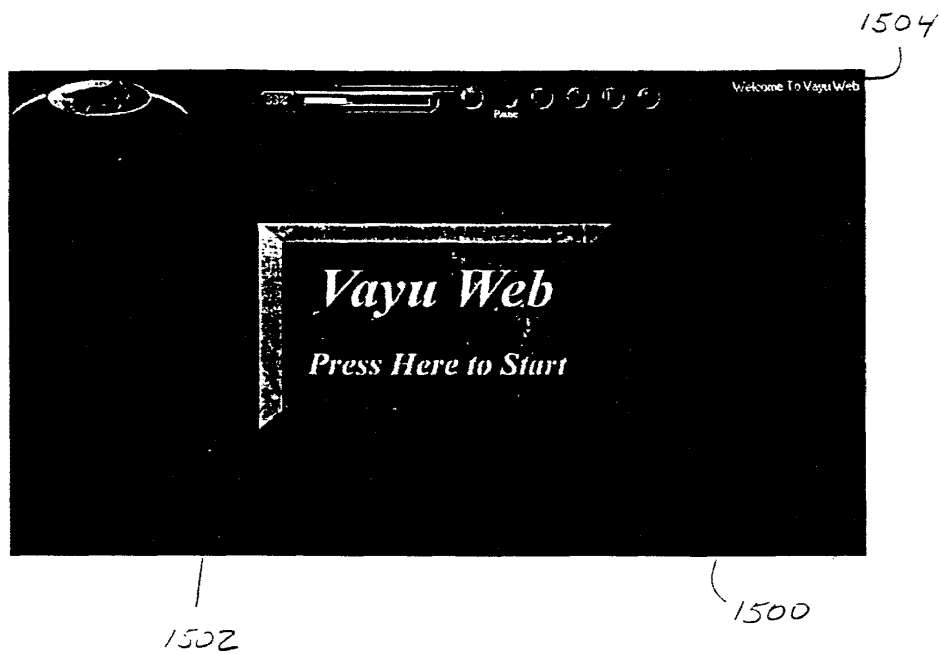
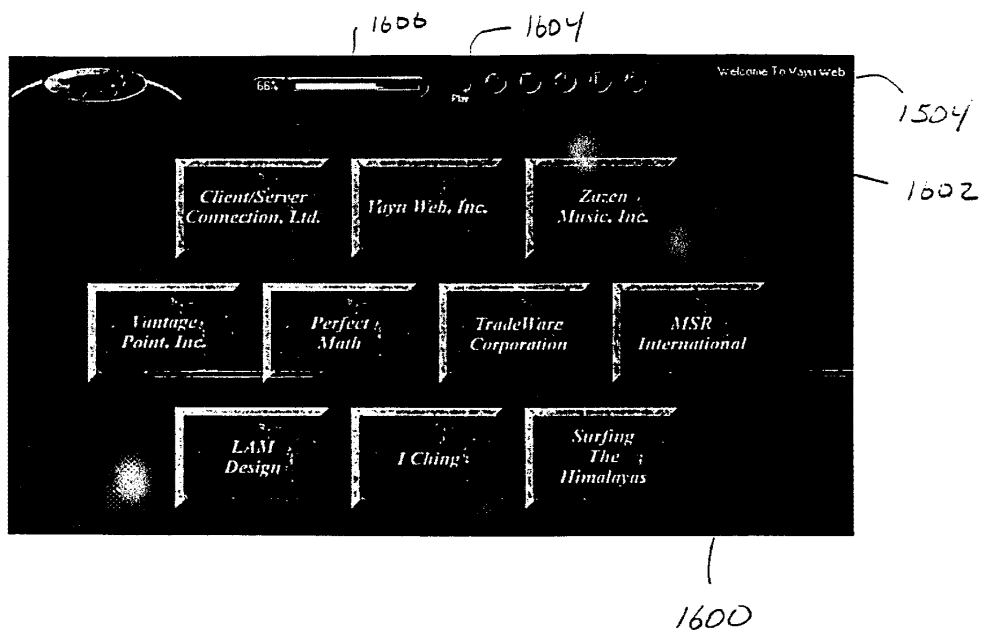


FIGURE 15

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**FIGURE 16**

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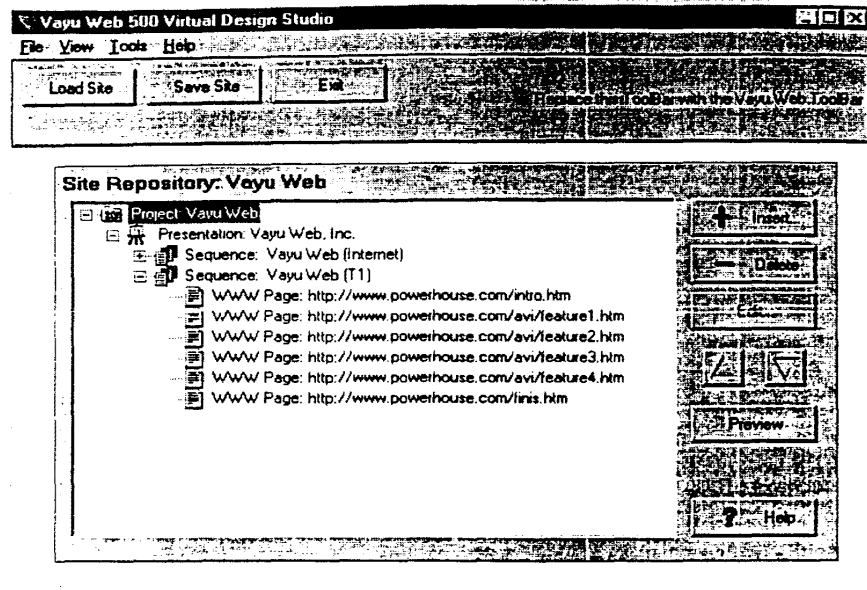


FIGURE 17

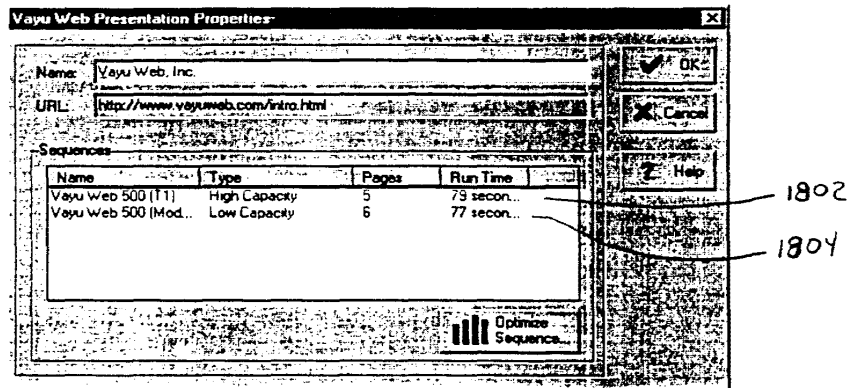


FIGURE 18

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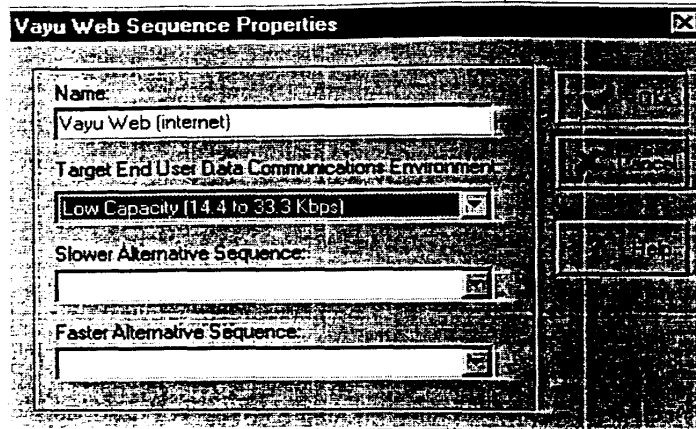
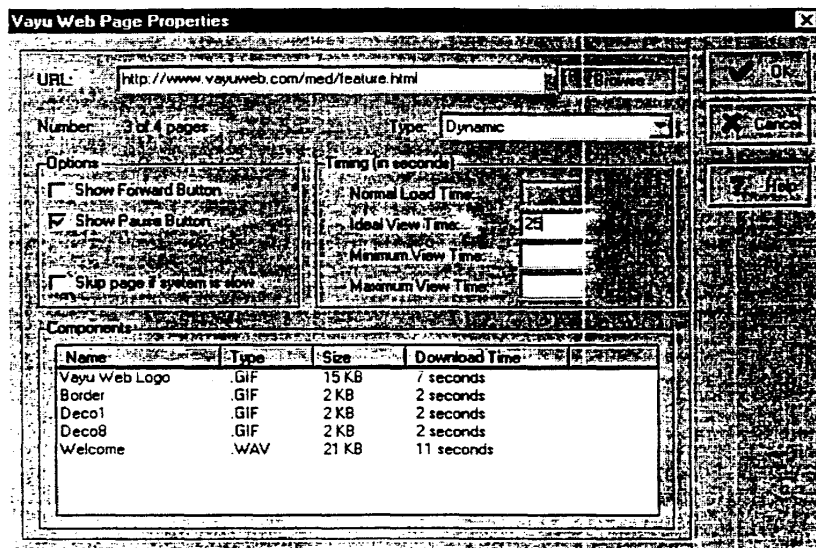


FIGURE 19

1900



2000

FIGURE 20

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FIGURE 21

Optimize Sequence

Sequence: Vayu Web (Internet) Type: Static
Data Communications Environment: Low Capacity (14.4 to 33.3 Kbps)

Legend

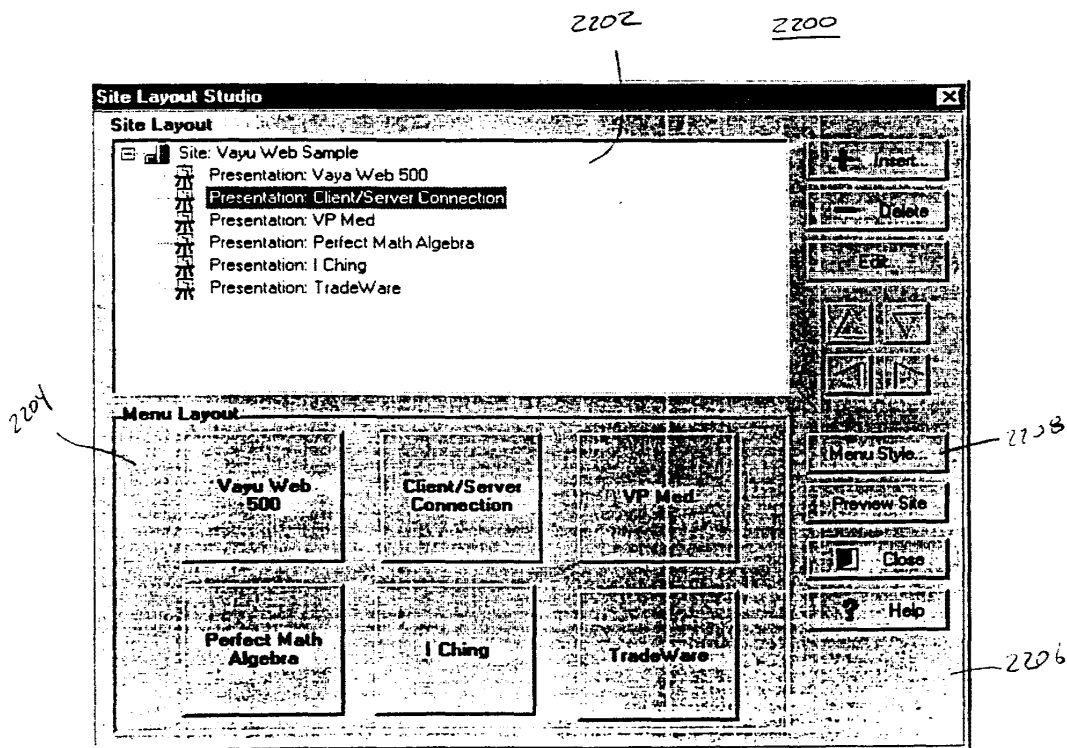
- Above Ideal View Time Level
- Below Ideal View Time Level

Ideal View Time				
Estimated View Time				
Normal Load Time				
Optional Page?				

<< Back Pages 1 to 7 of 7 Next >>

OK Cancel Optimize Help

20/20

FIGURE 22



Robert Greene Sterne
Jorge A. Goldstein
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Robert W. Esmond
Tracy-Gene G. Durkin
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Michael B. Ray
Robert E. Sokohl
Eric K. Steffe
Michael Q. Lee
John M. Covert
Robert C. Millonig
Donald J. Featherstone
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*Practice Limited to
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October 29, 2007

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PO Box 1450
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Art Unit 2155

Attn: Mail Stop Amendment

Re: U.S. Utility Patent Application
Application No. 11/452,431; Filed: June 14, 2006
For: **System and Method Related to Generating an Email Campaign**
Inventors: Foulger *et al.*
Our Ref: 2222.9480002

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Online Credit Card Payment Authorization in the amount of **\$180.00** to cover Information Disclosure Statement Fee;
2. Supplemental Information Disclosure Statement;
3. Form PTO/SB/08A (4 sheets) listing eighty-six documents (US1-US77 and FP1-FP9);
4. Form PTO/SB/08B (3 sheets) listing twenty-three documents (NPL1-NPL23); and
5. Copies of cited documents (FP1-FP9 and NPL1-NPL23).

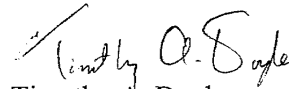
In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents
October 29, 2007
Page 2

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Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Timothy A. Doyle". The signature is written in a cursive, flowing style.

Timothy A. Doyle
Attorney for Applicants
Registration No. 51,262

TAD/nnk
Enclosures

Doc # 739436



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*Admitted only in Maryland
*Admitted only in Virginia
*Practice Limited to
Federal Agencies

September 6, 2007

WRITER'S DIRECT NUMBER:
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TDOYLE@SKGF.COM

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Art Unit 2165

Re: U.S. Utility Patent Application
Application No. 11/452,431; Filed: June 14, 2006
For: **System and Method Related to Generating an Email Campaign
(As Amended)**
Inventors: FOULGER *et al.*
Our Ref: 2222.9480002

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Statement Under 37 C.F.R. § 3.73(b) with Supplemental Sheet.

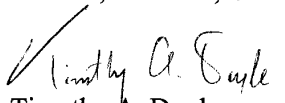
The above-listed documents are filed electronically through EFS-Web.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.


Timothy A. Doyle
Attorney for Applicants
Registration No. 51,262

TAD/brc
Enclosures

718380_1.DOC

Send to: doyle@skgf.com : 1100 New York Avenue, NW : Washington, DC 20005 : 202.371.2600 : 202.371.2540 : www.skgf.com

STATEMENT UNDER 37 CFR 3.73(b)

2222.9480002

Applicant/Patent Owner: Michael G. Foulger, et al.

Application No./Patent No.: 11/452,431 Filed/Issue Date: June 14, 2006

Entitled: System and Method Related to Generating an Email Campaign (as amended)

Archeron Limited LLC, a Limited Liability Company
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest
(The extent (by percentage) of its ownership interest is _____ %)

in the patent application/patent identified above by virtue of either:

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Michael G. Foulger, et al. To: ICPlanet Corporation
The document was recorded in the United States Patent and Trademark Office at
Reel 019752, Frame 0433, or for which a copy thereof is attached.
2. From: ICPlanet Corporation To: Hall, Kinion & Associates, Inc.
The document was recorded in the United States Patent and Trademark Office at
Reel 018263, Frame 0642, or for which a copy thereof is attached.
3. From: Hall, Kinion & Associates, Inc. To: Kforce, Inc.
The document was recorded in the United States Patent and Trademark Office at
Reel 018257, Frame 0579, or for which a copy thereof is attached.

☒ Additional documents in the chain of title are listed on a supplemental sheet.

☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Timothy A. Doyle
Signature

Timothy A. Doyle, Reg. No. 51,262

Printed or Typed Name

Authorized Person

Title

6 SEP 07
Date

Telephone Number

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Statement Under 37 CFR 3.73(b)

Supplemental Sheet

Applicant/Owner: Michael G. Foulger, et al.

Application No./Patent No.: 11/452,431

Filing Date/Issue Date: June 14, 2006

Title: SYSTEM AND METHOD RELATED TO GENERATING AN EMAIL
CAMPAIGN (AS AMENDED ON 6/14/2006)

Name of Assignee: Archeron Limited LLC

Type of Assignee: Limited Liability Company

Additional Documents in the Chain of Title:

4. From: ICPlanet Corporation To: KForce, Inc.

The document was recorded in the United States Patent and Trademark Office at Reel:
019002; Frame: 0645, or for which a copy thereof is attached.

5. From: KForce, Inc. To: Archeron Limited LLC

The document was recorded in the United States Patent and Trademark Office at Reel:
019550; Frame: 0768, or for which a copy thereof is attached.

#681739v1.DOC

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☒ Practitioners associated with the Customer Number: 26111

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☒ The address associated with Customer Number: 26111

OR

☐ Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Email

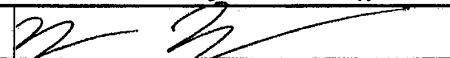
Assignee Name and Address:

Archeron Limited LLC
 2711 Centerville Road, Suite 400
 Wilmington, DE 19808

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	7/26/2007
Name	Bryan Burpee	Telephone	
Title	Authorized Person for Archeron Limited LLC		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt	
EFS ID:	2166955
Application Number:	11452431
International Application Number:	
Confirmation Number:	2713
Title of Invention:	System and method related to generating an email campaign
First Named Inventor/Applicant Name:	Michael G. Foulger
Customer Number:	26111
Filer:	Timothy Aloysius Doyle
Filer Authorized By:	
Attorney Docket Number:	2018.0040002
Receipt Date:	07-SEP-2007
Filing Date:	14-JUN-2006
Time Stamp:	09:09:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		22229480002373bandPower ofAtty.pdf	372651 eb4be37a9e80dcd356d570861a9e1d34c28470a4	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Miscellaneous Incoming Letter	1	1
	Assignee showing of ownership per 37 CFR 3.73(b).	2	3
	Power of Attorney	4	4
Warnings:			
Information:			
Total Files Size (in bytes):		372651	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.			



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/452,431	06/14/2006	Michael G. Foulger	2018.0040002	2713
26111 7590 05/18/2007 STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER BAROT, BHARAT	
			ART UNIT 2155	PAPER NUMBER
			MAIL DATE 05/18/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	11/452,431		FOULGER ET AL.	
	Examiner		Art Unit	
	Bharat N. Barot		2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 14 June 2006.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 20-34 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 20-34 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 06/14/2006.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

NON-STATUTORY DOUBLE PATENTING

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application, See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

ANTICIPATION REJECTION

2. Claims 1-9 and 12-17 of U.S. Patent No. 7,065,555 contain every elements and limitations of claims 20-34 of the instant application and as such anticipate claims 20-34 of the instant application. This is a double patenting rejection.

3. "A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

4. The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

The claimed invention of the pending claims 20-28 of the instant application is same as the claimed invention of the patented claims 1-9 of the U.S. Patent No. 7,043,525. Applicant claimed the common subject matter in a broader scope by deleting a limitation such as a step of tracking the custom email sent to each of the at least one email target. No new invention or new improvement is being claimed in the instant application claims 20-28.

The claimed invention of the pending claims 29-34 of the instant application is same as the claimed invention of the patented claims 12-17 of the U.S. Patent No.

7,043,525. Applicant claimed the common subject matter in a broader scope by deleting a limitation such as a campaign tracker that receives a response corresponding to the sent custom email and creates a campaign tracking list that includes the received response. No new invention or new improvement is being claimed in the instant application claims 29-34.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application, which matured into the US Patent No. 7,065,555. [Based on 8-38] See also MPEP § 804.

CONTENT INFORMATION

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bharat Barot** whose Telephone Number is **(571) 272-3979**. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM. Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number **(571) 273-8300**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Saleh Najjar**, can be reached at **(571) 272-4006**.

Patent Examiner Bharat Barot
Art Unit 2155
May 08, 2007


BHARAT BAROT
PRIMARY EXAMINER

06/14/2006

Equivalent of Form PTO/SB/08A (07-05)

Approved for use through 07/31/2006.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Application Number	~~To Be Assigned~~ 11/452,431
		Filing Date	June 14, 2006
		First Named Inventor	Michael G. FOULGER
		Art Unit	~~To Be Assigned~~ 2155
		Examiner Name	~~To Be Assigned~~ /Bharat Barot/
Sheet	1	of	02
		Attorney Docket Number	2018.0040002

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (If Known)			
/BB/	US1	5,818,447	10/1998	WOLF et al.	
	US2	5,966,695	10/1999	MELCHIONE et al.	
	US3	5,978,799	11/1999	HIRSCH	
	US4	6,854,007	02/2005	HAMMOND	
	US5	6,721,784	04/2004	LEONARD et al.	
	US6	5,937,162	08/1999	FUNK et al.	
	US7	6,360,254	03/2002	LINDEN et al.	
	US8	6,377,936	04/2002	HENRICK et al.	
	US9	5,966,695	10/1999	MELCHIONE et al.	
	US10	5,793,972	08/1998	SHANE	
	US11	6,618,747	09/2003	FLYNN et al.	
	US12	6,101,485	08/2000	FORTENBERRY et al.	
	US13	6,694,353	02/2004	SOMMERER	
	US14	6,055,510	04/2000	HENRICK et al.	
	US15	6,668,281	12/2003	AYYADURAI	
	US16	6,549,950	04/2003	LYTLE et al.	
	US17	6,449,635	09/2002	TILDEN et al.	
	US18	6,377,936	04/2002	HENRICK et al.	
	US19	6,170,011	01/2001	BECK et al.	
/BB/	US20	5,265,033	11/1993	VAJK et al.	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³ Number ⁴ Kind Code ⁵ (If known)			
/BB/	FP1	WO 00/20975 A1	04/2000		
	FP2				
	FP3				
	FP4				
	FP5				
	FP6				
	FP7				
	FP8				
	FP9				

544912_1.DOC

Examiner Signature	/Bharat Barot/	Date Considered	05/08/2007
--------------------	----------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. *Applicant's unique citation designation number (optional). *See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. *Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). *For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. *Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

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Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Application Number	~~To Be Assigned~~ 11/452,431
		Filing Date	June 14, 2006
		First Named Inventor	Michael G. FOULGER
		Art Unit	~~To Be Assigned~~ 2155
		Examiner Name	~~To Be Assigned~~ /Bharat Barot/
Sheet	02 of 2	Attorney Docket Number	2018.0040002

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published	T ²
/BB/	NPL1	ANDERSON, D., "E-mail or Me-Mail?" The Industry Standard, IDG.net, printed from http://www.thestandard.com/article/display/0,1151,12422,00.html , 4 pages (March 6, 2000).	
	NPL2	CROSS, R. and NASSEF, A., "E-Mail Direct Marketing Comes of Age," Direct Marketing, Hoke Communications, Vol. 62, No. 6, pp. 44-45 (October 1999).	
	NPL3	"Top Ten Strategies for Direct Email Success," Boldfish Corporation, Printed from http://www.boldfish.com/BF-emguide/top-ten.html , 7 pages (January 1, 2000).	
	NPL4	English-language Abstract of Japanese Patent Publication No. 2000020421, European Patent Office, 1 page (January 21, 2000 - Date of publication of application).	
/BB/	NPL5	Copy of International Search Report from PCT Application No. PCT/US01/13137, 7 pages, mailed August 28, 2002.	
	NPL6		
	NPL7		
	NPL8		
	NPL9		
	NPL10		

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Examiner Signature	/Bharat Barot/	Date Considered	05/08/2007
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Notice of References Cited	Application/Control No. 11/452,431	Applicant(s)/Patent Under Reexamination FOULGER ET AL.	
	Examiner Bharat N. Barot	Art Unit 2155	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-7,065,555 B2	06-2006	Foulger et al.	709/206
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



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United States Patent and Trademark Office
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www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 2713

SERIAL NUMBER	FILING OR 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/452,431	06/14/2006	709	2155	2018.0040002
RULE				

APPLICANTS

Michael G. Foulger, Novato, CA;
Thomas R. Chipperfield, Petaluma, CA;
Jeremy S. Cooper, Petaluma, CA;
Andrew C. Storms, Petaluma, CA;

** CONTINUING DATA *****

Yes β/β

This application is a CON of 09/841,186 04/25/2001 PAT 7,065,555 which claims benefit of 60/199,355 04/25/2000

** FOREIGN APPLICATIONS *****

No β/β

IF REQUIRED, FOREIGN FILING LICENSE GRANTED **

07/06/2006

Foreign Priority claimed	☐ yes ☒ no	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119 (a-d) conditions met	☐ yes ☒ no ☐ Met after Allowance	CA	14	15	2
Verified and Acknowledged	Examiner's Signature <u>Bernard Perrot</u> Initials				

ADDRESS

26111

TITLE

System and method related to generating an email campaign

FILING FEE RECEIVED 1130	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees
		☐ 1.16 Fees (Filing)
		☐ 1.17 Fees (Processing Ext. of time)
		☐ 1.18 Fees (Issue)
		☐ Other _____
		☐ Credit

Index of Claims



Application/Control No.

11/452,431

Examiner

Bharat N. Barot

Applicant(s)/Patent under Reexamination

FOULGER ET AL.

Art Unit

2155

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim	Date
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Bharat N. Barot

2155

[illegible]

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

Set Name Query
side by side

DB=USPT; PLUR=YES; OP=ADJ

<u>L16</u>	L3 and application program
<u>L15</u>	L3 same application program
<u>L14</u>	L3 same script
<u>L13</u>	L12 and L3
<u>L12</u>	L11 or L10
<u>L11</u>	custom e-mail
<u>L10</u>	custom email
<u>L9</u>	generat\$ with configur\$ with file with email
<u>L8</u>	L6 and template
<u>L7</u>	L6 and L3
<u>L6</u>	email with target with database
<u>L5</u>	L3 and template
<u>L4</u>	L3 same template
<u>L3</u>	L2 or L1
<u>L2</u>	e-mail campaign
<u>L1</u>	email campaign

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8	<u>L16</u>
0	<u>L15</u>
0	<u>L14</u>
0	<u>L13</u>
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10	<u>L6</u>
0	<u>L5</u>
0	<u>L4</u>
14	<u>L3</u>
12	<u>L2</u>
2	<u>L1</u>

END OF SEARCH HISTORY



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APPLICATION NUMBER	FILING OR 371(c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/452,431	06/14/2006	Michael G. Foulger	2018.0040002

CONFIRMATION NO. 2713

26111
STERNE, KESSLER, GOLDSTEIN & FOX PLLC
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC20005

Title: System and method related to generating an email campaign

Publication No. US-2007-0022170-A1

Publication Date: 01/25/2007

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

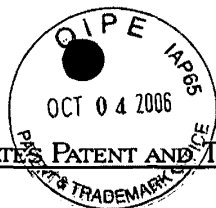
The publication may be accessed through the USPTO's publicly available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 703-305-3028.

Pre-Grant Publication Division, 703-605-4283



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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/452,431	06/14/2006	Michael G. Foulger	2018.0040002

CONFIRMATION NO. 2713

FORMALITIES
 LETTER

26111
 STERNE, KESSLER, GOLDSTEIN & FOX PLLC
 1100 NEW YORK AVENUE, N.W.
 WASHINGTON, DC 20005

Date Mailed: 07/07/2006

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b) 08/05/2006 SDENBOB1 00000160 11452431

<i>Filing Date Granted</i>	01 FC:1011	300.00 OP
	02 FC:1111	500.00 OP
	03 FC:1311	200.00 OP
	04 FC:1051	130.00 OP

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
Applicant must submit \$ 300 to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The substitute specification must be accompanied by a marked up copy as set forth in 37 CFR 1.125(c) and a statement that the specification contains no new matter (see 37 CFR 1.125(b)). The specification, claims, or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
 - Since a preliminary amendment was present on the filing date of the application and such amendment is part of the original disclosure of the application, the substitute specification must include all of the desired changes made in the preliminary amendment. See 37 CFR 1.115 and 1.125.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **\$1130** for a Large Entity

- **\$300** Statutory basic filing fee.
- **\$130** Surcharge.
- The application search fee has not been paid. Applicant must submit **\$500** to complete the search fee.
- The application examination fee has not been paid. Applicant must submit **\$200** to complete the examination fee for a large entity

Replies should be mailed to: Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

*A copy of this notice **MUST** be returned with the reply.*



Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382
PART 2 - COPY TO BE RETURNED WITH RESPONSE



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David K.S. Cornwell
Robert W. Esmond
Tracy-Gene G. Durkin
Michele A. Cimbala
Michael B. Ray
Robert E. Sokohl
Eric K. Steffe
Michael Q. Lee
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Of Counsel

Edward J. Kessler
Kenneth C. Bass III
Marvin C. Guthrie

*Admitted only in Maryland
*Admitted only in Virginia
*Practice Limited to
Federal Agencies

October 4, 2006

WRITER'S DIRECT NUMBER:

(202) 772-8817

INTERNET ADDRESS:

BWADE@SKGF.COM

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Mail Stop Missing Parts

Re: U.S. Utility Patent Application
Appl. No. 11/452,431; Filed: June 14, 2006
For: **System and Method Related to Generating an Email Campaign (as amended)**
Inventors: FOULGER *et al.*
Our Ref: 2018.0040002

Sir:

In reply to the "Notice to File Missing Parts of Application--Filing Date Granted," dated July 7, 2006, Applicants submit the following documents for appropriate action by the U.S. Patent and Trademark Office:

1. Copy of the Notice to File Missing Parts;
2. Second Preliminary Amendment Under 37 C.F.R. §1.115;
3. Substitute Specification, Marked Up to Show Changes Made;
4. Clean Version of Substitute Specification (without markings);
5. PTO Fee Transmittal Form (PTO/SB/17);
6. Petition for Extension of Time Under 37 C.F.R. 1.136;
7. Credit Card Payment Form (PTO-2038) for \$1,250.00 to cover:
 - \$1,000.00 - Patent Application fee;
 - \$ 130.00 - Late Filing Surcharge;
 - \$ 120.00 - Extension of Time fee; and
6. One (1) return postcard.

Sterne, Kessler, Goldstein & Fox PLLC. : 1100 New York Avenue, NW : Washington, DC 20005 : 202.371.2600 f 202.371.2540 : www.skgf.com

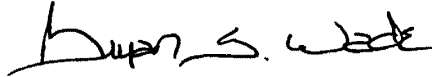
Commissioner for Patents
October 4, 2006
Page 2

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036. If extensions of time under 37 C.F.R. § 1.136 other than those otherwise provided for herewith are required to prevent abandonment of the present patent application, then such extensions of time are hereby petitioned, and any fees therefor are hereby authorized to be charged to our Deposit Account No. 19-0036.

Respectfully submitted,

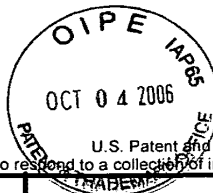
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Bryan S. Wade
Attorney for Applicants
Registration No. 58,228

MVM/BSW:smn:apg
Enclosures

580336_1.DOC



PTO/SB/17 (01-06)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2006☐ Applicant claims small entity status. See 37 CFR 1.27TOTAL AMOUNT OF PAYMENT (\$)
1,130.00**Complete if Known**

Application Number	11/452,431
Filing Date	June 14, 2006
First Named Inventor	Michael G. FOULGER
Examiner Name	To Be Assigned
Art Unit	To Be Assigned
Attorney Docket No.	2018.0040002

METHOD OF PAYMENT (check all that apply)

☐ Check ☒ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____
☒ Deposit Account Deposit Account Number: **19-0036** Deposit Account Name: **Sterne, Kessler, Goldstein & Fox P.L.L.C.**

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION (All the fees below are due upon filing or may be subject to a surcharge.)****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	1,000.00
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES**Fee Description**

Each claim over 20 (including Reissues)
Each independent claim over 3 (including Reissues)
Multiple dependent claims

Fee (\$)	Small Entity Fee (\$)
50	25
200	100
360	180

Total Claims 15 - 20 or HP = 0 x 50.00 = 0.00
HP = highest number of total claims paid for, if greater than 20.

Indep. Claims 2 - 3 or HP = 0 x 200.00 = 0.00
HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims
Fee (\$)
Fee Paid (\$)
360.00 0.00

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets 43 - 100 = 0 / 50 = 0 (round up to a whole number) x 250.00 = 0.00

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Late Filing Surcharge

Fees Paid (\$)

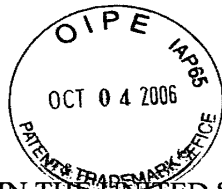
130.00**SUBMITTED BY**

Signature	<u>Bryan S. Wade</u>	Registration No. (Attorney/Agent)	58,228	Telephone	(202) 371-2600
Name (Print/Type)	Bryan S. Wade	Date	October 4, 2006		

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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580,332



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Foulger *et al.*

Appl. No.: 11/452,431

Filed: June 14, 2006

For: **System and Method Related to
Generating an Email Campaign (as
amended)**

Confirmation No.: 2713

Art Unit: *(to be assigned)*

Examiner: *(to be assigned)*

Atty. Docket: 2018.0040002

Second Preliminary Amendment Under 37 C.F.R. § 1.115

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the Notice to File Missing Parts dated July 7, 2006 and in advance of prosecution, Applicants submit the following amendments and remarks. This Second Preliminary Amendment is provided in the following format:

- (A) Each section begins on a separate sheet;
- (B) Starting on a separate sheet, amendments to the specification;
- (C) Starting on a separate sheet, a complete listing of all of the claims; and
- (D) Starting on a separate sheet, the Remarks.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments to the Specification

Please replace the originally filed specification with the attached substitute specification, marked up to show changes made in accordance with 37 CFR 1.125(c). A clean version of the substitute specification (without markings) is also attached hereto in accordance with 37 CFR 1.125(c).

Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1-19. (Canceled)

20. (Previously Presented) A method for conducting an email campaign, comprising the steps of:

- (1) receiving an email target database;
- (2) generating an email campaign template related to at least one email target

in the received email target database, wherein step (2) comprises:

- (a) generating a message template, and
- (b) generating a configuration file to contain data related to each of the at least one email target, wherein the data is insertable in the generated message template; and

(3) sending to each of the at least one email target a corresponding custom email, wherein the custom email is formed from the email campaign template.

21. (Previously Presented) The method of claim 20, wherein step (1) comprises the step of:

- (a) generating the email target database.

22. (Previously Presented) The method of claim 21, wherein step (a) comprises the steps of:

- (i) collecting at least one raw document;
- (ii) parsing said collected at least one document;
- (iii) categorizing said parsed at least one document into at least one category;
- (iv) inserting said at least one document into a database; and
- (v) removing documents from the database corresponding to duplicate email addresses.

23. (Previously Presented) The method of claim 20, wherein step (1) comprises the step of:

- (a) requesting an email target database according to a structured query language statement.

24. (Previously Presented) The method of claim 20, wherein step (1) comprises the step of:

- (a) receiving an email target database from a database vendor.

25. (Previously Presented) The method of claim 20, wherein step (b) comprises the steps of:

- (i) generating a custom uniform resource locator address for each of the at least one email target; and
- (ii) inserting the generated custom uniform resource locator address for each of the at least one email target into the configuration file.

26. (Previously Presented) The method of claim 25, wherein step (i) comprises the steps of:

(A) generating a hash from a campaign ID, a message template version ID, a user reference ID, and a private key, for each of the at least one email target; and

(B) appending a first portion of the generated hash for each of the at least one email target to a host web address to form the custom uniform resource locator address for each of the at least one email target.

27. (Previously Presented) The method of claim 26, wherein the host web address is equal to:

hostname/module?token

where hostname is replaced with an email campaign host Internet address,

module is replaced with an identifier for software located at the email campaign host directed to processing the custom uniform resource locator address for each email target after it is selected, and

token is replaced with any alphanumeric identifier for unique information related to the customized uniform resource locator address for each of the at least one email target.

28. (Previously Presented) The method of claim 20, wherein step (3) comprises the step of:

(a) forming the custom email for each of the at least one email target
from the generated text message template and the generated configuration file.

29. (Previously Presented) A system to generate an email campaign,
comprising:

an email campaign generator that generates an email campaign template from an
email target database, wherein said email target database comprises a plurality of email
targets; and

an email campaign engine that generates a custom email corresponding to each of
said plurality of email targets, wherein said custom email is formed from said email
campaign template, wherein said email campaign engine sends said custom email to each
of said plurality of email targets;

wherein said email campaign template comprises

a text message, and

a configuration file that includes data from said email target database
corresponding to each of said plurality of email targets.

30. (Previously Presented) The system of claim 29, wherein said email
campaign engine makes a copy of said text message to generate said custom email.

31. (Previously Presented) The system of claim 30, wherein said email
campaign engine replaces at least one custom tag in said text message copy with a
corresponding portion of said configuration file data.

32. (Previously Presented) The system of claim 29, wherein said email campaign generator comprises a custom uniform resource locator generator that creates a custom uniform resource locator address for each of said plurality of email targets, wherein said configuration file includes said custom uniform resource locator address in said data.

33. (Previously Presented) The system of claim 32, wherein said custom uniform resource locator generator generates a hash from a campaign ID, a message template version ID, a user reference ID, and a private key, for each of said plurality of email targets, and appends at least a portion of the generated hash to a host web address to form said custom uniform resource locator address for each of said plurality of email targets.

34. (Previously Presented) The system of claim 33, wherein said host web address is equal to:

hostname/module?token

where hostname is replaced with an email campaign host Internet address,

module is replaced with an identifier for software located at the email campaign host directed to processing said custom uniform resource locator address for an email target after it is selected, and

token is replaced with any alphanumeric identifier for unique information related to said custom uniform resource locator address for said email target.

Remarks

Upon entry of the foregoing amendment, claims 20-34 are pending in the application, with claims 20 and 29 being the independent claims. Claims 1-19 were previously canceled. The originally filed specification has been replaced with a substitute specification. The substitute specification includes no new matter, and Applicants respectfully request entry thereof.

Conclusion

Prompt and favorable consideration of this Second Preliminary Amendment is respectfully requested. Applicants believe the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

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SYSTEM AND METHOD RELATED TO GENERATING AN EMAIL CAMPAIGN

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CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application No. 09/841,186, filed April 25, 2001, which claims the benefit of U.S. Provisional Application No. 60/199,355, filed April 25, 2000. U.S. Patent Application No. 09/841,186 is incorporated herein by reference in its entirety.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The present invention is directed to marketing via email, and, in particular, to generating marketing related email.

Background Art

[0003] The ability to market a product or service to individuals who are accessible on the Internet is becoming increasingly important. Effective ways of contacting these individuals are being sought. For instance, to market to these individuals, email may be sent to the individuals over the Internet, to provide information related to the product or service. Email systems exist today for sending email to a target set of email addresses for purposes such as marketing, information acquisition, and otherwise. A system for sending email to a number of email targets for such purposes may be called an email campaign.

[0004] Present email campaigns may suffer from difficulties in locating a pool of relevant individuals to be contacted. In a small email campaign, each email sent is critical to the success of the campaign, and needs to be carefully created. In other situations, large

numbers of individuals to be contacted may have been found. This may result in increased difficulty in tailoring the large number of required email messages to the individuals for more effective contact.

[0005] Furthermore, once an email campaign has been initiated, difficulties in measuring success of the email campaign are presented. Effective ways for determining whether email recipients have received email from the email campaign have been sought. Also, effective ways for allowing the email recipients to provide feedback have also been sought. It may be desirable for the email recipients to be able to respond with feedback, and for the quantity and content of the responses to be monitored and tracked.

[0006] In light of the foregoing, what is needed is an efficient way to create an email campaign.

BRIEF SUMMARY OF THE INVENTION

[0007] The present invention is directed to a system for generating an email campaign. An email campaign generator generates an email campaign template from an email target database. The email target database includes at least one email target. An email campaign engine generates a custom email corresponding to each of the email targets in the email target database. The custom email are formed from the email campaign template. The email campaign engine sends each custom email to the corresponding email target. A campaign tracker receives at least one response corresponding to one or more of the sent custom email. The campaign tracker creates a campaign tracking list that includes the received at least one response.

[0008] The present invention is further directed to a method for an email campaign. An email target database is received. An email campaign template related to at least one email target in the received email target database is generated. An email customized for each email target is sent to the respective email target. Each customized email is formed from the email campaign template.

[0009] The email campaign template can be generated by generating a message template, and generating a configuration file to contain data related to each email target. The data for each email target is insertable in the generated message template. The data may include a custom resource locator address. The custom uniform resource locator (URL) address can be generated for each email target. The generated custom URL address for each email target is inserted into the configuration file. A message authentication code

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can be generated for each email target. All or a portion of the generated message authentication code for each email target can be appended to a host web address to form the custom URL address for each target.

[0010] Further features and advantages of the invention as well as the structure and operation of various embodiments of the present invention are described in detail below with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS/FIGURES

[0011] The accompanying drawings, which are incorporated herein and form a part of the specification, illustrate the present invention and, together with the description, further serve to explain the principles of the invention and to enable a person skilled in the pertinent art to make and use the invention.

[0012] FIG. 1 illustrates an exemplary computer network according to the present invention.

[0013] FIG. 2 illustrates an exemplary email campaign generator and tracker, according to an embodiment of the present invention.

[0014] FIG. 3A illustrates structure and operation of an exemplary email campaign generator, according to an embodiment of the present invention.

[0015] FIG. 3B illustrates an exemplary email campaign generator, according to an embodiment of the present invention.

[0016] FIG. 4 illustrates structure and operation of an exemplary email campaign engine, according to an embodiment of the present invention.

[0017] FIG. 5 illustrates structure and operation of an exemplary campaign tracker, according to an embodiment of the present invention.

[0018] FIG. 6 illustrates generation of a customized URL address, according to an example embodiment of the present invention.

[0019] FIG. 7 illustrates an exemplary email target database generator, according to an embodiment of the present invention.

[0020] FIG. 8A illustrates an example email campaign history, according to an embodiment of the present invention.

[0021] FIG. 8B illustrates an example email campaign summary, according to an embodiment of the present invention.

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- [0022] FIG. 9 is a flowchart illustrating a sequence of operation according to an embodiment of the present invention.
- [0023] FIG. 10 is a flowchart illustrating a sequence of operation for generating an email target database, according to an embodiment of the present invention.
- [0024] FIGS. 11A-C are flowcharts illustrating sequences of operation related to generating an email campaign template.
- [0025] FIG. 12 is a diagram of an example Internet environment according to the present invention.
- [0026] FIG. 13 shows a simplified four-layered communication model supporting Web commerce.
- [0027] FIG. 14 is a block diagram of a computer system according to an example implementation of the present invention.
- [0028] The present invention will now be described with reference to the accompanying drawings. In the drawings, like reference numbers indicate identical or functionally similar elements. Additionally, the left-most digit(s) of a reference number identifies the drawing in which the reference number first appears.

DETAILED DESCRIPTION OF THE INVENTION

Overview

[0029] The present invention is directed to a method and system for generating and tracking an email campaign. An email campaign generator generates an email campaign template from an email target database. The email target database includes one or more email targets. An email campaign engine generates a custom email corresponding to each of the email targets in the email target database. The custom email are formed from the email campaign template. The email campaign engine sends each custom email to the corresponding email target. A campaign tracker receives at least one response corresponding to one or more of the sent custom email. The campaign tracker creates a campaign tracking list that includes the received at least one response.

[0030] In an example embodiment, the email campaign is related to permission-based marketing. For example, the email campaign may be related to permission-based marketing of resumes. The resumes may have been collected by an email campaign host or manager from the Internet by spider engines, or otherwise. The invention determines email targets or email addresses for each resume. This allows the email campaign host or manager to send a custom email to each resume owner, to request their permission to post the resume owner's resume on the email campaign host's web site, for example. The resume owner may provide their permission via a custom uniform resource locator (URL) address provided to the resume owner in the custom email. The resume owner may select the custom URL address, which will open a custom web page displaying the resume owner's collected resume. The resume owner may then optionally edit their collected resume on the web page. The resume owner may also decline to have their resume posted via email or the custom URL.

[0031] The invention is also adaptable to information and documents other than resumes, as would be understood by persons skilled in the relevant art(s) from the teachings herein. The alternative information and documents should have an email address associated with them, so that the information and document owners may be contacted by email, as described according to the present invention herein.

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[0032] The invention is adaptable to any type of web, Internet, network, and other form of electronic communication used for marketing of information, information broadcasting, and any other form of communication tracking and handling.

System Level Description

[0033] FIG. 1 illustrates an exemplary computer network 100, according to embodiments of the present invention. Computer network 100 includes an email campaign generator and tracker 110, a network 120, a first user computer system 130, a second user computer system 140, and a third user computer system 150.

[0034] Email campaign generator and tracker 110 generates and tracks an email campaign, according to the present invention. In embodiments, email campaign generator and tracker 110 receives an email target database. In alternate embodiments, email campaign generator and tracker 110 generates an email target database from raw documentation, such as one or more resumes obtained from the Internet. Email campaign generator and tracker 110 generates a custom email for one or more of the email targets in the email target database, and sends each custom email to the corresponding email target. Email campaign generator and tracker 110 then tracks and organizes responses from the email targets. Email campaign generator and tracker 110 as described in this section and elsewhere herein can be achieved using any number of structural implementations, including hardware, firmware, software, or any combination thereof. For example, email campaign generator and tracker 110 may reside and operate in a computer system. The details of such structural implementations will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

[0035] Email campaign generator and tracker 110 is coupled to network 120 via first communications link 160. First communications link 160 can be any suitable communications link for interfacing a computer system or other hardware with a network, such as network 120, as would be apparent to a person skilled in the relevant art(s) from the teachings herein.

[0036] Network 120 can be any communications network known to persons skilled in the relevant art(s) from the teachings herein. For instance, network 120 can be a network such as a local area network (LAN), an intranet, or the Internet. Examples embodiments for network 120 are further described herein. An example network 120 can include an Internet 1200, which is illustrated in FIG. 12 as described more fully below.

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[0037] First, second, and third user computer systems 130, 140, and 150 are coupled to network 120 via a second, a third, and a fourth communications link 170, 180, and 190, respectively. First, second, and third user computer systems 130, 140, and 150 can be any computer systems that are configured to receive and send email, and can access web pages. Suitable computer systems would be apparent to a person skilled in the relevant art(s). Any number of user computer systems may interface with network 120, according to embodiments of the present invention.

[0038] Second, third, and fourth communications links 170, 180, and 190 can be any suitable communications links for interfacing a computer system or other hardware with a network, such as network 120, as would be recognized by persons skilled in the relevant art(s) from the teachings herein. Various suitable communication links for first, second, third, and fourth communications links 160, 170, 180, and 190 are described below in relation to FIGS. 12-14.

[0039] Description in these terms is provided for convenience only. It is not intended that the invention be limited to application in this example network environment. In fact, after reading the following description, it will become apparent to a person skilled in the relevant art(s) how to implement the invention in alternative environments known now or developed in the future.

Email Campaign Generator and Tracker

[0040] FIG. 2 illustrates an exemplary email campaign generator and tracker 110, according to an embodiment of the present invention. Email campaign generator and tracker 110 includes an email campaign generator 210, an email campaign engine 220, and a campaign tracker 230.

[0041] Email campaign generator 210 receives an email target database 295. In embodiments, the email campaign generator 210 generates an email campaign template 280 from email target database 295. Email target database 295 includes a plurality of email targets (email addresses, for example). In an embodiment where the email campaign is related to a collection of resumes, email target database 295 may include one or more resumes, each with a corresponding email address for the resume owner.

[0042] FIG. 3A illustrates operation and structure of exemplary email campaign generator 210, according to an embodiment of the present invention. Email campaign generator 210 receives an email target list 310. In an embodiment, email campaign

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generator 210 requests email target list 310 according to a structured query language (SQL) statement, as would be understood by persons skilled in the relevant art(s) from the teachings herein. Email target database 295 may include email target list 310.

[0043] Email campaign generator 210 outputs a text message file 320 and a configuration file 330. Text message file 320 and configuration file 330 are included in email campaign template 280.

[0044] Text message file 320 is a customized text message for the current email campaign. Hence, text message file 320 contains a textual message for an email recipient. Text message file 320 also contains a series of custom tags to be filled in with email recipient specific data, such as the recipient's full name, other recipient specific data, and a custom URL. When a custom email is received from the current email campaign, the recipient may select the custom URL in the received email, which will open a web page for the recipient that the email campaign manager desires the recipient to view.

[0045] Configuration file 330 is generated to contain data related to each email target or recipient. The data for each email target is insertable in the message template created from text message file 320. This data may include invariant data and variant data, as shown in FIG. 3A. Invariant data may include information such as the subject line of the email message (i.e., "we found your resume"), and other items in the email message that will not vary from email to email in a particular email campaign. The invariant data may also include email source server information. Variant data may include custom information used to fill in the custom tags of text message file 320, such as full name = "John Jones".

[0046] In an embodiment, email campaign generator 210 creates a custom URL. FIG. 3B illustrates an example email campaign generator 210, according to an embodiment of the present invention. Email campaign generator 210 includes a URL generator 340. In an embodiment, URL generator 340 uses an MD5 hash to create a custom URL for each email target or recipient. Other message authentication code generators other than MD5 may be adapted for this use, as would be recognized by persons skilled in the relevant art(s) from the teachings herein.

[0047] FIG. 6 illustrates generation of a customized URL 660, according to an example embodiment of the present invention. For example, URL generator 340 may operate according to the operation and structure shown in FIG. 6. A custom URL address is

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typically generated for each email target, although in some situations it may be advantageous to provide the same URL address to one or more recipients. The generated custom URL address for each email target is inserted as data into configuration file 330.

[0048] As shown in FIG. 6, a hash generator 620 receives ID file 610. ID file 610 includes a campaign ID, a version ID, and an IC (independent contractor) ID (userid). The campaign ID is unique for each email campaign conducted. The version ID is the current version of text message file 320. The IC ID is a unique ID for the current email target.

[0049] Hash generator 620 further receives a private key 670. Private key 670 is a private key or password unique to the email campaign host, as would be understood by persons skilled in the relevant art(s) from the teachings herein.

[0050] Hash generator 620 generates a 32-byte hash 630 from the campaign ID, the version ID, the IC ID, and the private key 670, for each email target. For example, hash generator 620 may use MD5 to create hash 630. The invention is applicable to hash sizes other than 32-bytes, although a 32-byte hash is provided as an example herein.

[0051] 16 bytes of the generated 32-byte hash 630 are appended to a host web address 680 to form customized URL 660 for each email target. Either a first 16 bytes 640 or a second 16 bytes 650 of 32-byte hash 630 may be appended to host web address 680. Other portions of generated hash 630 may also be used.

[0052] Various host web addresses may be used for host web address 680. In an example embodiment, a generic host web address 680 is equal to:

hostname/module?token

where "hostname", "module", and "token" are replaceable parameters. "hostname" may be replaced by any addressable Internet address, such as "www.icplanet.com". "module" may be replaced by any identifier or filename for software that handles execution of the link of customized URL 660 when it is selected by the email recipient. "token" may be replaced with any collection of numbers or letters that identify unique information related to customized URL 660. For example, host web address 680 may be equal to:

www.hostname.com/rz.cfm?a=&b=&c=

where "hostname" is equal to "www.hostname.com", "module" is equal to "rz.cfm", and token is equal to "&a=&b=&c=".

[0053] When an email target or recipient receives customized URL 660 in the custom email message, the recipient may select it, to view their custom web site, which is hosted

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at the email campaign host. The email campaign host compares the incoming URL address request to local data tables to verify the validity of the URL recipient, to allow the recipient access to the web page. Once the recipient is verified, the recipient may view and edit the web site. For example, when the web page represents the recipient's resume, the recipient may edit their posted resume.

[0054] In the described embodiment, 16 bytes of the 32 byte hash are utilized because, in tools such as Eudora and Outlook, text is cut off at 72 characters, and then does a word wrap. Hence, a "clickable" URL sent via email that is longer than 72 characters would wrap, and may then become an unexecutable link. Using 16 bytes of the 32 byte hash keeps the URL address length below the 72 character limit, avoiding word wrap.

[0055] As shown in FIG. 2, email campaign engine 220 receives email campaign template 280, and outputs email 260 and email campaign data 290. Email 260 includes one or more custom email messages. Email campaign data 290 is described more fully elsewhere herein. FIG. 4 illustrates operation and structure of an exemplary email campaign engine 220, according to an embodiment of the present invention. Email campaign engine 220 receives text message file 320 and configuration file 330.

[0056] Email campaign engine 220 generates a custom email message 410 corresponding to each email target in email target database 295. Email message 410 is formed from email campaign template 280 (text message file 320 and configuration file 330). Email campaign engine 220 copies text message file 320, and replaces each custom tag in text message file 320 with corresponding data in configuration file 330, to generate custom email message 410. For example, customized URL 660 may be inserted for a corresponding custom tag in custom email message 410. Email campaign engine 220 sends each custom email message 410 to a corresponding email target.

[0057] Email campaign engine 220 also outputs email campaign data 290. For example, email campaign data 290 includes any data that may be utilized by campaign tracker 230.

[0058] As shown in FIG. 2, campaign tracker 230 receives email campaign data 290 and a response 270, and outputs tracking information 250. FIG. 5 illustrates operation of an exemplary campaign tracker 230, according to an embodiment of the present invention. Campaign tracker 230 receives a response 270 and email campaign data 290. Response 270 is typically a URL access or a sent email, which may occur through a firewall 510, when present. Campaign tracker 230 outputs tracking information 250. Tracking information 250 includes a campaign tracking list 520.

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- [0059] Each response 270 corresponds to a sent custom email message 410 and is received from the recipient of that sent custom email message 410. For example, response 270 for a particular sent custom email message 410 may be created by the email recipient by executing customized URL 660 in the custom email. Campaign tracker 230 creates campaign tracking list 520 that includes data related to each response 270.
- [0060] Campaign tracking list 520 may include links to other pages, such as statistical data page 530 and charts 540.
- [0061] FIG. 8A illustrates an exemplary campaign tracking list 520, email campaign history 800, according to an embodiment of the present invention. Email campaign history 800 illustrates various parameters and measured data related to a number of email campaigns. For example, email campaign history 800 may be displayed in a computer system display/graphical user interface.
- [0062] Email campaign history 800 includes a campaign ID column 802, a hits column 804, a subject column 806, a date column 808, a message text column 812, and a demographics column 814. Campaign ID column 802 includes a list of identifiers for one or more email campaigns. Identifiers in campaign ID column 802 may be selected to display further information on a particular email campaign, as further described below. Hits column 804 includes an indication of the number or percentage of successful hits for email campaigns listed in campaign ID column 802. For example, a successful hit may be declared when an email recipient selects their customized URL 660. Subject column 806 provides a brief description for email campaigns listed in campaign ID column 802. Date column 808 includes a date and time indication of the initiation of email campaigns listed in campaign ID column 802. Message text column 812 displays an identifier for the text of an email used in email campaigns listed in campaign ID column 802. For example, if an identifier in message text column 812 is selected, the text of an email, such as text message file 320 of FIG. 3A corresponding to the email campaign, may be displayed. Demographics column 814 allows for one or more demographics charts to be displayed for email campaigns listed in campaign ID column 802.
- [0063] By selecting a campaign ID in campaign ID column 802 of email campaign history 800, a user may display a campaign statistical data page 530, as shown in FIG. 5. For example, if a first campaign ID 816 in FIG. 8A is selected, a user may display an email campaign summary 810, an example of which is shown in FIG. 8B. Email

campaign summary 810 shows a variety of statistical data related to the email campaign of first campaign ID 816.

[0064] The email campaign generator and tracker of the present invention is not limited to these implementations. The email generator and tracker, and its elements, as described in this section can be achieved using any number of structural implementations, including hardware, firmware, software, or any combination thereof. The details of such structural implementations will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

Operation

[0065] Exemplary operational and/or structural implementations related to the structure(s), and/or embodiments described above are presented in this section (and its subsections). These components and methods are presented herein for purposes of illustration, and not limitation. The invention is not limited to the particular examples of components and methods described herein. Alternatives (including equivalents, extensions, variations, deviations, etc., of those described herein) will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein. Such alternatives fall within the scope and spirit of the present invention.

[0066] FIG. 9 shows a flowchart providing detailed operational steps of an example embodiment of the present invention. The steps of FIG. 9 can be implemented in hardware, firmware, software, or a combination thereof. For instance, the steps of FIG. 9 can be implemented by email campaign generator and tracker 110, and/or apportioned among email campaign generator 210, email campaign engine 220, and campaign tracker 230. Other structural embodiments will be apparent to persons skilled in the relevant art(s) based on the discussion contained herein. These steps are described in detail below.

[0067] The process begins with step 910. In step 910, an email target database is received. In embodiments, the email target database is requested according to a structured query language (SQL) statement, as would be understood by persons skilled in the relevant art(s) from the teachings herein. In embodiments, the email target database is received from a resume database vendor, is generated from resume data gathered by a spider engine, or is otherwise previously generated. For example, the email target database is email target database 295 shown in FIG. 2. In embodiments, the email target database is generated from raw resume documents and/or other related data. Refer to

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further description related to FIG. 7 herein for example structure for an email target database generator, and to FIG. 10 herein for example operational steps related to email target database generation.

- [0068] In step 920, an email related to at least one email target in the received email target database is generated. For example, the generated email campaign template is email campaign template 280, which includes text message file 320 and configuration file 330.
- [0069] In step 930, an email customized for each email target is sent to each email target, wherein each customized email is formed from the email campaign template. In embodiments, a customized email for each email target is formed from the generated text message template and the generated configuration file. For example, the customized email is custom email message 410.
- [0070] In step 940, the sent custom email is tracked. In embodiments, at least one response is received from a respondent corresponding to one of the sent customized email, and a campaign tracking list is created from the received at least one response. For example, campaign tracker 230 receives response 270, and outputs campaign tracking list 520, as shown in FIG. 5.
- [0071] In embodiments, creating the campaign tracking list includes determining various parameters. This may include determining a number of successful visits from respondents, determining a number of sent customized email that were undeliverable (e.g., email did not find their respective target email addresses), and determining a number of respondents that requested deletion.
- [0072] FIGS. 11A-C illustrate flowcharts providing operational embodiments for implementing at least a portion of the operation of step 920 in FIG. 9. The steps of FIGS. 11A-C can be implemented in hardware, firmware, software, or a combination thereof. Other structural embodiments will be apparent to persons skilled in the relevant art(s) based on the discussion contained herein. These steps are described in detail below.
- [0073] The steps shown in FIG. 11A may occur in any order. The process in FIG. 11A begins with step 1110. In step 1110, a message template is generated. For example, the message template is text message file 320 shown in FIG. 3A.
- [0074] In step 1120, a configuration file is generated to contain data related to each email target, wherein the data for each email target is insertable in the generated message template. For example, the configuration file is configuration file 330 shown in FIG. 3A.

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[0075] The process in FIG. 11B begins with step 1130. In step 1130, a custom URL address is generated for each email target. For example, the custom URL address is customized URL 660 shown in FIG. 6.

[0076] In step 1140, the generated custom URL address for each email target is inserted into the configuration file.

[0077] The process in FIG. 11C begins with step 1150. In step 1150, a 32-byte hash is generated from a campaign ID, a message template version ID, a user reference ID, and a private key, for each email target. As described above, MD5 or other message authentication code generator may be used to generate the hash. Other hash sizes than 32 bytes may be generated.

[0078] In step 1160, the first 16 bytes of the generated 32-byte hash for each email target is appended to a host web address to form the custom URL address for each email target. The invention is applicable to appending other portions of the hash. In an embodiment, as described above, the host web address may be equal to:

hostname/module?token

where "hostname", "module", and "token" are replaceable parameters that are more fully described above.

[0079] These embodiments are provided for purposes of illustration, and are not intended to limit the invention. Alternate embodiments, differing slightly or substantially from those described herein, will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

Email Target Database

[0080] FIG. 7 illustrates an exemplary email target database generator 700, according to an embodiment of the present invention. For example, email target database generator 700 may generate email target database 295 shown in FIG. 2. For exemplary purposes, email target database generator 700 is described below in reference to the processing of collected resumes. It will be understood by a person skilled in the relevant art(s) from the teachings herein, that the email target database generator 700 of the present invention is applicable to the processing of any document type.

[0081] Email target database generator 700 includes a resume parser 710, a resume auto-categorizer, a database inserter 730, and an email-de-duplicator 740.

- [0082] Email target database generator 700 receives raw data 750. In embodiments, raw data 750 may be a collection of resumes, or other resume related data. As described above, in alternative embodiments, raw data 750 may include a collection of other types of documentation or information. This data may be based on templates and other descriptor files.
- [0083] Resume parser 710 receives raw data 750. Resume parser 710 includes one or more programs that identify parts of a resume. Resume parser 710 detects sections of resumes (e.g., education, summary, work history, etc.), and breaks the resumes into separate series of files. In alternative embodiments, parser 710 may be adapted to parsing other document types or information.
- [0084] Resume auto-categorizer 720 receives the output of resume parser 710. Resume auto-categorizer 720 analyzes the received collection of information, and executes a keyword matching operation on the information. For example, in an embodiment related to resumes, resume auto-categorizer 720 maintains a list of job categories and whole collection of associated keywords, scores the keywords (e.g., if it finds a keyword many times in a resume, it gives that resume a high score). For instance, one particular resume may receive a rating of "10" in information technology, and a "2" in management.
- [0085] Database inserter 730 receives the output of resume auto-categorizer, and inserts all of the resume-related information, or other information, into a database.
- [0086] Email de-duplicator 740 receives the output of database inserter 730, and searches for duplicate email addresses due potentially due to duplicate resumes or other documents collected. Email de-duplicator 740 eliminates duplicates so that each email target receives a single custom email.
- [0087] Email de-duplicator outputs resume database information 760, which in an embodiment may be all or a portion of email target database 295.
- [0088] The email target database generator of the present invention is not limited to these implementations. The email target database generator as described in this section can be achieved using any number of structural implementations, including hardware, firmware, software, or any combination thereof. The details of such structural implementations will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.
- [0089] FIG. 10 shows a flowchart providing detailed operational steps of an example embodiment of the email target database generator of the present invention. The steps of

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FIG. 10 can be implemented in hardware, firmware, software, or a combination thereof. For instance, the steps of FIG. 10 can be implemented by email target database generator 700, and/or apportioned among resume parser 710, resume auto-categorizer 720, database inserter 730, and email de-duplicator 740. Furthermore, the steps of FIG. 10 do not necessarily have to occur in the order shown, as will be apparent to persons skilled in the relevant art(s) based on the teachings herein. Other structural embodiments will be apparent to persons skilled in the relevant art(s) based on the discussion contained herein. These steps are described in detail below.

- [0090] The process begins with step 1010. In step 1010, at least one raw document is collected. For example, the one or more raw documents may be resumes.
- [0091] In step 1020, the collected at least one document is parsed.
- [0092] In step 1030, the parsed at least one document is categorized into at least one category. For example, when the documents are resumes, the at least one category may be at least one job category.
- [0093] In step 1040, the at least one document is inserted into a database.
- [0094] In step 1050, documents corresponding to duplicate email addresses are removed from the database.
- [0095] These embodiments are provided for purposes of illustration, and are not intended to limit the invention. Alternate embodiments, differing slightly or substantially from those described herein, will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

Example Network Environment

- [0096] The present invention can be implemented in conjunction with any communication network, such as the Internet, which supports interactive services and applications. In particular, the present invention can be implemented in any Web service, preferably a Web service supporting secure transactions, such as, the Secure Socket Layer (SSL) protocol and/or using a Secure HyperText Transport Protocol (S-HTTP). In one example, the present invention is implemented in a multi-platform (platform independent) programming language such as Java 1.1. Java-enabled browsers are used, such as, Netscape, HotJava, and Microsoft Explorer browsers. Active content Web pages can be used. Such active content Web pages can include Java applets or ActiveX controls, or any other active content technology developed now or in the future. The present

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invention, however, is not intended to be limited to Java or Java-enabled browsers, and can be implemented in any programming language and browser, developed now or in the future, as would be apparent to a person skilled in the art given this description.

[0097] FIG. 12 is a diagram of an example internetwork environment according to the present invention. FIG. 12 shows a communication network or combination of networks (Internet) 1200, which can support the invention. Internet 1200 consists of interconnected computers that support communication between many different types of users including businesses, universities, individuals, government, and financial institutions. Internet 1200 supports many different types of communication links implemented in a variety of architectures. For example, voice and data links can be used including phone, paging, cellular, and cable TV (CATV) links. Terminal equipment can include local area networks, personal computers with modems, content servers of multi-media, audio, video, and other information, pocket organizers, Personal Data Assistants (PDAs), and set-top boxes.

[0098] Communication over a communication network, such as Internet 1200, is carried out through different layers of communication. FIG. 13 shows a simplified four-layered communication model supporting Web commerce including an application layer 1308, transport layer 1310, Internet layer 1320, physical layer 1330. As would be apparent to a person skilled in the art, in practice, a number of different layers can be used depending upon a particular network design and communication application. Application layer 1308 represents the different tools and information services which are used to access the information over the Internet. Such tools include, but are not limited to, Telnet log-in service 1301, IRC chat 1302, Web service 1303, and SMTP (Simple Mail Transfer Protocol) electronic mail service 1306. Web service 1303 allows access to HTTP documents 1304, and FTP and Gopher files 1305. A Secure Socket Layer (SSL) is an optional protocol used to encrypt communications between a Web browser and Web server.

[0099] Description of the example environment in these terms is provided for convenience only. It is not intended that the invention be limited to application in this example environment. In fact, after reading the following description, it will become apparent to a person skilled in the relevant art how to implement the invention in alternative environments.

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Example Computer System

- [0100] An example of a computer system 1440 is shown in FIG. 14. The computer system 1440 represents any single or multi-processor computer. Single-threaded and multi-threaded computers can be used. Unified or distributed memory systems can be used.
- [0101] Computer system 1440 includes one or more processors, such as processor 1444. One or more processors 1444 can execute software implementing routine 400 as described above. Each processor 1444 is connected to a communication infrastructure 1442 (e.g., a communications bus, cross-bar, or network). Various software embodiments are described in terms of this exemplary computer system. After reading this description, it will become apparent to a person skilled in the relevant art how to implement the invention using other computer systems and/or computer architectures.
- [0102] Computer system 1440 also includes a main memory 1446, preferably random access memory (RAM), and can also include a secondary memory 1448. The secondary memory 1448 can include, for example, a hard disk drive 1450 and/or a removable storage drive 1452, representing a floppy disk drive, a magnetic tape drive, an optical disk drive, etc. The removable storage drive 1452 reads from and/or writes to a removable storage unit 1454 in a well known manner. Removable storage unit 1454 represents a floppy disk, magnetic tape, optical disk, etc., which is read by and written to by removable storage drive 1452. As will be appreciated, the removable storage unit 1454 includes a computer usable storage medium having stored therein computer software and/or data.
- [0103] In alternative embodiments, secondary memory 1448 can include other similar means for allowing computer programs or other instructions to be loaded into computer system 1440. Such means can include, for example, a removable storage unit 1462 and an interface 1460. Examples can include a program cartridge and cartridge interface (such as that found in video game devices), a removable memory chip (such as an EPROM, or PROM) and associated socket, and other removable storage units 1462 and interfaces 1460 which allow software and data to be transferred from the removable storage unit 1462 to computer system 1440.
- [0104] Computer system 1440 can also include a communications interface 1464. Communications interface 1464 allows software and data to be transferred between computer system 1440 and external devices via communications path 1466. Examples of

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communications interface 1464 can include a modem, a network interface (such as Ethernet card), a communications port, etc. Software and data transferred via communications interface 1464 are in the form of signals which can be electronic, electromagnetic, optical or other signals capable of being received by communications interface 1464, via communications path 1466. Note that communications interface 1464 provides a means by which computer system 1440 can interface to a network such as the Internet.

[0105] The present invention can be implemented using software running (that is, executing) in an environment similar to that described above with respect to FIG. 12. In this document, the term "computer program product" is used to generally refer to removable storage drive 1452, a hard disk installed in hard disk drive 1450, or a carrier wave carrying software over a communication path 1466 (wireless link or cable) to communication interface 1464. A computer useable medium can include magnetic media, optical media, or other recordable media, or media that transmits a carrier wave or other signal. These computer program products are means for providing software to computer system 1440. For instance, in embodiments, email campaign generator and tracker 110 is implemented as one or more computer programs. Furthermore, the example modules of email campaign generator and tracker 110 shown in FIG. 2, may be implemented as one or more separate computer programs.

[0106] Computer programs (also called computer control logic) are stored in main memory 1446 and/or secondary memory 1448. Computer programs can also be received via communications interface 1464. Such computer programs, when executed, enable the computer system 1440 to perform the features of the present invention as discussed herein. In particular, the computer programs, when executed, enable the processor 1444 to perform the features of the present invention. Accordingly, such computer programs represent controllers of the computer system 1440.

[0107] The present invention can be implemented as control logic in software, firmware, hardware or any combination thereof. In an embodiment where the invention is implemented using software, the software may be stored in a computer program product and loaded into computer system 1440 using removable storage drive 1452, hard drive 1450, or interface 1460. Alternatively, the computer program product may be downloaded to computer system 1440 over communications path 1466. The control logic

(software), when executed by the one or more processors 1444, causes the processor(s) 1444 to perform the functions of the invention as described herein.

[0108] In another embodiment, the invention is implemented primarily in firmware and/or hardware using, for example, hardware components such as application specific integrated circuits (ASICs). Implementation of a hardware state machine so as to perform the functions described herein will be apparent to persons skilled in the relevant art(s).

Conclusion

[0109] While various embodiments of the present invention have been described above, it should be understood that they have been presented by way of example only, and not limitation. It will be apparent to persons skilled in the relevant art that various changes in form and detail can be made therein without departing from the spirit and scope of the invention. Thus, the breadth and scope of the present invention should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims and their equivalents.



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Foulger *et al.*
Appl. No. 11/452,431

SYSTEM AND METHOD RELATED TO GENERATING
AN EMAIL CAMPAIGN

ABSTRACT OF THE DISCLOSURE

A method and system for generating an email campaign is described. An email campaign generator generates an email campaign template from an email target database. The email target database comprises at least one email target. An email campaign engine generates a custom email corresponding to each of the at least one email target. The custom email is formed from the email campaign template. The email campaign engine sends to each of the at least one email target the corresponding custom email. A campaign tracker receives at least one response corresponding to the sent custom email. The campaign tracker creates a campaign tracking list that includes the received at least one response.

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SYSTEM AND METHOD RELATED TO GENERATING ~~AND TRACKING~~ AN EMAIL CAMPAIGN

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CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application No. 09/841,186, filed April 25, 2001, which claims the benefit of U.S. Provisional Application No. 60/199,355, filed April 25, 2000. U.S. Patent Application No. 09/841,186 is incorporated herein by reference in its entirety.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The present invention is directed to marketing via email, and, in particular, to generating ~~and tracking~~ marketing related email.

Background Art

[0003] The ability to market a product or service to individuals who are accessible on the Internet is becoming increasingly important. Effective ways of contacting these individuals are being sought. For instance, to market to these individuals, email may be sent to the individuals over the Internet, to provide information related to the product or service. Email systems exist today for sending email to a target set of email addresses for purposes such as marketing, information acquisition, and otherwise. A system for sending email to a number of email targets for such purposes may be called an email campaign.

[0004] Present email campaigns may suffer from difficulties in locating a pool of relevant individuals to be contacted. In a small email campaign, each email sent is critical to the success of the campaign, and needs to be carefully created. In other situations, large

numbers of individuals to be contacted may have been found. This may result in increased difficulty in tailoring the large number of required email messages to the individuals for more effective contact.

[0005] Furthermore, once an email campaign has been initiated, difficulties in measuring success of the email campaign are presented. Effective ways for determining whether email recipients have received email from the email campaign have been sought. Also, effective ways for allowing the email recipients to provide feedback have also been sought. It may be desirable for the email recipients to be able to respond with feedback, and for the quantity and content of the responses to be monitored and tracked.

[0006] In light of the foregoing, what is needed is an efficient way to create ~~and track a~~ an email campaign.

BRIEF SUMMARY OF THE INVENTION

[0007] The present ~~invention~~ invention is directed to a system for generating ~~and tracking~~ an email campaign. An email campaign generator generates an email campaign template from an email target database. The email target database includes at least one email target. An email campaign engine generates a custom email corresponding to each of the email targets in the email target database. The custom email are formed from the email campaign template. The email campaign engine sends each custom email to the corresponding email target. A campaign tracker receives at least one response corresponding to one or more of the sent custom email. The campaign tracker creates a campaign tracking list that includes the received at least one response.

[0008] The present invention is further directed to a method for an email campaign. An email target database is received. An email campaign template related to at least one email target in the received email target database is generated. An email customized for each email target is sent to the respective email target. Each customized email is formed from the email campaign template. ~~The sent custom email is tracked.~~

[0009] The email campaign template can be generated by generating a message template, and generating a configuration file to contain data related to each email target. The data for each email target is insertable in the generated message template. The data may include a custom resource locator address. The custom uniform resource locator (URL) address can be generated for each email target. The generated custom URL address for each email target is inserted into the configuration file. A message authentication code

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can be generated for each email target. All or a portion of the generated message authentication code for each email target can be appended to a host web address to form the custom URL address for each target.

[0010] Further features and advantages of the invention as well as the structure and operation of various embodiments of the present invention are described in detail below with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS/FIGURES

[0011] The accompanying drawings, which are incorporated herein and form a part of the specification, illustrate the present invention and, together with the description, further serve to explain the principles of the invention and to enable a person skilled in the pertinent art to make and use the invention.

[0012] FIG. 1 illustrates an exemplary computer network according to the present invention.

[0013] FIG. 2 illustrates an exemplary email campaign generator and tracker, according to an embodiment of the present invention.

[0014] FIG. 3A illustrates structure and operation of an exemplary email campaign generator, according to an embodiment of the present invention.

[0015] FIG. 3B illustrates an exemplary email campaign generator, according to an embodiment of the present invention.

[0016] FIG. 4 illustrates structure and operation of an exemplary email campaign engine, according to an embodiment of the present invention.

[0017] FIG. 5 illustrates structure and operation of an exemplary campaign tracker, according to an embodiment of the present invention.

[0018] FIG. 6 illustrates generation of a customized URL address, according to an example embodiment of the present invention.

[0019] FIG. 7 illustrates an exemplary email target database generator, according to an embodiment of the present invention.

[0020] FIG. 8A illustrates an example email campaign history, according to an embodiment of the present invention.

[0021] FIG. 8B illustrates an example email campaign summary, according to an embodiment of the present invention.

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- [0022] FIG. 9 is a flowchart illustrating a sequence of operation according to an embodiment of the present invention.
- [0023] FIG. 10 is a flowchart illustrating a sequence of operation for generating an email target database, according to an embodiment of the present invention.
- [0024] FIGS. 11A-C are flowcharts illustrating sequences of operation related to generating an email campaign template[.,].
- [0025] FIG. 12 is a diagram of an example Internet environment according to the present invention.
- [0026] FIG. 13 shows a simplified four-layered communication model supporting Web commerce.
- [0027] FIG. 14 is a block diagram of a computer system according to an example implementation of the present invention.
- [0028] The present invention will now be described with reference to the accompanying drawings. In the drawings, like reference numbers indicate identical or functionally similar elements. Additionally, the left-most digit(s) of a reference number identifies the drawing in which the reference number first appears.

DETAILED DESCRIPTION OF THE INVENTION

Overview

[0029] The present invention is directed to a method and system for generating and tracking an email campaign. An email campaign generator generates an email campaign template from an email target database. The email target database includes one or more email targets. An email campaign engine generates a custom email corresponding to each of the email targets in the email target database. The custom email are formed from the email campaign template. The email campaign engine sends each custom email to the corresponding email target. A campaign tracker receives at least one response corresponding to one or more of the sent custom email. The campaign tracker creates a campaign tracking list that includes the received at least one response.

[0030] In an example embodiment, the email campaign is related to permission-based marketing. For example, the email campaign may be related to permission-based marketing of resumes. The resumes may have been collected by an email campaign host or manager from the Internet by spider engines, or otherwise. The invention determines email targets or email addresses for each resume. This allows the email campaign host or manager to send a custom email to each resume owner, to request their permission to post the resume owner's resume on the email campaign host's web site, for example. The resume owner may provide their permission via a custom uniform resource locator (URL) address provided to the resume owner in the custom email. The resume owner may select the custom URL address, which will open a custom web page displaying the resume owner's collected resume. The resume owner may then optionally edit their collected resume on the web page. The resume owner may also decline to have their resume posted via email or the custom URL.

[0031] The invention is also adaptable to information and documents other than resumes, as would be understood by persons skilled in the relevant art(s) from the teachings herein. The alternative information and documents should have an email address associated with them, so that the information and document owners may be contacted by email, as described according to the present invention herein.

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[0032] The invention is adaptable to any type of web, Internet, network, and other form of electronic communication used for marketing of information, information broadcasting, and any other form of communication tracking and handling.

System Level Description

[0033] FIG. 1 illustrates an exemplary computer network 100, according to embodiments of the present invention. Computer network 100 includes an email campaign generator and tracker 110, a network 120, a first user computer system 130, a second user computer system 140, and a third user computer system 150.

[0034] Email campaign generator and tracker 110 generates and tracks an email campaign, according to the present invention. In embodiments, email campaign generator and tracker 110 receives an email target database. In alternate embodiments, email campaign generator and tracker 110 generates an email target database from raw documentation, such as one or more resumes obtained from the Internet. Email campaign generator and tracker 110 generates a custom email for one or more of the email targets in the email target database, and sends each custom email to the corresponding email target. Email campaign generator and tracker 110 then tracks and organizes responses from the email targets. Email campaign generator and tracker 110 as described in this section and elsewhere herein can be achieved using any number of structural implementations, including hardware, firmware, software, or any combination thereof. For example, email campaign generator and tracker 110 may reside and operate in a computer system. The details of such structural implementations will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

[0035] Email campaign generator and tracker 110 is coupled to network 120 via first communications link 160. First communications link 160 can be any suitable communications link for interfacing a computer system or other hardware with a network, such as network 120, as would be apparent to a person skilled in the relevant art(s) from the teachings herein.

[0036] Network 120 can be any communications network known to persons skilled in the relevant art(s) from the teachings herein. For instance, network 120 can be a network such as a local area network (LAN), an intranet, or the Internet. Examples embodiments for network 120 are further described herein. An example network 120 can include an Internet 1200, which is illustrated in FIG. 12 as described more fully below.

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[0037] First, second, and third user computer systems 130, 140, and 150 are coupled to network 120 via a second, a third, and a fourth communications link 170, 180, and 190, respectively. First, second, and third user computer systems 130, 140, and 150 can be any computer systems that are configured to receive and send email, and can access web pages. Suitable computer systems would be apparent to a person skilled in the relevant art(s). Any number of user computer systems may interface with network 120, according to embodiments of the present invention.

[0038] Second, third, and fourth communications links 170, 180, and 190 can be any suitable communications links for interfacing a computer system or other hardware with a network, such as network 120, as would be recognized by persons skilled in the relative relevant art(s) from the teachings herein. Various suitable communication links for first, second, third, and fourth communications links 160, 170, 180, and 190 are described below in relation to FIGS. 12-14.

[0039] Description in these terms is provided for convenience only. It is not intended that the invention be limited to application in this example network environment. In fact, after reading the following description, it will become apparent to a person skilled in the relevant art(s) how to implement the invention in alternative environments known now or developed in the future.

Email Campaign Generator and Tracker

[0040] FIG. 2 illustrates an exemplary email campaign generator and tracker 110, according to an embodiment of the present invention. Email campaign generator and tracker 110 includes an email campaign generator 210, an email campaign engine 220, and a campaign tracker 230.

[0041] Email campaign generator 210 receives an email target database 295. In embodiments, the email campaign generator 210 generates an email campaign template 280 from email target database 295. Email target database 295 includes a plurality of email targets (email addresses, for example). In an embodiment where the email campaign is related to a collection of resumes, email target database 295 may include one or more resumes, each with a corresponding email address for the resume owner.

[0042] FIG. 3A illustrates operation and structure of exemplary email campaign generator 210, according to an embodiment of the present invention. Email campaign generator 210 receives an email target list 310. In an embodiment, email campaign

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generator 210 requests email target list 310 according to a structured query language (SQL) statement, as would be understood by persons skilled in the relevant art(s) from the teachings herein. Email target database 295 may include email target list 310.

[0043] Email campaign generator 210 outputs a text message file 320 and a configuration file 330. Text message file 320 and configuration file 330 are included in email campaign template 280.

[0044] Text message file 320 is a customized text message for the current email campaign. Hence, text message file 320 contains a textual message for an email recipient. Text message file 320 also contains a series of custom tags to be filled in with email recipient specific data, such as the recipient's full name, other recipient specific data, and a custom URL. When a custom email is received from the current email campaign, the recipient may select the custom URL in the received email, which will open a web page for the recipient that the email campaign manager desires the recipient to view.

[0045] Configuration file 330 is generated to contain data related to each email target or recipient. The data for each email target is insertable in the message template created from text message file 320. This data may include invariant data and variant data, as shown in FIG. 3A. Invariant data may include information such as the subject line of the email message (i.e., "we found your resume"), and other items in the email message that will not vary from email to email in a particular email campaign. The invariant data may also include email source server information. Variant data may include custom information used to fill in the custom tags of text message file 320, such as full name = "John Jones".

[0046] In an embodiment, email campaign generator 210 creates a custom URL. FIG. 3B illustrates an example email campaign generator 210, according to an embodiment of the present invention. Email campaign generator 210 includes a URL generator 340. In an embodiment, URL generator 340 uses an MD5 hash to create a custom URL for each email target or recipient. Other message authentication code generators other than MD5 may be adapted for this use, as would be recognized by persons skilled in the relevant art(s) from the teachings herein.

[0047] FIG. 6 illustrates generation of a customized URL 660, according to an example embodiment of the present invention. For example, URL generator 340 may operate according to the operation and structure shown in FIG. 6. A custom URL address is

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typically generated for each email target, although in some situations it may be advantageous to provide the same URL address to one or more recipients. The generated custom URL address for each email target is inserted as data into configuration file 330.

[0048] As shown in FIG. 6, a hash generator 620 receives ID file 610. ID file 610 includes a campaign ID, a version ID, and an IC (independent contractor) ID (userid). The campaign ID is unique for each email campaign conducted. The version ID is the current version of text message file 320. The IC ID is a unique ID for the current email target.

[0049] Hash generator 620 further receives a private key 670. Private key 670 is a private key or password unique to the email campaign host, as would be understood by persons skilled in the relevant art(s) from the teachings herein.

[0050] Hash generator 620 generates a 32-byte hash 630 from the campaign ID, the version ID, the IC ID, and the private key 670, for each email target. For example, hash generator 620 may use MD5 to create hash 630. The invention is applicable to hash sizes other than 32-bytes, although a 32-byte hash is provided as an example herein.

[0051] 16 bytes of the generated 32-byte hash 630 are appended to a host web address 680 to form customized URL 660 for each email target. Either a first 16 bytes 640 or a second 16 bytes 650 of 32-byte hash 630 may be appended to host web address 680. Other portions of generated hash 630 may also be used.

[0052] Various host web addresses may be used for host web address 680. In an example embodiment, a generic host web address 680 is equal to:

hostname/module?token

where "hostname", "module", and "token" are replaceable parameters. "hostname" may be replaced by any addressable Internet address, such as "www.icplanet.com". "module" may be replaced by any identifier or filename for software that handles execution of the link of customized URL 660 when it is selected by the email recipient. "token" may be replaced with any collection of numbers or letters that identify unique information related to customized URL 660. For example, host web address 680 may be equal to:

www.hostname.com/rz.cfm?a=&b=&c=

where "hostname" is equal to "www.hostname.com", "module" is equal to "rz.cfm", and token is equal to "&a=&b=&c=".

[0053] When an email target or recipient receives customized URL 660 in the custom email message, the recipient may select it, to view their custom web site, which is hosted

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at the email campaign host. The email campaign host compares the incoming URL address request to local data tables to verify the validity of the URL recipient, to allow the recipient access to the web page. Once the recipient is verified, the recipient may view and edit the web site. For example, when the web page represents the recipient's resume, the recipient may edit their posted resume.

[0054] In the described embodiment, 16 bytes of the 32 byte hash are utilized because, in tools such as Eudora and Outlook, text is cut off at 72 characters, and then does a word wrap. Hence, a "clickable" URL sent via email that is longer than 72 characters would wrap, and may then become an unexecutable link. Using 16 bytes of the 32 byte hash keeps the URL address length below the 72 character limit, avoiding word wrap.

[0055] As shown in FIG. 2, email campaign engine 220 receives email campaign template 280, and outputs email 260 and email campaign data 290. Email 260 includes one or more custom email messages. Email campaign data 290 is described more fully elsewhere herein. FIG. 4 illustrates operation and structure of an exemplary email campaign engine 220, according to an embodiment of the present invention. Email campaign engine 220 receives text message file 320 and configuration file 330.

[0056] Email campaign engine 220 generates a custom email message 410 corresponding to each email target in email target database 295. Email message 410 is formed from email campaign template 280 (text message file 320 and configuration file 330). Email campaign engine 220 copies text message file 320, and replaces each custom tag in text message file 320 with corresponding data in configuration file 330, to generate custom email message 410. For example, customized URL 660 may be inserted for a corresponding custom tag in custom email message 410. Email campaign engine 220 sends each custom email message 410 to a corresponding email target.

[0057] Email campaign engine 220 also outputs email campaign data 290. For example, email campaign data 290 includes any data that may be utilized by campaign tracker 230.

[0058] As shown in FIG. 2, campaign tracker 230 receives email campaign data 290 and a response 270, and outputs tracking information 250. FIG. 5 illustrates operation of an exemplary campaign tracker 230, according to an embodiment of the present invention. Campaign tracker 230 receives a response 270 and email campaign data 290. Response 270 is typically a URL access or a sent email, which may occur through a firewall 510, when present. Campaign tracker 230 outputs tracking information 250. Tracking information 250 includes a campaign tracking list 520.

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- [0059] Each response 270 corresponds to a sent custom email message 410 and is received from the recipient of that sent custom email message 410. For example, response 270 for a particular sent custom email message 410 may be created by the email recipient by executing customized URL 660 in the custom email. Campaign tracker 230 creates campaign tracking list 520 that includes data related to each response 270.
- [0060] Campaign tracking list 520 may include links to other pages, such as statistical data page 530 and charts 540.
- [0061] FIG. 8A illustrates an exemplary campaign tracking list 520, email campaign history 800, according to an embodiment of the present invention. Email campaign history 800 illustrates various parameters and measured data related to a number of email campaigns. For example, email campaign history 800 may be displayed in a computer system display/graphical user interface.
- [0062] Email campaign history 800 includes a campaign ID column 802, a hits column 804, a subject column 806, a date column 808, a message text column 812, and a demographics column 814. Campaign ID column 802 includes a list of identifiers for one or more email campaigns. Identifiers in campaign ID column 802 may be selected to display further information on a particular email campaign, as further described below. Hits column 804 includes an indication of the number or percentage of successful hits for email campaigns listed in campaign ID column 802. For example, a successful hit may be declared when an email recipient selects their customized URL 660. Subject column 806 provides a brief description for email campaigns listed in campaign ID column 802. Date column 808 includes a date and time indication of the initiation of email campaigns listed in campaign ID column 802. Message text column 812 displays an identifier for the text of an email used in email campaigns listed in campaign ID column 802. For example, if an identifier in message text column 812 is selected, the text of an email, such as text message file 320 of FIG. 3A corresponding to the email campaign, may be displayed. Demographics column 814 allows for one or more demographics charts to be displayed for email campaigns listed in campaign ID column 802.
- [0063] By selecting a campaign ID in campaign ID column 802 of email campaign history 800, a user may display a campaign statistical data page 530, as shown in FIG. 5. For example, if a first campaign ID 816 in FIG. 8A is selected, a user may display an email campaign summary 810, an example of which is shown in FIG. 8B. Email

campaign summary 810 shows a variety of statistical data related to the email campaign of first campaign ID 816.

[0064] The email campaign generator and tracker of the present invention is not limited to these implementations. The email generator and tracker, and its elements, as described in this section can be achieved using any number of structural implementations, including hardware, firmware, software, or any combination thereof. The details of such structural implementations will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

Operation

[0065] Exemplary operational and/or structural implementations related to the structure(s), and/or embodiments described above are presented in this section (and its subsections). These components and methods are presented herein for purposes of illustration, and not limitation. The invention is not limited to the particular examples of components and methods described herein. Alternatives (including equivalents, extensions, variations, deviations, etc., of those described herein) will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein. Such alternatives fall within the scope and spirit of the present invention.

[0066] FIG. 9 shows a flowchart providing detailed operational steps of an example embodiment of the present invention. The steps of FIG. 9 can be implemented in hardware, firmware, software, or a combination thereof. For instance, the steps of FIG. 9 can be implemented by email campaign generator and tracker 110, and/or apportioned among email campaign generator 210, email campaign engine 220, and campaign tracker 230. Other structural embodiments will be apparent to persons skilled in the relevant art(s) based on the discussion contained herein. These steps are described in detail below.

[0067] The process begins with step 910. In step 910, an email target database is received. In embodiments, the email target database is requested according to a structured query language (SQL) statement, as would be understood by persons skilled in the relevant art(s) from the teachings herein. In embodiments, the email target database is received from a resume database vendor, is generated from resume data gathered by a spider engine, or is otherwise previously generated. For example, the email target database is email target database 295 shown in FIG. 2. In embodiments, the email target database is generated from raw resume documents and/or other related data. Refer to

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further description related to FIG. 7 herein for example structure for an email target database generator, and to FIG. 10 herein for example operational steps related to email target database generation.

- [0068] In step 920, an email related to at least one email target in the received email target database is generated. For example, the generated email campaign template is email campaign template 280, which includes text message file 320 and configuration file 330.
- [0069] In step 930, an email customized for each email target is sent to each email target, wherein each customized email is formed from the email campaign template. In embodiments, a customized email for each email target is formed from the generated text message template and the generated configuration file. For example, the customized email is custom email message 410.
- [0070] In step 940, the sent custom email is tracked. In embodiments, at least one response is received from a respondent corresponding to one of the sent customized email, and a campaign tracking list is created from the received at least one response. For example, campaign tracker 230 receives response 270, and outputs campaign tracking list 520, as shown in FIG. 5.
- [0071] In embodiments, creating the campaign tracking list includes determining various parameters. This may include determining a number of successful visits from respondents, determining a number of sent customized email that were undeliverable (e.g., email did not find their respective target email addresses), and determining a number of respondents that requested deletion.
- [0072] FIGS. 11A-C illustrate flowcharts providing operational embodiments for implementing at least a portion of the operation of step 920 in FIG. 9. The steps of FIGS. 11A-C can be implemented in hardware, firmware, software, or a combination thereof. Other structural embodiments will be apparent to persons skilled in the relevant art(s) based on the discussion contained herein. These steps are described in detail below.
- [0073] The steps shown in FIG. 11A may occur in any order. The process in FIG. 11A begins with step 1110. In step 1110, a message template is generated. For example, the message template is text message file 320 shown in FIG. 3A.
- [0074] In step 1120, a configuration file is generated to contain data related to each email target, wherein the data for each email target is insertable in the generated message template. For example, the configuration file is configuration file 330 shown in FIG. 3A.

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- [0075] The process in FIG. 11B begins with step 1130. In step 1130, a custom URL address is generated for each email target. For example, the custom URL address is customized URL 660 shown in FIG. 6.
- [0076] In step 1140, the generated custom URL address for each email target is inserted into the configuration file.
- [0077] The process in FIG. 11C begins with step 1150. In step 1150, a 32-byte hash is generated from a campaign ID, a message template version ID, a user reference ID, and a private key, for each email target. As described above, MD5 or other message authentication code generator may be used to generate the hash. Other hash sizes than 32 bytes may be generated.
- [0078] In step 1160, the first 16 bytes of the generated 32-byte hash for each email target is appended to a host web address to form the custom URL address for each email target. The invention is applicable to appending other portions of the hash. In an embodiment, as described above, the host web address may be equal to:

hostname/module?token

where "hostname", "module", and "token" are replaceable parameters that are more fully described above.

- [0079] These embodiments are provided for purposes of illustration, and are not intended to limit the invention. Alternate embodiments, differing slightly or substantially from those described herein, will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

Email Target Database

- [0080] FIG. 7 illustrates an exemplary email target database generator 700, according to an embodiment of the present invention. For example, email target database generator 700 may generate email target database 295 shown in FIG. 2. For exemplary purposes, email target database generator 700 is described below in reference to the processing of collected resumes. It will be understood by a person skilled in the relevant art(s) from the teachings herein, that the email target database generator 700 of the present invention is applicable to the processing of any document type.
- [0081] Email target database generator 700 includes a resume parser 710, a resume auto-categorizer, a database inserter 730, and an email-de-duplicator 740.

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- [0082] Email target database generator 700 receives raw data 750. In embodiments, raw data 750 may be a collection of resumes, or other resume related data. As described above, in alternative embodiments, raw data 750 may include a collection of other types of documentation or information. This data may be based on templates and other descriptor files.
- [0083] Resume parser 710 receives raw data 750. Resume parser 710 includes one or more programs that identify parts of a resume. Resume parser 710 detects sections of resumes (e.g., education, summary, work history, etc.), and breaks the resumes into separate series of files. In alternative embodiments, parser 710 may be adapted to parsing other document types or information.
- [0084] Resume auto-categorizer 720 receives the output of resume parser 710. Resume auto-categorizer 720 analyzes the received collection of information, and executes a keyword matching operation on the information. For example, in an embodiment related to resumes, resume auto-categorizer 720 maintains a list of job categories and whole collection of associated keywords, scores the keywords (e.g., if it finds a keyword many times in a resume, it gives that resume a high score). For instance, one particular resume may receive a rating of "10" in information technology, and a "2" in management.
- [0085] Database inserter 730 receives the output of resume auto-categorizer, and inserts all of the resume-related information, or other information, into a database.
- [0086] Email de-duplicator 740 receives the output of database inserter 730, and searches for duplicate email addresses due potentially due to duplicate resumes or other documents collected. Email de-duplicator 740 eliminates duplicates so that each email target receives a single custom email.
- [0087] Email de-duplicator outputs resume database information 760, which in an embodiment may be all or a portion of email target database 295.
- [0088] The email target database generator of the present invention is not limited to these implementations. The email target database generator as described in this section can be achieved using any number of structural implementations, including hardware, firmware, software, or any combination thereof. The details of such structural implementations will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.
- [0089] FIG. 10 shows a flowchart providing detailed operational steps of an example embodiment of the email target database generator of the present invention. The steps of

FIG. 10 can be implemented in hardware, firmware, software, or a combination thereof. For instance, the steps of FIG. 10 can be implemented by email target database generator 700, and/or apportioned among resume parser 710, resume auto-categorizer 720, database inserter 730, and email de-duplicator 740. Furthermore, the steps of FIG. 10 do not necessarily have to occur in the order shown, as will be apparent to persons skilled in the relevant art(s) based on the teachings herein. Other structural embodiments will be apparent to persons skilled in the relevant art(s) based on the discussion contained herein. These steps are described in detail below.

- [0090] The process begins with step 1010. In step 1010, at least one raw document is collected. For example, the one or more raw documents may be resumes.
- [0091] In step 1020, the collected at least one document is parsed.
- [0092] In step 1030, the parsed at least one document is categorized into at least one category. For example, when the documents are resumes, the at least one category may be at least one job category.
- [0093] In step 1040, the at least one document is inserted into a database.
- [0094] In step 1050, documents corresponding to duplicate email addresses are removed from the database.
- [0095] These embodiments are provided for purposes of illustration, and are not intended to limit the invention. Alternate embodiments, differing slightly or substantially from those described herein, will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

Example Network Environment

- [0096] The present invention can be implemented in conjunction with any communication network, such as the Internet, which supports interactive services and applications. In particular, the present invention can be implemented in any Web service, preferably a Web service supporting secure transactions, such as, the Secure Socket Layer (SSL) protocol and/or using a Secure HyperText Transport Protocol (S-HTTP). In one example, the present invention is implemented in a multi-platform (platform independent) programming language such as Java 1.1. Java-enabled browsers are used, such as, Netscape, HotJava, and Microsoft Explorer browsers. Active content Web pages can be used. Such active content Web pages can include Java applets or ActiveX controls, or any other active content technology developed now or in the future. The present

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invention, however, is not intended to be limited to Java or Java-enabled browsers, and can be implemented in any programming language and browser, developed now or in the future, as would be apparent to a person skilled in the art given this description.

[0097] FIG. 12 is a diagram of an example internetwork environment according to the present invention. FIG. 12 shows a communication network or combination of networks (Internet) 1200, which can support the invention. Internet 1200 consists of interconnected computers that support communication between many different types of users including businesses, universities, individuals, government, and financial institutions. Internet 1200 supports many different types of communication links implemented in a variety of architectures. For example, voice and data links can be used including phone, paging, cellular, and cable TV (CATV) links. Terminal equipment can include local area networks, personal computers with modems, content servers of multi-media, audio, video, and other information, pocket organizers, Personal Data Assistants (PDAs), and set-top boxes.

[0098] Communication over a communication network, such as Internet 1200, is carried out through different layers of communication. FIG. 13 shows a simplified four-layered communication model supporting Web commerce including an application layer 1308, transport layer 1310, Internet layer 1320, physical layer 1330. As would be apparent to a person skilled in the art, in practice, a number of different layers can be used depending upon a particular network design and communication application. Application layer 1308 represents the different tools and information services which are used to access the information over the Internet. Such tools include, but are not limited to, Telnet log-in service 1301, IRC chat 1302, Web service 1303, and SMTP (Simple Mail Transfer Protocol) electronic mail service 1306. Web service 1303 allows access to HTTP documents 1304, and FTP and Gopher files 1305. A Secure Socket Layer (SSL) is an optional protocol used to encrypt communications between a Web browser and Web server.

[0099] Description of the example environment in these terms is provided for convenience only. It is not intended that the invention be limited to application in this example environment. In fact, after reading the following description, it will become apparent to a person skilled in the relevant art how to implement the invention in alternative environments.

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Example Computer System

- [0100] An example of a computer system 1440 is shown in FIG. 14. The computer system 1440 represents any single or multi-processor computer. Single-threaded and multi-threaded computers can be used. Unified or distributed memory systems can be used.
- [0101] Computer system 1440 includes one or more processors, such as processor 1444. One or more processors 1444 can execute software implementing routine 400 as described above. Each processor 1444 is connected to a communication infrastructure 1442 (e.g., a communications bus, cross-bar, or network). Various software embodiments are described in terms of this exemplary computer system. After reading this description, it will become apparent to a person skilled in the relevant art how to implement the invention using other computer systems and/or computer architectures.
- [0102] Computer system 1440 also includes a main memory 1446, preferably random access memory (RAM), and can also include a secondary memory 1448. The secondary memory 1448 can include, for example, a hard disk drive 1450 and/or a removable storage drive 1452, representing a floppy disk drive, a magnetic tape drive, an optical disk drive, etc. The removable storage drive 1452 reads from and/or writes to a removable storage unit 1454 in a well known manner. Removable storage unit 1454 represents a floppy disk, magnetic tape, optical disk, etc., which is read by and written to by removable storage drive 1452. As will be appreciated, the removable storage unit 1454 includes a computer usable storage medium having stored therein computer software and/or data.
- [0103] In alternative embodiments, secondary memory 1448 can include other similar means for allowing computer programs or other instructions to be loaded into computer system 1440. Such means can include, for example, a removable storage unit 1462 and an interface 1460. Examples can include a program cartridge and cartridge interface (such as that found in video game devices), a removable memory chip (such as an EPROM, or PROM) and associated socket, and other removable storage units 1462 and interfaces 1460 which allow software and data to be transferred from the removable storage unit 1462 to computer system 1440.
- [0104] Computer system 1440 can also include a communications interface 1464. Communications interface 1464 allows software and data to be transferred between computer system 1440 and external devices via communications path 1466. Examples of

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communications interface 1464 can include a modem, a network interface (such as Ethernet card), a communications port, etc. Software and data transferred via communications interface 1464 are in the form of signals which can be electronic, electromagnetic, optical or other signals capable of being received by communications interface 1464, via communications path 1466. Note that communications interface 1464 provides a means by which computer system 1440 can interface to a network such as the Internet.

[0105] The present invention can be implemented using software running (that is, executing) in an environment similar to that described above with respect to FIG. 12. In this document, the term "computer program product" is used to generally refer to removable storage drive 1452, a hard disk installed in hard disk drive 1450, or a carrier wave carrying software over a communication path 1466 (wireless link or cable) to communication interface 1464. A computer useable medium can include magnetic media, optical media, or other recordable media, or media that transmits a carrier wave or other signal. These computer program products are means for providing software to computer system 1440. For instance, in embodiments, email campaign generator and tracker 110 is implemented as one or more computer programs. Furthermore, the example modules of email campaign generator and tracker 110 shown in FIG. 2, may be implemented as one or more separate computer programs.

[0106] Computer programs (also called computer control logic) are stored in main memory 1446 and/or secondary memory 1448. Computer programs can also be received via communications interface 1464. Such computer programs, when executed, enable the computer system 1440 to perform the features of the present invention as discussed herein. In particular, the computer programs, when executed, enable the processor 1444 to perform the features of the present invention. Accordingly, such computer programs represent controllers of the computer system 1440.

[0107] The present invention can be implemented as control logic in software, firmware, hardware or any combination thereof. In an embodiment where the invention is implemented using software, the software may be stored in a computer program product and loaded into computer system 1440 using removable storage drive 1452, hard drive 1450, or interface 1460. Alternatively, the computer program product may be downloaded to computer system 1440 over communications path 1466. The control logic

(software), when executed by the one or more processors 1444, causes the processor(s) 1444 to perform the functions of the invention as described herein.

[0108] In another embodiment, the invention is implemented primarily in firmware and/or hardware using, for example, hardware components such as application specific integrated circuits (ASICs). Implementation of a hardware state machine so as to perform the functions described herein will be apparent to persons skilled in the relevant art(s).

Conclusion

[0109] While various embodiments of the present invention have been described above, it should be understood that they have been presented by way of example only, and not limitation. It will be apparent to persons skilled in the relevant art that various changes in form and detail can be made therein without departing from the spirit and scope of the invention. Thus, the breadth and scope of the present invention should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims and their equivalents.

**SYSTEM AND METHOD RELATED TO GENERATING ~~AND TRACKING~~ AN
EMAIL CAMPAIGN****ABSTRACT OF THE DISCLOSURE**

A method and system for generating ~~and tracking~~ an email campaign is described. An email campaign generator generates an email campaign template from an email target database. The email target database comprises at least one email target. An email campaign engine generates a custom email corresponding to each of the at least one email target. The custom email is formed from the email campaign template. The email campaign engine sends to each of the at least one email target the corresponding custom email. A campaign tracker receives at least one response corresponding to the sent custom email. The campaign tracker creates a campaign tracking list that includes the received at least one response.



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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) FY 2005 (Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).)		Docket Number (Optional) 2018.0040002																								
Application Number 11/452,431		Filed June 14, 2006																								
For System and Method Related to Generating an Email Campaign (as amended)																										
Art Unit To Be Assigned		Examiner To Be Assigned																								
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application. The requested extension and fee are as follows (check time period desired and enter the appropriate fee below): <table border="1"><thead><tr><th></th><th>Fee</th><th>Small Entity Fee</th><th></th></tr></thead><tbody><tr><td>☒ One month (37 CFR 1.17(a)(1))</td><td>\$120</td><td>\$60</td><td>\$ 120.00</td></tr><tr><td>☐ Two months (37 CFR 1.17(a)(2))</td><td>\$450</td><td>\$225</td><td>\$ _____</td></tr><tr><td>☐ Three months (37 CFR 1.17(a)(3))</td><td>\$1020</td><td>\$510</td><td>\$ _____</td></tr><tr><td>☐ Four months (37 CFR 1.17(a)(4))</td><td>\$1590</td><td>\$795</td><td>\$ _____</td></tr><tr><td>☐ Five months (37 CFR 1.17(a)(5))</td><td>\$2160</td><td>\$1080</td><td>\$ _____</td></tr></tbody></table> ☐ Applicant claims small entity status. See 37 CFR 1.27. ☐ A check in the amount of the fee is enclosed. ☒ Payment by credit card. Form PTO-2038 is attached. ☐ The Director has already been authorized to charge fees in this application to a Deposit Account. ☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number <u>19-0036</u>. I have enclosed a duplicate copy of this sheet. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. I am the ☐ applicant/inventor. 10/05/2006 SDENBOR1 00000168 11452431 05 FC:1251 120.00 OP ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96). ☐ attorney or agent of record. Registration Number _____ ☒ attorney or agent under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 <u>58,228</u> <u>Bryan S. Wade</u> October 4, 2006 Signature Date <u>Bryan S. Wade</u> (202) 371-2600 Typed or printed name Telephone Number NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below. ☒ Total of <u>1</u> forms are submitted.				Fee	Small Entity Fee		☒ One month (37 CFR 1.17(a)(1))	\$120	\$60	\$ 120.00	☐ Two months (37 CFR 1.17(a)(2))	\$450	\$225	\$ _____	☐ Three months (37 CFR 1.17(a)(3))	\$1020	\$510	\$ _____	☐ Four months (37 CFR 1.17(a)(4))	\$1590	\$795	\$ _____	☐ Five months (37 CFR 1.17(a)(5))	\$2160	\$1080	\$ _____
	Fee	Small Entity Fee																								
☒ One month (37 CFR 1.17(a)(1))	\$120	\$60	\$ 120.00																							
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☐ Five months (37 CFR 1.17(a)(5))	\$2160	\$1080	\$ _____																							

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 11/452,431		Filing Date 06/14/2006		☐ To be Mailed			
APPLICATION AS FILED – PART I												
(Column 1)			(Column 2)		SMALL ENTITY ☐		OR		OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)		
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (j), or (m))	N/A	N/A	N/A		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 =	*	X \$	=	OR	X \$	=	X \$	=	X \$		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$	=	OR	X \$	=	X \$	=	X \$		
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).											
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APPLICATION AS AMENDED – PART II												
(Column 1)			(Column 2)		(Column 3)		SMALL ENTITY		OR		OTHER THAN SMALL ENTITY	
AMENDMENT	06/14/2006	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
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AMENDMENT	10/04/2006	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
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	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0	X \$	=	OR	X \$200 =	0	X \$	=
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* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.												

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11/452,431	06/14/2006	Michael G. Foulger	2018.0040002

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Date Mailed: 07/07/2006

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
Applicant must submit \$ 300 to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The substitute specification must be accompanied by a marked up copy as set forth in 37 CFR 1.125(c) and a statement that the specification contains no new matter (see 37 CFR 1.125(b)). The specification, claims, or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
 - Since a preliminary amendment was present on the filing date of the application and such amendment is part of the original disclosure of the application, the substitute specification must include all of the desired changes made in the preliminary amendment. See 37 CFR 1.115 and 1.215.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **\$1130** for a Large Entity

- **\$300** Statutory basic filing fee.
- **\$130** Surcharge.
- The application search fee has not been paid. Applicant must submit **\$500** to complete the search fee.
- The application examination fee has not been paid. Applicant must submit **\$200** to complete the examination fee for a large entity

Replies should be mailed to: Mail Stop Missing Parts
Commissioner for Patents
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Alexandria VA 22313-1450

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Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	2018.0040002
First Inventor	Michael G. FOULGER
Title	See 1 in Addendum
Express Mail Label No.	

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.	ADDRESS TO: Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450														
1. ☐ Fee Transmittal Form (e.g., PTO/SB/17) <i>(Submit an original and a duplicate for fee processing)</i> 2. ☐ Applicant claims small entity status. See 37 CFR 1.27. 3. ☒ Specification [Total Pages <u>29</u>] Both the claims and abstract must start on a new page <i>(For information on the preferred arrangement, see MPEP 608.01(a))</i> 4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets <u>14</u>] 5. Oath or Declaration [Total Sheets <u>3</u>] a. ☐ Newly executed (original or copy) b. ☒ A copy from a prior application (37 CFR 1.63(d)) <i>(for continuation/divisional with Box 18 completed)</i> i. ☐ DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b). 6. ☒ Application Data Sheet. See 37 CFR 1.76 7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) ☐ Landscape Table on CD 8. Nucleotide and/or Amino Acid Sequence Submission <i>(if applicable, items a. - c. are required)</i> a. Computer Readable Form (CRF) i. ☐ Computer Readable Form (CRF) ii. ☐ Transfer Request (37 CFR 1.821(e)) b. Specification Sequence Listing on: i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statements verifying identity of above copies	ACCOMPANYING APPLICATION PARTS 9. ☐ Assignment Papers (cover sheet & document(s)) Name of Assignee _____ 10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney <i>(when there is an assignee)</i> 11. ☐ English Translation Document <i>(if applicable)</i> 12. ☒ Information Disclosure Statement (PTO/SB/08 or PTO-1449) ☐ Copies of foreign patent documents, publications, & other information 13. ☒ Preliminary Amendment 14. ☒ Return Receipt Postcard (MPEP 503) <i>(Should be specifically itemized)</i> 15. ☐ Certified Copy of Priority Document(s) <i>(if foreign priority is claimed)</i> 16. ☐ Nonpublication Request under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 17. ☒ Other: <u>Authorization under 37CFR 1.136(a)(3)</u>														
18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76: ☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: <u>09/841,186</u> Prior application information: Examiner <u>Saleh Najjar</u> Art Unit: <u>2157</u>															
19. CORRESPONDENCE ADDRESS ☒ The address associated with Customer Number: <u>26111</u> OR ☐ Correspondence address below <table border="1"><tr><td colspan="2">Name</td></tr><tr><td colspan="2">Address</td></tr><tr><td>City</td><td>State</td></tr><tr><td>Country</td><td>Zip Code</td></tr><tr><td>Telephone</td><td>Email Address</td></tr></table> <table border="1"><tr><td>Signature <u>Bryan S. Wade</u></td><td>Date June 14, 2006</td></tr><tr><td>Name (Print/Type) Bryan S. Wade</td><td>Registration No. (Attorney/Agent) 58,228</td></tr></table>		Name		Address		City	State	Country	Zip Code	Telephone	Email Address	Signature <u>Bryan S. Wade</u>	Date June 14, 2006	Name (Print/Type) Bryan S. Wade	Registration No. (Attorney/Agent) 58,228
Name															
Address															
City	State														
Country	Zip Code														
Telephone	Email Address														
Signature <u>Bryan S. Wade</u>	Date June 14, 2006														
Name (Print/Type) Bryan S. Wade	Registration No. (Attorney/Agent) 58,228														

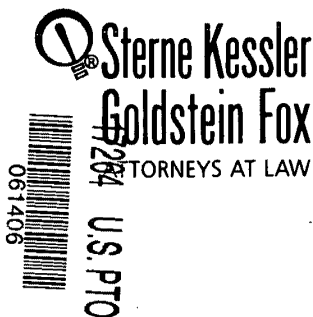
This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

544,888

Addendum

1. **System and Method Related to Generating an Email Campaign (As Amended)**



Robert Greene Sterne
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*Admitted only in Maryland
*Admitted only in Virginia
•Practice Limited to
Federal Agencies

June 14, 2006

WRITER'S DIRECT NUMBER:

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INTERNET ADDRESS:

BWADE@SKGF.COM

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Re: U.S. Non-Provisional Utility Patent Application under 37 C.F.R. § 1.53(b)
Appl. No. To Be Assigned; Filed: June 14, 2006
For: **System and Method Related to Generating an Email Campaign
(As Amended)**
Inventors: FOULGER *et al.*
Our Ref: 2018.0040002



Sir:

The following documents are forwarded herewith for appropriate action by the U.S. Patent and Trademark Office:

1. Utility Patent Application Transmittal Form (PTO/SB/05);
2. Authorization to Treat a Reply As Incorporating An Extension of Time Under 37 C.F.R. § 1.136(a)(3); and
3. U.S. Utility Patent Application entitled:

System and Method Related to Generating and Tracking an Email Campaign

and naming as inventors:

Michael G. FOULGER
Thomas R. CHIPPERFIELD
Jeremy S. COOPER
Andrew C. STORMS

the application comprising:

- a. an Application Data Sheet (37 C.F.R. § 1.76);

Sterne, Kessler, Goldstein & Fox P.L.L.C. : 1100 New York Avenue, NW : Washington, DC 20005 : 202.371.2600 f 202.371.2540 : www.skgsf.com

Commissioner for Patents

June 14, 2006

Page 2

- b. A copy of the executed Declaration for Patent Application, as originally filed in U.S. Serial No. 09/841,186;
 - c. A specification containing:
 - i. 23 pages of description prior to the claims;
 - ii. 5 pages of claims (15 claims);
 - iii. a one (1) page abstract;
 - d. 14 sheets of drawings: (Figures 1, 2, 3A, 3B, 4, 5, 6, 7, 8A, 8B, 9, 10, 11A, 11B, 11C, 12, 13, 14);
- 4. A Preliminary Amendment Under 37 C.F.R. §1.115;
 - 5. An Information Disclosure Statement;
 - 6. A listing of the cited documents on Form PTO/SB/08A (1 page.);
 - 7. A listing of the cited documents on Form PTO/SB/08B (1 page.); and
 - 8. Two (2) return postcards.

Correspondence should be sent to Customer Number 26111.

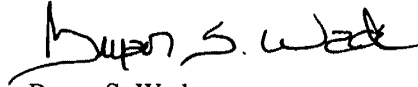
It is respectfully requested that, of the two attached postcards, one be stamped with the filing date of these documents and returned to our courier, and the other, prepaid postcard, be stamped with the filing date and unofficial application number and returned as soon as possible.

Commissioner for Patents
June 14, 2006
Page 3

This patent application is being submitted under 37 C.F.R. § 1.53(b) without filing fee.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Bryan S. Wade", with a stylized flourish at the end.

Bryan S. Wade
Attorney for Applicants
Registration No. 58,228

JSW/BSW:smn
Enclosures

544903_1.DOC

**SYSTEM AND METHOD RELATED TO GENERATING AND
TRACKING AN EMAIL CAMPAIGN**

Inventors: Michael G. Foulger
 Thomas R. Chipperfield
 Jeremy S. Cooper
 Andrew C. Storms

[0001] This application claims the benefit of U.S. Provisional Application No. 60/199,355, filed April 25, 2000.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The present invention is directed to marketing via email, and, in particular, to generating and tracking marketing related email.

Background Art

[0003] The ability to market a product or service to individuals who are accessible on the Internet is becoming increasingly important. Effective ways of contacting these individuals are being sought. For instance, to market to these individuals, email may be sent to the individuals over the Internet, to provide information related to the product or service. Email systems exist today for sending email to a target set of email addresses for purposes such as marketing, information acquisition, and otherwise. A system for sending email to a number of email targets for such purposes may be called an email campaign.

[0004] Present email campaigns may suffer from difficulties in locating a pool of relevant individuals to be contacted. In a small email campaign, each email sent is critical to the success of the campaign, and needs to be carefully created. In other situations, large numbers of individuals to be contacted may have been found. This may result in increased difficulty in tailoring the large number of required email messages to the individuals for more effective contact.

SKGF Ref. No. 2018.0040001

- [0005] Furthermore, once an email campaign has been initiated, difficulties in measuring success of the email campaign are presented. Effective ways for determining whether email recipients have received email from the email campaign have been sought. Also, effective ways for allowing the email recipients to provide feedback have also been sought. It may be desirable for the email recipients to be able to respond with feedback, and for the quantity and content of the responses to be monitored and tracked.
- [0006] In light of the foregoing, what is needed is an efficient way to create and track a email campaign.

BRIEF SUMMARY OF THE INVENTION

- [0007] The present invention is directed to a system for generating and tracking an email campaign. An email campaign generator generates an email campaign template from an email target database. The email target database includes at least one email target. An email campaign engine generates a custom email corresponding to each of the email targets in the email target database. The custom email are formed from the email campaign template. The email campaign engine sends each custom email to the corresponding email target. A campaign tracker receives at least one response corresponding to one or more of the sent custom email. The campaign tracker creates a campaign tracking list that includes the received at least one response.
- [0008] The present invention is further directed to a method for an email campaign. An email target database is received. An email campaign template related to at least one email target in the received email target database is generated. An email customized for each email target is sent to the respective email target. Each customized email is formed from the email campaign template. The sent custom email is tracked.
- [0009] The email campaign template can be generated by generating a message template, and generating a configuration file to contain data related to each email

target. The data for each email target is insertable in the generated message template. The data may include a custom resource locator address. The custom uniform resource locator (URL) address can be generated for each email target. The generated custom URL address for each email target is inserted into the configuration file. A message authentication code can be generated for each email target. All or a portion of the generated message authentication code for each email target can be appended to a host web address to form the custom URL address for each target.

[0010] Further features and advantages of the invention as well as the structure and operation of various embodiments of the present invention are described in detail below with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS/FIGURES

[0011] The accompanying drawings, which are incorporated herein and form a part of the specification, illustrate the present invention and, together with the description, further serve to explain the principles of the invention and to enable a person skilled in the pertinent art to make and use the invention.

[0012] FIG. 1 illustrates an exemplary computer network according to the present invention.

[0013] FIG. 2 illustrates an exemplary email campaign generator and tracker, according to an embodiment of the present invention.

[0014] FIG. 3A illustrates structure and operation of an exemplary email campaign generator, according to an embodiment of the present invention.

[0015] FIG. 3B illustrates an exemplary email campaign generator, according to an embodiment of the present invention.

[0016] FIG. 4 illustrates structure and operation of an exemplary email campaign engine, according to an embodiment of the present invention.

[0017] FIG. 5 illustrates structure and operation of an exemplary campaign tracker, according to an embodiment of the present invention.

- [0018] FIG. 6 illustrates generation of a customized URL address, according to an example embodiment of the present invention.
- [0019] FIG. 7 illustrates an exemplary email target database generator, according to an embodiment of the present invention.
- [0020] FIG. 8A illustrates an example email campaign history, according to an embodiment of the present invention.
- [0021] FIG. 8B illustrates an example email campaign summary, according to an embodiment of the present invention.
- [0022] FIG. 9 is a flowchart illustrating a sequence of operation according to an embodiment of the present invention.
- [0023] FIG. 10 is a flowchart illustrating a sequence of operation for generating an email target database, according to an embodiment of the present invention.
- [0024] FIGS. 11A-C are flowcharts illustrating sequences of operation related to generating an email campaign template,
- [0025] FIG. 12 is a diagram of an example Internet environment according to the present invention.
- [0026] FIG. 13 shows a simplified four-layered communication model supporting Web commerce.
- [0027] FIG. 14 is a block diagram of a computer system according to an example implementation of the present invention.
- [0028] The present invention will now be described with reference to the accompanying drawings. In the drawings, like reference numbers indicate identical or functionally similar elements. Additionally, the left-most digit(s) of a reference number identifies the drawing in which the reference number first appears.

DETAILED DESCRIPTION OF THE INVENTION

Overview

[0029] The present invention is directed to a method and system for generating and tracking an email campaign. An email campaign generator generates an email campaign template from an email target database. The email target database includes one or more email targets. An email campaign engine generates a custom email corresponding to each of the email targets in the email target database. The custom email are formed from the email campaign template. The email campaign engine sends each custom email to the corresponding email target. A campaign tracker receives at least one response corresponding to one or more of the sent custom email. The campaign tracker creates a campaign tracking list that includes the received at least one response.

[0030] In an example embodiment, the email campaign is related to permission-based marketing. For example, the email campaign may be related to permission-based marketing of resumes. The resumes may have been collected by an email campaign host or manager from the Internet by spider engines, or otherwise. The invention determines email targets or email addresses for each resume. This allows the email campaign host or manager to send a custom email to each resume owner, to request their permission to post the resume owner's resume on the email campaign host's web site, for example. The resume owner may provide their permission via a custom uniform resource locator (URL) address provided to the resume owner in the custom email. The resume owner may select the custom URL address, which will open a custom web page displaying the resume owner's collected resume. The resume owner may then optionally edit their collected resume on the web page. The resume owner may also decline to have their resume posted via email or the custom URL.

[0031] The invention is also adaptable to information and documents other than resumes, as would be understood persons skilled in the relevant art(s) from the

teachings herein. The alternative information and documents should have an email address associated with them, so that the information and document owners may be contacted by email, as described according to the present invention herein.

- [0032] The invention is adaptable to any type of web, Internet, network, and other form of electronic communication used for marketing of information, information broadcasting, and any other form of communication tracking and handling.

System Level Description

- [0033] FIG. 1 illustrates an exemplary computer network 100, according to embodiments of the present invention. Computer network 100 includes an email campaign generator and tracker 110, a network 120, a first user computer system 130, a second user computer system 140, and a third user computer system 150.

- [0034] Email campaign generator and tracker 110 generates and tracks an email campaign, according to the present invention. In embodiments, email campaign generator and tracker 110 receives an email target database. In alternate embodiments, email campaign generator and tracker 110 generates an email target database from raw documentation, such as one or more resumes obtained from the Internet. Email campaign generator and tracker 110 generates a custom email for one or more of the email targets in the email target database, and sends each custom email to the corresponding email target. Email campaign generator and tracker 110 then tracks and organizes responses from the email targets. Email campaign generator and tracker 110 as described in this section and elsewhere herein can be achieved using any number of structural implementations, including hardware, firmware, software, or any combination thereof. For example, email campaign generator and tracker 110 may reside and operate in a computer system. The details of such structural implementations will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

- [0035] Email campaign generator and tracker 110 is coupled to network 120 via first communications link 160. First communications link 160 can be any

suitable communications link for interfacing a computer system or other hardware with a network, such as network 120, as would be apparent to a person skilled in the relevant art(s) from the teachings herein.

[0036] Network 120 can be any communications network known to persons skilled in the relevant art(s) from the teachings herein. For instance, network 120 can be a network such as a local area network (LAN), an intranet, or the Internet. Examples embodiments for network 120 are further described herein. An example network 120 can include an Internet 1200, which is illustrated in FIG. 12 as described more fully below.

[0037] First, second, and third user computer systems 130, 140, and 150 are coupled to network 120 via a second, a third, and a fourth communications link 170, 180, and 190, respectively. First, second, and third user computer systems 130, 140, and 150 can be any computer systems that are configured to receive and send email, and can access web pages. Suitable computer systems would be apparent to a person skilled in the relevant art(s). Any number of user computer systems may interface with network 120, according to embodiments of the present invention.

[0038] Second, third, and fourth communications links 170, 180, and 190 can be any suitable communications links for interfacing a computer system or other hardware with a network, such as network 120, as would be recognized by persons skilled in the relative art(s) from the teachings herein. Various suitable communication links for first, second, third, and fourth communications links 160, 170, 180, and 190 are described below in relation to FIGS. 12-14.

[0039] Description in these terms is provided for convenience only. It is not intended that the invention be limited to application in this example network environment. In fact, after reading the following description, it will become apparent to a person skilled in the relevant art(s) how to implement the invention in alternative environments known now or developed in the future.

Email Campaign Generator and Tracker

- [0040] FIG. 2 illustrates an exemplary email campaign generator and tracker 110, according to an embodiment of the present invention. Email campaign generator and tracker 110 includes an email campaign generator 210, an email campaign engine 220, and a campaign tracker 230.
- [0041] Email campaign generator 210 receives an email target database 295. In embodiments, the email campaign generator 210 generates an email campaign template 280 from email target database 295. Email target database 295 includes a plurality of email targets (email addresses, for example). In an embodiment where the email campaign is related to a collection of resumes, email target database 295 may include one or more resumes, each with a corresponding email address for the resume owner.
- [0042] FIG. 3A illustrates operation and structure of exemplary email campaign generator 210, according to an embodiment of the present invention. Email campaign generator 210 receives an email target list 310. In an embodiment, email campaign generator 210 requests email target list 310 according to a structured query language (SQL) statement, as would be understood by persons skilled in the relevant art(s) from the teachings herein. Email target database 295 may include email target list 310.
- [0043] Email campaign generator 210 outputs a text message file 320 and a configuration file 330. Text message file 320 and configuration file 330 are included in email campaign template 280.
- [0044] Text message file 320 is a customized text message for the current email campaign. Hence, text message file 320 contains a textual message for an email recipient. Text message file 320 also contains a series of custom tags to be filled in with email recipient specific data, such as the recipient's full name, other recipient specific data, and a custom URL. When a custom email is received from the current email campaign, the recipient may select the custom URL in the

received email, which will open a web page for the recipient that the email campaign manager desires the recipient to view.

[0045] Configuration file 330 is generated to contain data related to each email target or recipient. The data for each email target is insertable in the message template created from text message file 320. This data may include invariant data and variant data, as shown in FIG. 3A. Invariant data may include information such as the subject line of the email message (i.e., "we found your resume"), and other items in the email message that will not vary from email to email in a particular email campaign. The invariant data may also include email source server information. Variant data may include custom information used to fill in the custom tags of text message file 320, such as full name = "John Jones".

[0046] In an embodiment, email campaign generator 210 creates a custom URL. FIG. 3B illustrates an example email campaign generator 210, according to an embodiment of the present invention. Email campaign generator 210 includes a URL generator 340. In an embodiment, URL generator 340 uses an MD5 hash to create a custom URL for each email target or recipient. Other message authentication code generators other than MD5 may be adapted for this use, as would be recognized by persons skilled in the relevant art(s) from the teachings herein.

[0047] FIG. 6 illustrates generation of a customized URL 660, according to an example embodiment of the present invention. For example, URL generator 340 may operate according to the operation and structure shown in FIG. 6. A custom URL address is typically generated for each email target, although in some situations it may be advantageous to provide the same URL address to one or more recipients. The generated custom URL address for each email target is inserted as data into configuration file 330.

[0048] As shown in FIG. 6, a hash generator 620 receives ID file 610. ID file 610 includes a campaign ID, a version ID, and an IC (independent contractor) ID (userid). The campaign ID is unique for each email campaign conducted. The

version ID is the current version of text message file 320. The IC ID is a unique ID for the current email target.

[0049] Hash generator 620 further receives a private key 670. Private key 670 is a private key or password unique to the email campaign host, as would be understood by persons skilled in the relevant art(s) from the teachings herein.

[0050] Hash generator 620 generates a 32-byte hash 630 from the campaign ID, the version ID, the IC ID, and the private key 670, for each email target. For example, hash generator 620 may use MD5 to create hash 630. The invention is applicable to hash sizes other than 32-bytes, although a 32-byte hash is provided as an example herein.

[0051] 16 bytes of the generated 32-byte hash 630 are appended to a host web address 680 to form customized URL 660 for each email target. Either a first 16 bytes 640 or a second 16 bytes 650 of 32-byte hash 630 may be appended to host web address 680. Other portions of generated hash 630 may also be used.

[0052] Various host web addresses may be used for host web address 680. In an example embodiment, a generic host web address 680 is equal to:

hostname/module?token

where "hostname", "module", and "token" are replaceable parameters. "hostname" may be replaced by any addressable Internet address, such as "www.icplanet.com". "module" may be replaced by any identifier or filename for software that handles execution of the link of customized URL 660 when it is selected by the email recipient. "token" may be replaced with any collection of numbers or letters that identify unique information related to customized URL 660. For example, host web address 680 may be equal to:

www.hostname.com/rz.cfm?a=&b=&c=

where "hostname" is equal to "www.hostname.com", "module" is equal to "rz.cfm", and token is equal to "&a=&b=&c=".

[0053] When an email target or recipient receives customized URL 660 in the custom email message, the recipient may select it, to view their custom web site, which is hosted at the email campaign host. The email campaign host compares the incoming URL address request to local data tables to verify the validity of the URL recipient, to allow the recipient access to the web page. Once the recipient is verified, the recipient may view and edit the web site. For example, when the web page represents the recipient's resume, the recipient may edit their posted resume.

[0054] In the described embodiment, 16 bytes of the 32 byte hash are utilized because, in tools such as Eudora and Outlook, text is cut off at 72 characters, and then does a word wrap. Hence, a "clickable" URL sent via email that is longer than 72 characters would wrap, and may then become an unexecutable link. Using 16 bytes of the 32 byte hash keeps the URL address length below the 72 character limit, avoiding word wrap.

[0055] As shown in FIG. 2, email campaign engine 220 receives email campaign template 280, and outputs email 260 and email campaign data 290. Email 260 includes one or more custom email messages. Email campaign data 290 is described more fully elsewhere herein. FIG. 4 illustrates operation and structure of an exemplary email campaign engine 220, according to an embodiment of the present invention. Email campaign engine 220 receives text message file 320 and configuration file 330.

[0056] Email campaign engine 220 generates a custom email message 410 corresponding to each email target in email target database 295. Email message 410 is formed from email campaign template 280 (text message file 320 and configuration file 330). Email campaign engine 220 copies text message file 320, and replaces each custom tag in text message file 320 with corresponding data in configuration file 330, to generate custom email message 410. For example, customized URL 660 may be inserted for a corresponding custom tag in custom

email message 410. Email campaign engine 220 sends each custom email message 410 to a corresponding email target.

[0057] Email campaign engine 220 also outputs email campaign data 290. For example, email campaign data 290 includes any data that may be utilized by campaign tracker 230.

[0058] As shown in FIG. 2, campaign tracker 230 receives email campaign data 290 and a response 270, and outputs tracking information 250. FIG. 5 illustrates operation of an exemplary campaign tracker 230, according to an embodiment of the present invention. Campaign tracker 230 receives a response 270 and email campaign data 290. Response 270 is typically a URL access or a sent email, which may occur through a firewall 510, when present. Campaign tracker 230 outputs tracking information 250. Tracking information 250 includes a campaign tracking list 520.

[0059] Each response 270 corresponds to a sent custom email message 410 and is received from the recipient of that sent custom email message 410. For example, response 270 for a particular sent custom email message 410 may be created by the email recipient by executing customized URL 660 in the custom email. Campaign tracker 230 creates campaign tracking list 520 that includes data related to each response 270.

[0060] Campaign tracking list 520 may include links to other pages, such as statistical data page 530 and charts 540.

[0061] FIG. 8A illustrates an exemplary campaign tracking list 520, email campaign history 800, according to an embodiment of the present invention. Email campaign history 800 illustrates various parameters and measured data related to a number of email campaigns. For example, email campaign history 800 may be displayed in a computer system display/graphical user interface.

[0062] Email campaign history 800 includes a campaign ID column 802, a hits column 804, a subject column 806, a date column 808, a message text column 812, and a demographics column 814. Campaign ID column 802 includes a list of identifiers for one or more email campaigns. Identifiers in campaign ID

column 802 may be selected to display further information on a particular email campaign, as further described below. Hits column 804 includes an indication of the number or percentage of successful hits for email campaigns listed in campaign ID column 802. For example, a successful hit may be declared when an email recipient selects their customized URL 660. Subject column 806 provides a brief description for email campaigns listed in campaign ID column 802. Date column 808 includes a date and time indication of the initiation of email campaigns listed in campaign ID column 802. Message text column 812 displays an identifier for the text of an email used in email campaigns listed in campaign ID column 802. For example, if an identifier in message text column 812 is selected, the text of an email, such as text message file 320 of FIG. 3A corresponding to the email campaign, may be displayed. Demographics column 814 allows for one or more demographics charts to be displayed for email campaigns listed in campaign ID column 802.

[0063] By selecting a campaign ID in campaign ID column 802 of email campaign history 800, a user may display a campaign statistical data page 530, as shown in FIG. 5. For example, if a first campaign ID 816 in FIG. 8A is selected, a user may display an email campaign summary 810, an example of which is shown in FIG. 8B. Email campaign summary 810 shows a variety of statistical data related to the email campaign of first campaign ID 816.

[0064] The email campaign generator and tracker of the present invention is not limited to these implementations. The email generator and tracker, and its elements, as described in this section can be achieved using any number of structural implementations, including hardware, firmware, software, or any combination thereof. The details of such structural implementations will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

Operation

[0065] Exemplary operational and/or structural implementations related to the structure(s), and/or embodiments described above are presented in this section (and its subsections). These components and methods are presented herein for purposes of illustration, and not limitation. The invention is not limited to the particular examples of components and methods described herein. Alternatives (including equivalents, extensions, variations, deviations, etc., of those described herein) will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein. Such alternatives fall within the scope and spirit of the present invention.

[0066] FIG. 9 shows a flowchart providing detailed operational steps of an example embodiment of the present invention. The steps of FIG. 9 can be implemented in hardware, firmware, software, or a combination thereof. For instance, the steps of FIG. 9 can be implemented by email campaign generator and tracker 110, and/or apportioned among email campaign generator 210, email campaign engine 220, and campaign tracker 230. Other structural embodiments will be apparent to persons skilled in the relevant art(s) based on the discussion contained herein. These steps are described in detail below.

[0067] The process begins with step 910. In step 910, an email target database is received. In embodiments, the email target database is requested according to a structured query language (SQL) statement, as would be understood by persons skilled in the relevant art(s) from the teachings herein. In embodiments, the email target database is received from a resume database vendor, is generated from resume data gathered by a spider engine, or is otherwise previously generated. For example, the email target database is email target database 295 shown in FIG. 2. In embodiments, the email target database is generated from raw resume documents and/or other related data. Refer to further description related to FIG. 7 herein for example structure for an email target database generator, and to FIG.

10 herein for example operational steps related to email target database generation.

[0068] In step 920, an email related to at least one email target in the received email target database is generated. For example, the generated email campaign template is email campaign template 280, which includes text message file 320 and configuration file 330.

[0069] In step 930, an email customized for each email target is sent to each email target, wherein each customized email is formed from the email campaign template. In embodiments, a customized email for each email target is formed from the generated text message template and the generated configuration file. For example, the customized email is custom email message 410.

[0070] In step 940, the sent custom email is tracked. In embodiments, at least one response is received from a respondent corresponding to one of the sent customized email, and a campaign tracking list is created from the received at least one response. For example, campaign tracker 230 receives response 270, and outputs campaign tracking list 520, as shown in FIG. 5.

[0071] In embodiments, creating the campaign tracking list includes determining various parameters. This may include determining a number of successful visits from respondents, determining a number of sent customized email that were undeliverable (e.g., email did not find their respective target email addresses), and determining a number of respondents that requested deletion.

[0072] FIGS. 11A-C illustrate flowcharts providing operational embodiments for implementing at least a portion of the operation of step 920 in FIG. 9. The steps of FIGS. 11A-C can be implemented in hardware, firmware, software, or a combination thereof. Other structural embodiments will be apparent to persons skilled in the relevant art(s) based on the discussion contained herein. These steps are described in detail below.

[0073] The steps shown in FIG. 11A may occur in any order. The process in FIG. 11A begins with step 1110. In step 1110, a message template is generated. For example, the message template is text message file 320 shown in FIG. 3A.

- [0074] In step 1120, a configuration file is generated to contain data related to each email target, wherein the data for each email target is insertable in the generated message template. For example, the configuration file is configuration file 330 shown in FIG. 3A.
- [0075] The process in FIG. 11B begins with step 1130. In step 1130, a custom URL address is generated for each email target. For example, the custom URL address is customized URL 660 shown in FIG. 6.
- [0076] In step 1140, the generated custom URL address for each email target is inserted into the configuration file.
- [0077] The process in FIG. 11C begins with step 1150. In step 1150, a 32-byte hash is generated from a campaign ID, a message template version ID, a user reference ID, and a private key, for each email target. As described above, MD5 or other message authentication code generator may be used to generate the hash. Other hash sizes than 32 bytes may be generated.
- [0078] In step 1160, the first 16 bytes of the generated 32-byte hash for each email target is appended to a host web address to form the custom URL address for each email target. The invention is applicable to appending other portions of the hash. In an embodiment, as described above, the host web address may be equal to:

hostname/module?token

where "hostname", "module", and "token" are replaceable parameters that are more fully described above.

- [0079] These embodiments are provided for purposes of illustration, and are not intended to limit the invention. Alternate embodiments, differing slightly or substantially from those described herein, will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

Email Target Database

- [0080] FIG. 7 illustrates an exemplary email target database generator 700, according to an embodiment of the present invention. For example, email target database generator 700 may generate email target database 295 shown in FIG. 2. For exemplary purposes, email target database generator 700 is described below in reference to the processing of collected resumes. It will be understood by a person skilled in the relevant art(s) from the teachings herein, that the email target database generator 700 of the present invention is applicable to the processing of any document type.
- [0081] Email target database generator 700 includes a resume parser 710, a resume auto-categorizer, a database inserter 730, and an email-de-duplicator 740.
- [0082] Email target database generator 700 receives raw data 750. In embodiments, raw data 750 may be a collection of resumes, or other resume related data. As described above, in alternative embodiments, raw data 750 may include a collection of other types of documentation or information. This data may be based on templates and other descriptor files.
- [0083] Resume parser 710 receives raw data 750. Resume parser 710 includes one or more programs that identify parts of a resume. Resume parser 710 detects sections of resumes (e.g., education, summary, work history, etc.), and breaks the resumes into separate series of files. In alternative embodiments, parser 710 may be adapted to parsing other document types or information.
- [0084] Resume auto-categorizer 720 receives the output of resume parser 710. Resume auto-categorizer 720 analyzes the received collection of information, and executes a keyword matching operation on the information. For example, in an embodiment related to resumes, resume auto-categorizer 720 maintains a list of job categories and whole collection of associated keywords, scores the keywords (e.g., if it finds a keyword many times in a resume, it gives that resume a high score). For instance, one particular resume may receive a rating of "10" in information technology, and a "2" in management.

- [0085] Database inserter 730 receives the output of resume auto-categorizer, and inserts all of the resume-related information, or other information, into a database.
- [0086] Email de-duplicator 740 receives the output of database inserter 730, and searches for duplicate email addresses due potentially due to duplicate resumes or other documents collected. Email de-duplicator 740 eliminates duplicates so that each email target receives a single custom email.
- [0087] Email de-duplicator outputs resume database information 760, which in an embodiment may be all or a portion of email target database 295.
- [0088] The email target database generator of the present invention is not limited to these implementations. The email target database generator as described in this section can be achieved using any number of structural implementations, including hardware, firmware, software, or any combination thereof. The details of such structural implementations will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.
- [0089] FIG. 10 shows a flowchart providing detailed operational steps of an example embodiment of the email target database generator of the present invention. The steps of FIG. 10 can be implemented in hardware, firmware, software, or a combination thereof. For instance, the steps of FIG. 10 can be implemented by email target database generator 700, and/or apportioned among resume parser 710, resume auto-categorizer 720, database inserter 730, and email de-duplicator 740. Furthermore, the steps of FIG. 10 do not necessarily have to occur in the order shown, as will be apparent to persons skilled in the relevant art(s) based on the teachings herein. Other structural embodiments will be apparent to persons skilled in the relevant art(s) based on the discussion contained herein. These steps are described in detail below.
- [0090] The process begins with step 1010. In step 1010, at least one raw document is collected. For example, the one or more raw documents may be resumes.
- [0091] In step 1020, the collected at least one document is parsed.

- [0092] In step 1030, the parsed at least one document is categorized into at least one category. For example, when the documents are resumes, the at least one category may be at least one job category.
- [0093] In step 1040, the at least one document is inserted into a database.
- [0094] In step 1050, documents corresponding to duplicate email addresses are removed from the database.
- [0095] These embodiments are provided for purposes of illustration, and are not intended to limit the invention. Alternate embodiments, differing slightly or substantially from those described herein, will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein.

Example Network Environment

- [0096] The present invention can be implemented in conjunction with any communication network, such as the Internet, which supports interactive services and applications. In particular, the present invention can be implemented in any Web service, preferably a Web service supporting secure transactions, such as, the Secure Socket Layer (SSL) protocol and/or using a Secure HyperText Transport Protocol (S-HTTP). In one example, the present invention is implemented in a multi-platform (platform independent) programming language such as Java 1.1. Java-enabled browsers are used, such as, Netscape, HotJava, and Microsoft Explorer browsers. Active content Web pages can be used. Such active content Web pages can include Java applets or ActiveX controls, or any other active content technology developed now or in the future. The present invention, however, is not intended to be limited to Java or Java-enabled browsers, and can be implemented in any programming language and browser, developed now or in the future, as would be apparent to a person skilled in the art given this description.
- [0097] FIG. 12 is a diagram of an example internetwork environment according to the present invention. FIG. 12 shows a communication network or

combination of networks (Internet) 1200, which can support the invention. Internet 1200 consists of interconnected computers that support communication between many different types of users including businesses, universities, individuals, government, and financial institutions. Internet 1200 supports many different types of communication links implemented in a variety of architectures. For example, voice and data links can be used including phone, paging, cellular, and cable TV (CATV) links. Terminal equipment can include local area networks, personal computers with modems, content servers of multi-media, audio, video, and other information, pocket organizers, Personal Data Assistants (PDAs), and set-top boxes.

[0098] Communication over a communication network, such as Internet 1200, is carried out through different layers of communication. FIG. 13 shows a simplified four-layered communication model supporting Web commerce including an application layer 1308, transport layer 1310, Internet layer 1320, physical layer 1330. As would be apparent to a person skilled in the art, in practice, a number of different layers can be used depending upon a particular network design and communication application. Application layer 1308 represents the different tools and information services which are used to access the information over the Internet. Such tools include, but are not limited to, Telnet log-in service 1301, IRC chat 1302, Web service 1303, and SMTP (Simple Mail Transfer Protocol) electronic mail service 1306. Web service 1303 allows access to HTTP documents 1304, and FTP and Gopher files 1305. A Secure Socket Layer (SSL) is an optional protocol used to encrypt communications between a Web browser and Web server.

[0099] Description of the example environment in these terms is provided for convenience only. It is not intended that the invention be limited to application in this example environment. In fact, after reading the following description, it will become apparent to a person skilled in the relevant art how to implement the invention in alternative environments.

Example Computer System

- [0100] An example of a computer system 1440 is shown in FIG. 14. The computer system 1440 represents any single or multi-processor computer. Single-threaded and multi-threaded computers can be used. Unified or distributed memory systems can be used.
- [0101] Computer system 1440 includes one or more processors, such as processor 1444. One or more processors 1444 can execute software implementing routine 400 as described above. Each processor 1444 is connected to a communication infrastructure 1442 (e.g., a communications bus, cross-bar, or network). Various software embodiments are described in terms of this exemplary computer system. After reading this description, it will become apparent to a person skilled in the relevant art how to implement the invention using other computer systems and/or computer architectures.
- [0102] Computer system 1440 also includes a main memory 1446, preferably random access memory (RAM), and can also include a secondary memory 1448. The secondary memory 1448 can include, for example, a hard disk drive 1450 and/or a removable storage drive 1452, representing a floppy disk drive, a magnetic tape drive, an optical disk drive, etc. The removable storage drive 1452 reads from and/or writes to a removable storage unit 1454 in a well known manner. Removable storage unit 1454 represents a floppy disk, magnetic tape, optical disk, etc., which is read by and written to by removable storage drive 1452. As will be appreciated, the removable storage unit 1454 includes a computer usable storage medium having stored therein computer software and/or data.
- [0103] In alternative embodiments, secondary memory 1448 can include other similar means for allowing computer programs or other instructions to be loaded into computer system 1440. Such means can include, for example, a removable storage unit 1462 and an interface 1460. Examples can include a program cartridge and cartridge interface (such as that found in video game devices), a

removable memory chip (such as an EPROM, or PROM) and associated socket, and other removable storage units 1462 and interfaces 1460 which allow software and data to be transferred from the removable storage unit 1462 to computer system 1440.

[0104] Computer system 1440 can also include a communications interface 1464. Communications interface 1464 allows software and data to be transferred between computer system 1440 and external devices via communications path 1466. Examples of communications interface 1464 can include a modem, a network interface (such as Ethernet card), a communications port, etc. Software and data transferred via communications interface 1464 are in the form of signals which can be electronic, electromagnetic, optical or other signals capable of being received by communications interface 1464, via communications path 1466. Note that communications interface 1464 provides a means by which computer system 1440 can interface to a network such as the Internet.

[0105] The present invention can be implemented using software running (that is, executing) in an environment similar to that described above with respect to FIG. 12. In this document, the term "computer program product" is used to generally refer to removable storage drive 1452, a hard disk installed in hard disk drive 1450, or a carrier wave carrying software over a communication path 1466 (wireless link or cable) to communication interface 1464. A computer useable medium can include magnetic media, optical media, or other recordable media, or media that transmits a carrier wave or other signal. These computer program products are means for providing software to computer system 1440. For instance, in embodiments, email campaign generator and tracker 110 is implemented as one or more computer programs. Furthermore, the example modules of email campaign generator and tracker 110 shown in FIG. 2, may be implemented as one or more separate computer programs.

[0106] Computer programs (also called computer control logic) are stored in main memory 1446 and/or secondary memory 1448. Computer programs can also be received via communications interface 1464. Such computer programs,

when executed, enable the computer system 1440 to perform the features of the present invention as discussed herein. In particular, the computer programs, when executed, enable the processor 1444 to perform the features of the present invention. Accordingly, such computer programs represent controllers of the computer system 1440.

[0107] The present invention can be implemented as control logic in software, firmware, hardware or any combination thereof. In an embodiment where the invention is implemented using software, the software may be stored in a computer program product and loaded into computer system 1440 using removable storage drive 1452, hard drive 1450, or interface 1460. Alternatively, the computer program product may be downloaded to computer system 1440 over communications path 1466. The control logic (software), when executed by the one or more processors 1444, causes the processor(s) 1444 to perform the functions of the invention as described herein.

[0108] In another embodiment, the invention is implemented primarily in firmware and/or hardware using, for example, hardware components such as application specific integrated circuits (ASICs). Implementation of a hardware state machine so as to perform the functions described herein will be apparent to persons skilled in the relevant art(s).

Conclusion

[0109] While various embodiments of the present invention have been described above, it should be understood that they have been presented by way of example only, and not limitation. It will be apparent to persons skilled in the relevant art that various changes in form and detail can be made therein without departing from the spirit and scope of the invention. Thus, the breadth and scope of the present invention should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims and their equivalents.

WHAT IS CLAIMED IS:

1. A method for conducting an email campaign, comprising the steps of:
 - (1) receiving an email target database;
 - (2) generating an email campaign template related to at least one email target in the received email target database;
 - (3) sending to each of the at least one email target a corresponding custom email, wherein the custom email is formed from the email campaign template; and
 - (4) tracking the custom email sent to each of the at least one email target.
2. The method of claim 1, wherein step (1) comprises the step of:
 - (a) generating the email target database.
3. The method of claim 2, wherein step (a) comprises the steps of:
 - (i) collecting at least one raw document;
 - (ii) parsing said collected at least one document;
 - (iii) categorizing said parsed at least one document into at least one category;
 - (iv) inserting said at least one document into a database;and
 - (v) removing documents from the database corresponding to duplicate email addresses.
4. The method of claim 1, wherein step (1) comprises the step of:
 - (a) requesting an email target database according to a structured query language statement.
5. The method of claim 1, wherein step (1) comprises the step of:

- (a) receiving an email target database from a database vendor.

6. The method of claim 1, wherein step (2) comprises the steps of:

- (a) generating a message template; and
- (b) generating a configuration file to contain data related to each of the at least one email target, wherein the data is insertable in the generated message template.

7. The method of claim 6, wherein step (b) comprises the steps of:

- (i) generating a custom uniform resource locator address for each of the at least one email target; and
- (ii) inserting the generated custom uniform resource locator address for each of the at least one email target into the configuration file.

8. The method of claim 7, wherein step (i) comprises the steps of:

- (A) generating a hash from a campaign ID, a message template version ID, a user reference ID, and a private key, for each of the at least one email target; and
- (B) appending a first portion of the generated hash for each of the at least one email target to a host web address to form the custom uniform resource locator address for each of the at least one email target.

9. The method of claim 8, wherein the host web address is equal to:

hostname/module?token

where hostname is replaced with an email campaign host Internet address,
module is replaced with an identifier for software located at the email campaign host directed to processing the custom uniform resource locator address for each email target after it is selected, and

token is replaced with any alphanumeric identifier for unique information related to the customized uniform resource locator address for each of the at least one email target.

10. The method of claim 6, wherein step (3) comprises the step of:

(a) forming the custom email for each of the at least one email target from the generated text message template and the generated configuration file.

11. The method of claim 1, wherein step (4) comprises the steps of:

(a) receiving at least one response from the at least one email target; and

(b) creating a campaign tracking list from said received at least one response.

12. The method of claim 11, wherein step (b) comprises the steps of:

(i) determining a number of successful visits from the at least one email target;

(ii) determining a number of the custom email sent to the at least one email target that were undeliverable; and

(iii) determining a number of the at least one email target that requested deletion.

13. A system for generating and tracking an email campaign, comprising:

an email campaign generator that generates an email campaign template from an email target database, wherein said email target database comprises an email target;

an email campaign engine that generates a custom email corresponding to said email target, wherein said custom email is formed from said email

campaign template, wherein said email campaign engine sends said custom email to said email target; and

a campaign tracker that receives a response corresponding to said sent custom email, and wherein said campaign tracker creates a campaign tracking list that includes said received response.

14. The system of claim 13, wherein said email campaign template comprises:
a text message; and

a configuration file that includes data from said email target database corresponding to said email target.

15. The system of claim 14, wherein said email campaign engine makes a copy of said text message to generate said custom email.

16. The system of claim 15, wherein said email campaign engine replaces at least one custom tag in said text message copy with a corresponding portion of said configuration file data.

17. The system of claim 14, wherein said email campaign generator comprises a custom uniform resource locator generator that creates a custom uniform resource locator address for said email target, wherein said configuration file includes said custom uniform resource locator address in said data.

18. The system of claim 17, wherein said custom uniform resource locator generator generates a hash from a campaign ID, a message template version ID, a user reference ID, and a private key, for said email target, and appends at least a portion of the generated hash to a host web address to form said custom uniform resource locator address for said email target.

19. The system of claim 18, wherein said host web address is equal to:

hostname/module?token

where hostname is replaced with an email campaign host Internet address,
module is replaced with an identifier for software located at the
email campaign host directed to processing said custom uniform resource locator
address for said email target after it is selected, and

token is replaced with any alphanumeric identifier for unique
information related to said custom uniform resource locator address for said email
target.

SYSTEM AND METHOD RELATED TO GENERATING AND TRACKING
AN EMAIL CAMPAIGN

ABSTRACT OF THE DISCLOSURE

A method and system for generating and tracking an email campaign is described. An email campaign generator generates an email campaign template from an email target database. The email target database comprises at least one email target. An email campaign engine generates a custom email corresponding to each of the at least one email target. The custom email is formed from the email campaign template. The email campaign engine sends to each of the at least one email target the corresponding custom email. A campaign tracker receives at least one response corresponding to the sent custom email. The campaign tracker creates a campaign tracking list that includes the received at least one response.

C:\WINDOWS\TEMP\A285-71.wpd

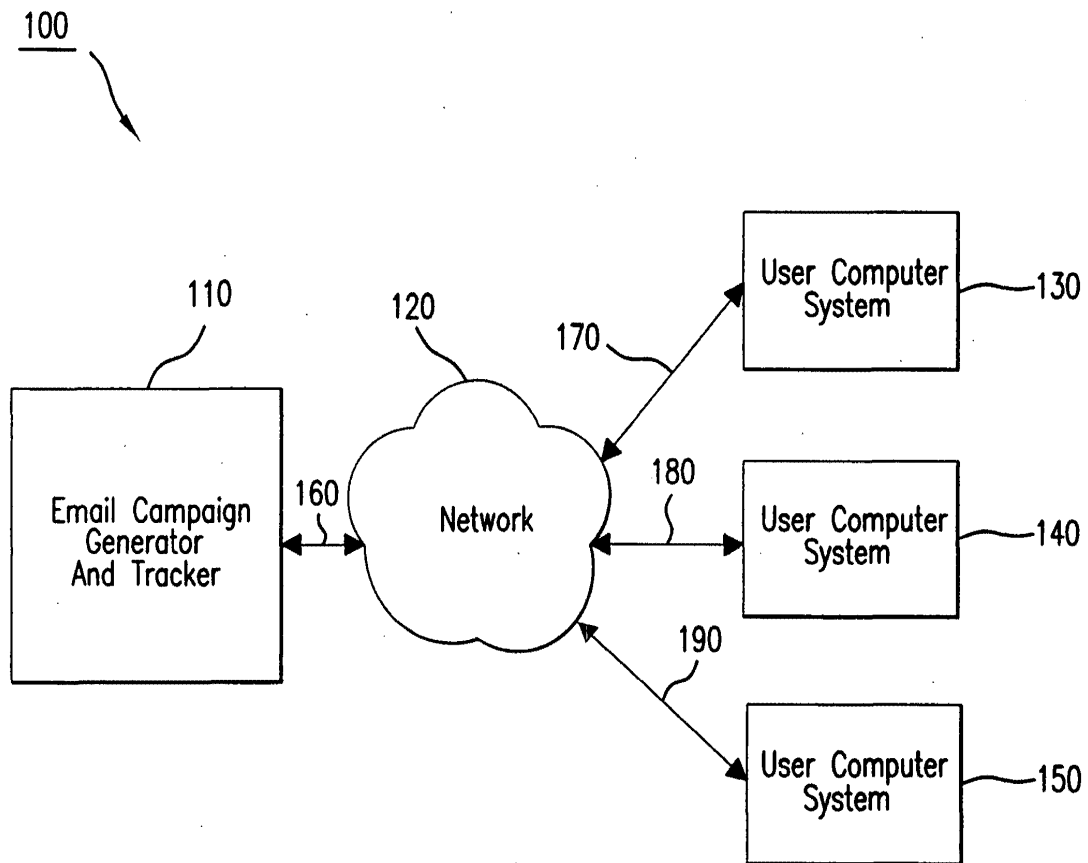


FIG.1

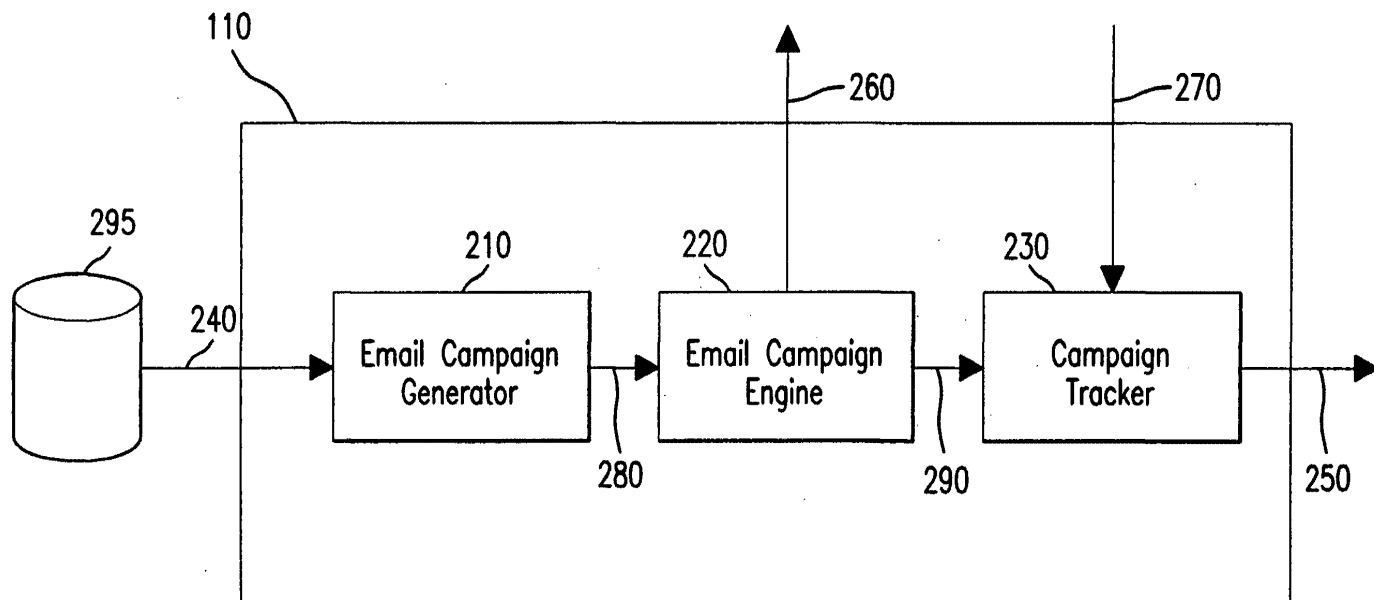


FIG.2

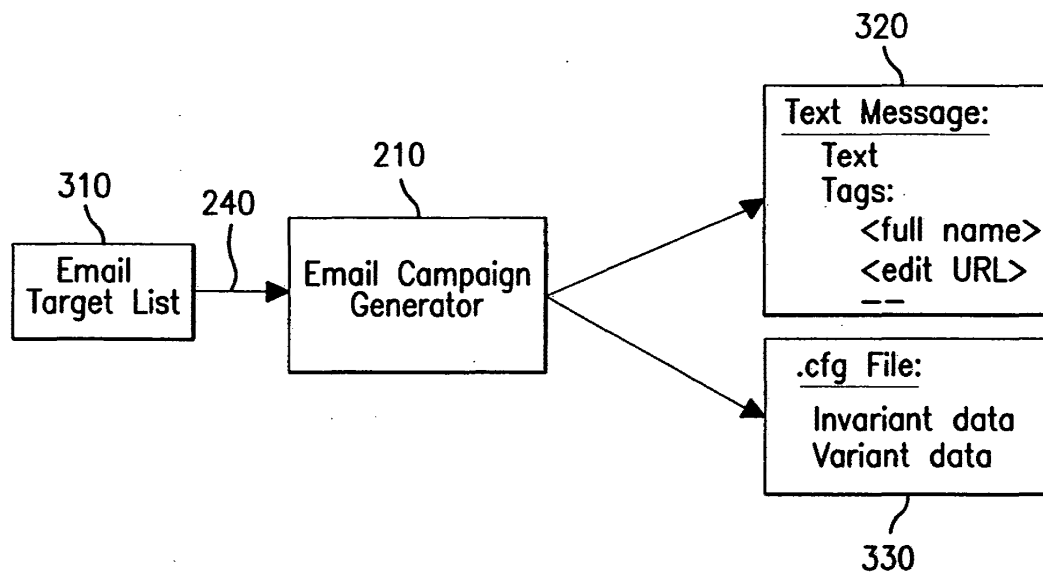


FIG.3A

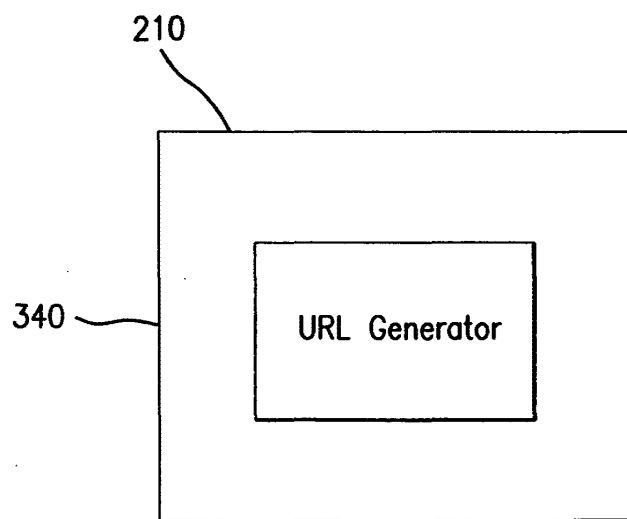


FIG.3B

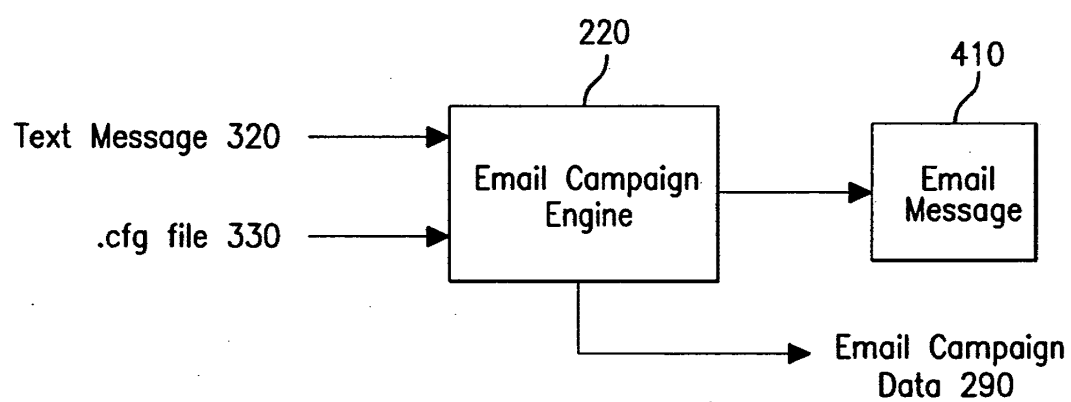


FIG.4

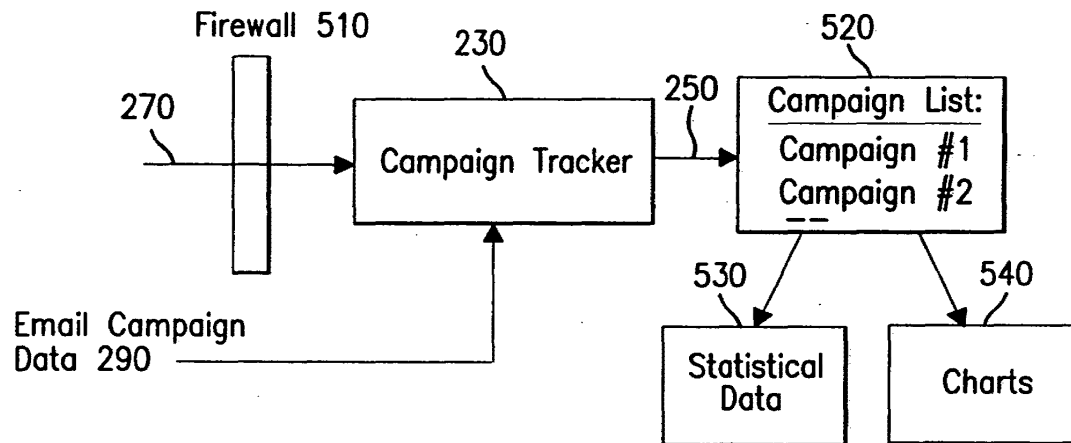


FIG. 5

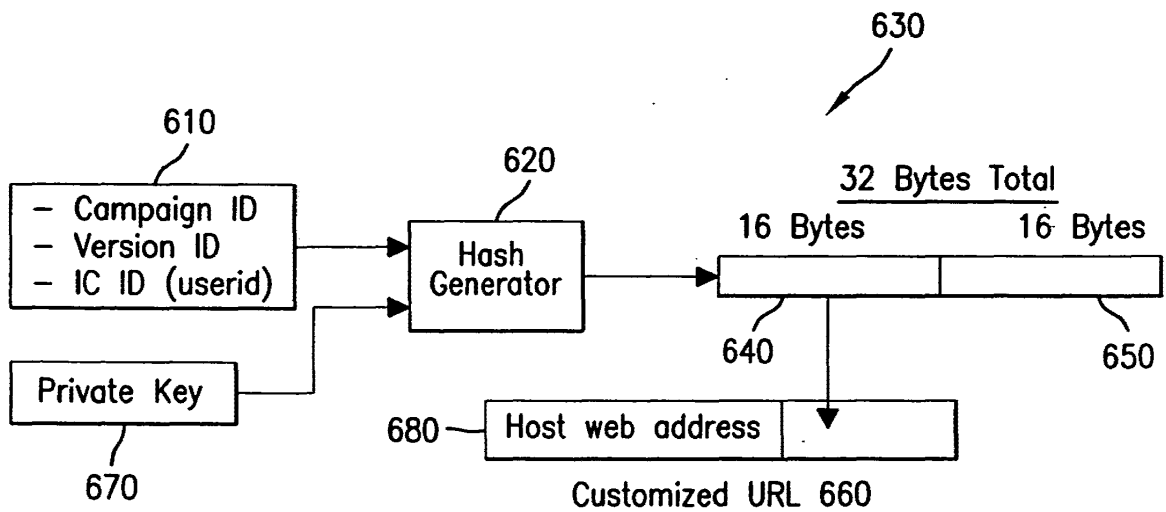


FIG. 6

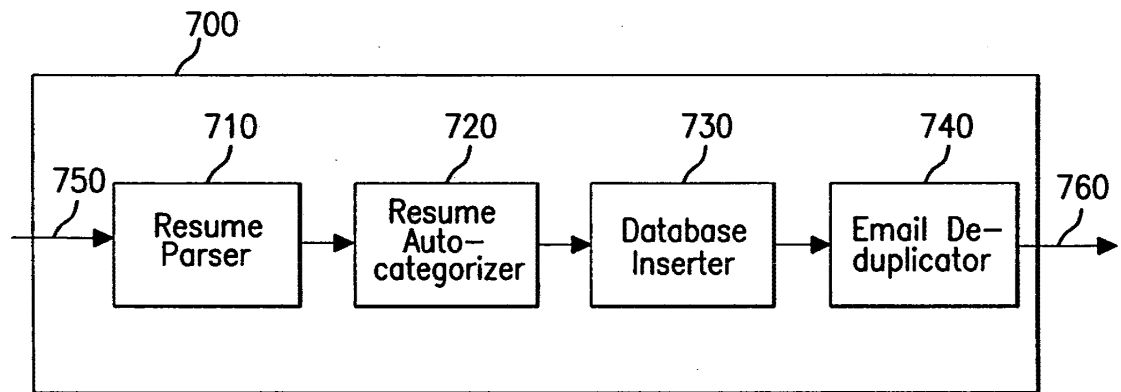


FIG. 7

INTRANET HOME

EMAIL STATISTICS HOME

EMAIL CAMPAIGN HISTORY 800

CAMPAIGN ⁸⁰² HITS ⁸⁰⁴ SUBJECT ⁸⁰⁶

7/14

FIG.8A

DATE ⁸⁰⁸
GENERATED

MESSAGE TEXT ⁸¹²

DEMOGRAPHICS ⁸¹⁴

<u>31 1</u>	⁸¹⁶ 4.56%	WE FOUND YOUR RESUME (W/NAME) Pt. 2	2000-03-03 17:05:00	<u>ICSolicitation031.01.txt</u>	<u>CHART</u>
<u>31 11</u>	2.10%	WE FOUND YOUR RESUME (FOLLOW- UP TO 31.1)	2000-03-14 13:46:00	<u>ICSolicitation031.011.txt</u>	<u>CHART</u>
<u>30 1</u>	20.00%	WE FOUND YOUR RESUME (W/NAME) pt. 1	2000-03-03 16:13:00	<u>ICSolicitation030.01.txt</u>	<u>CHART</u>
<u>29 1</u>	24.00%	WE FOUND YOUR RESUME (W/NAME)	2000-02-14 16:31:00	<u>ICSolicitation029.01.txt</u>	<u>CHART</u>
<u>29 11</u>	2.56%	WE FOUND YOUR RESUME (W/NAME: FOLLOW-UP #1 TO 29.1)	2000-02-23 16:02:00	<u>ICSolicitation029.011.txt</u>	<u>CHART</u>
<u>28 1</u>	14.00%	WE FOUND YOUR RESUME	2000-01-28 18:25:00	<u>ICSolicitation028.01.txt</u>	<u>CHART</u>
<u>28 11</u>	16.09%	WE FOUND YOUR RESUME (FOLLOW- UP #1 TO 28.1)	2000-02-04 18:55:00	<u>ICSolicitation028.011.txt</u>	<u>CHART</u>
<u>27 1</u>	17.00%	WE FOUND YOUR RESUME	2000-01-25 19:39:00	<u>ICSolicitation027.01.txt</u>	<u>CHART</u>
<u>27 2</u>	14.00%	WE FOUND YOUR RESUME	2000-01-28 18:22:00	<u>ICSolicitation027.02.txt</u>	<u>CHART</u>
<u>27 11</u>	11.90%	WE FOUND YOUR RESUME (FOLLOW- UP #1 TO 27.1)	2000-02-04 18:54:00	<u>ICSolicitation027.011.txt</u>	<u>CHART</u>
<u>27 21</u>	9.20%	WE FOUND YOUR RESUME (FOLLOW- UP #1 TO 27.2)	2000-02-04 18:55:00	<u>ICSolicitation027.021.txt</u>	<u>CHART</u>
<u>11 1</u>	31.91%	WE FOUND YOUR RESUME	1999-10-19 18:24:00	<u>ICSolicitation011.01.txt</u>	<u>CHART</u>
<u>11 2</u>	17.20%	WE FOUND YOUR RESUME	1999-10-22 16:05:00	<u>ICSolicitation011.02.txt</u>	<u>CHART</u>

INTRANET HOME

EMAIL STATISTICS HOME

EMAIL CAMPAIGN SUMMARY 810

WE FOUND YOUR RESUME (W/NAME) Pt. 2

EMAIL(s) SENT IN THIS CAMPAIGN: 900

EMAIL(s) THAT BOUNCED: 0 (0%)

SUCCESSFUL VISITS: 41 (4.56%)

DELETE REQUESTS: 0 (0.00%)

FURTHER DETAILS...

CATEGORY BREAKDOWN

IT-OTHER	—	13 (31.71%)
OTHER	—	10 (24.39%)
ADMINISTRATIVE	-	5 (12.20%)
ARCHITECT/ENGINEERING	-	3 (7.32%)
EXECUTIVE/MANAGEMENT	-	3 (7.32%)
MARKETING/ADVERTISING/PR	-	2 (4.88%)
FINANCE/ACCOUNTING	-	2 (4.88%)
SALES/BUSINESS DEVELOPMENT	-	1 (2.44%)
LEGAL/LAW	-	1 (2.44%)
CUSTOMER SERVICE/CALL CENTER	-	1 (2.44%)

STATE BREAKDOWN

CA	—	(45.12%)
TX	—	(23.45%)
DC	-	(12.01%)
WA	-	(7.93%)
OR	-	(2.32%)
NY	-	(2.12%)
NJ	-	(2.07%)
MA	-	(1.97%)

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FIG.8B

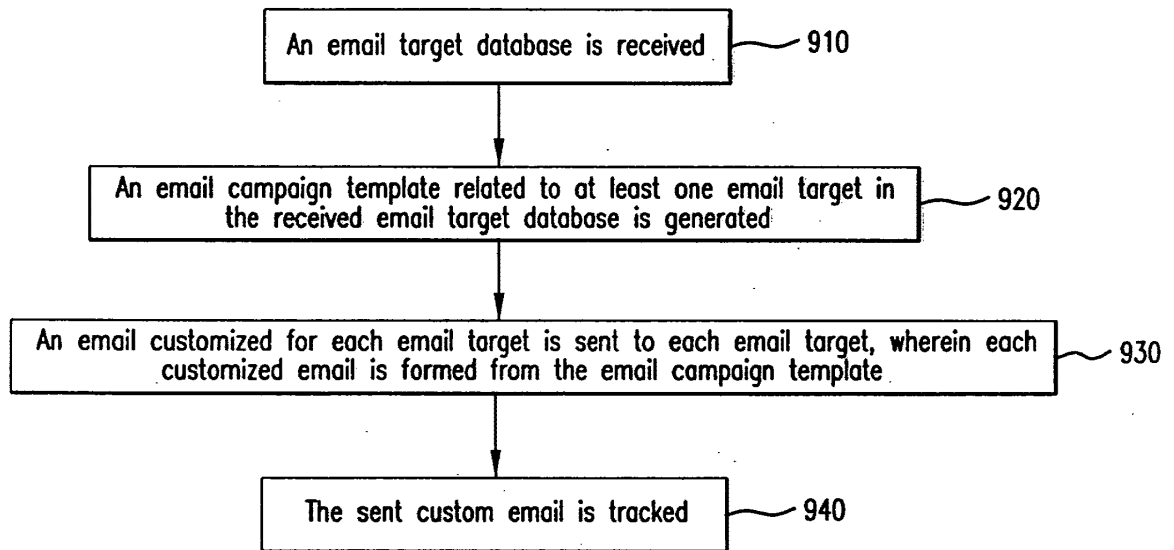


FIG.9

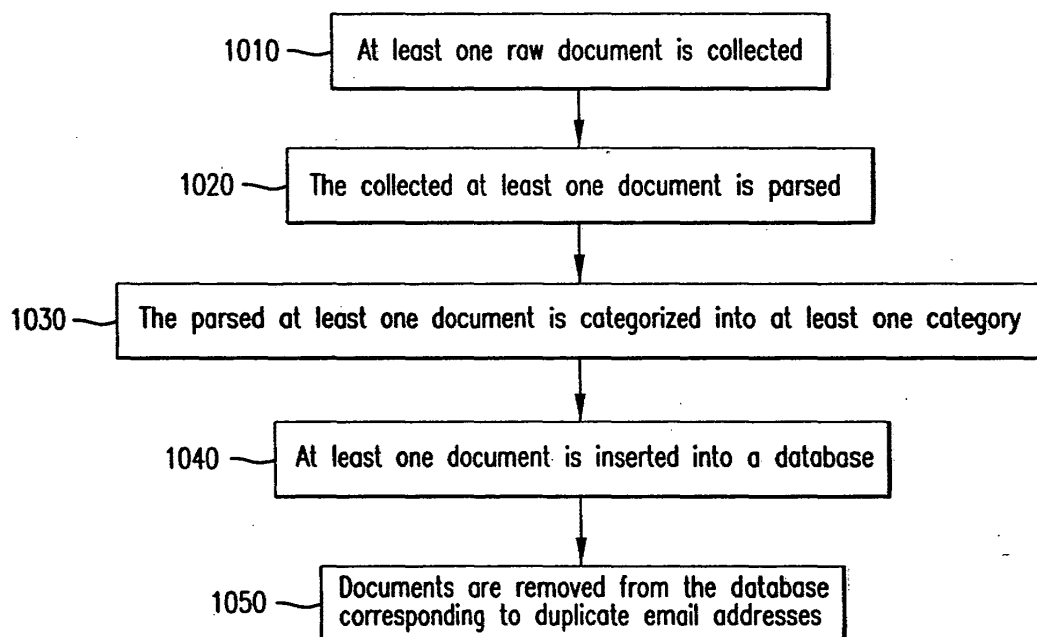


FIG.10

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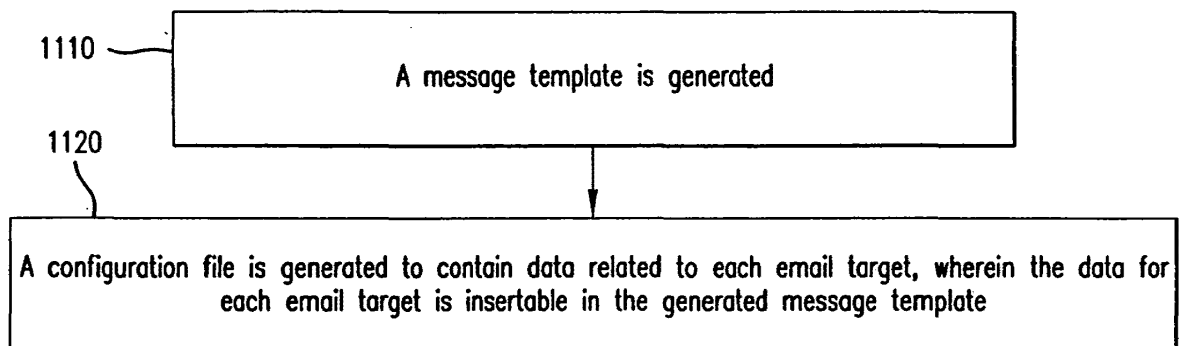


FIG.11A

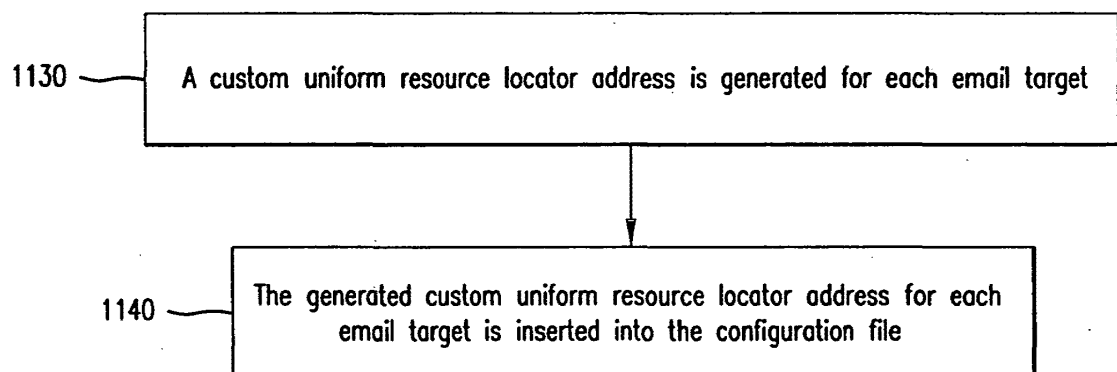


FIG.11B

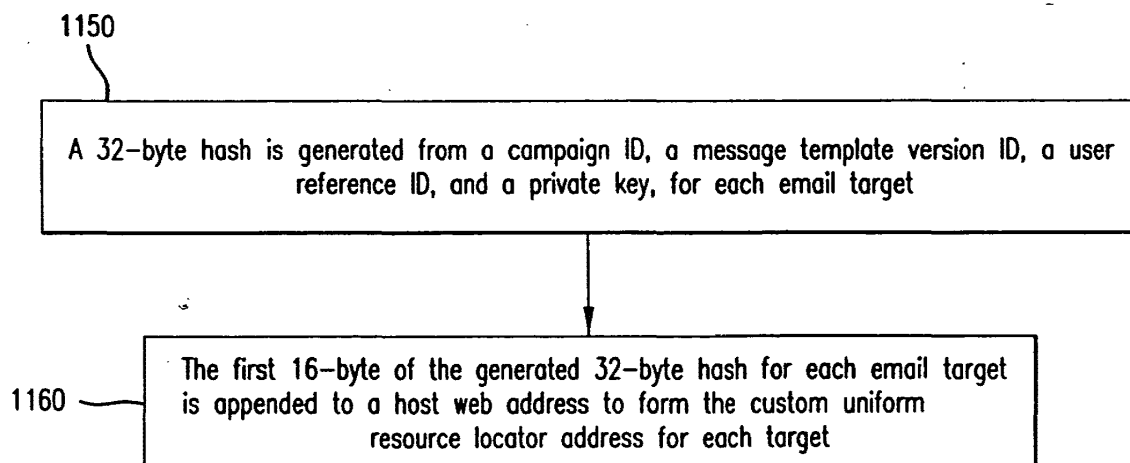
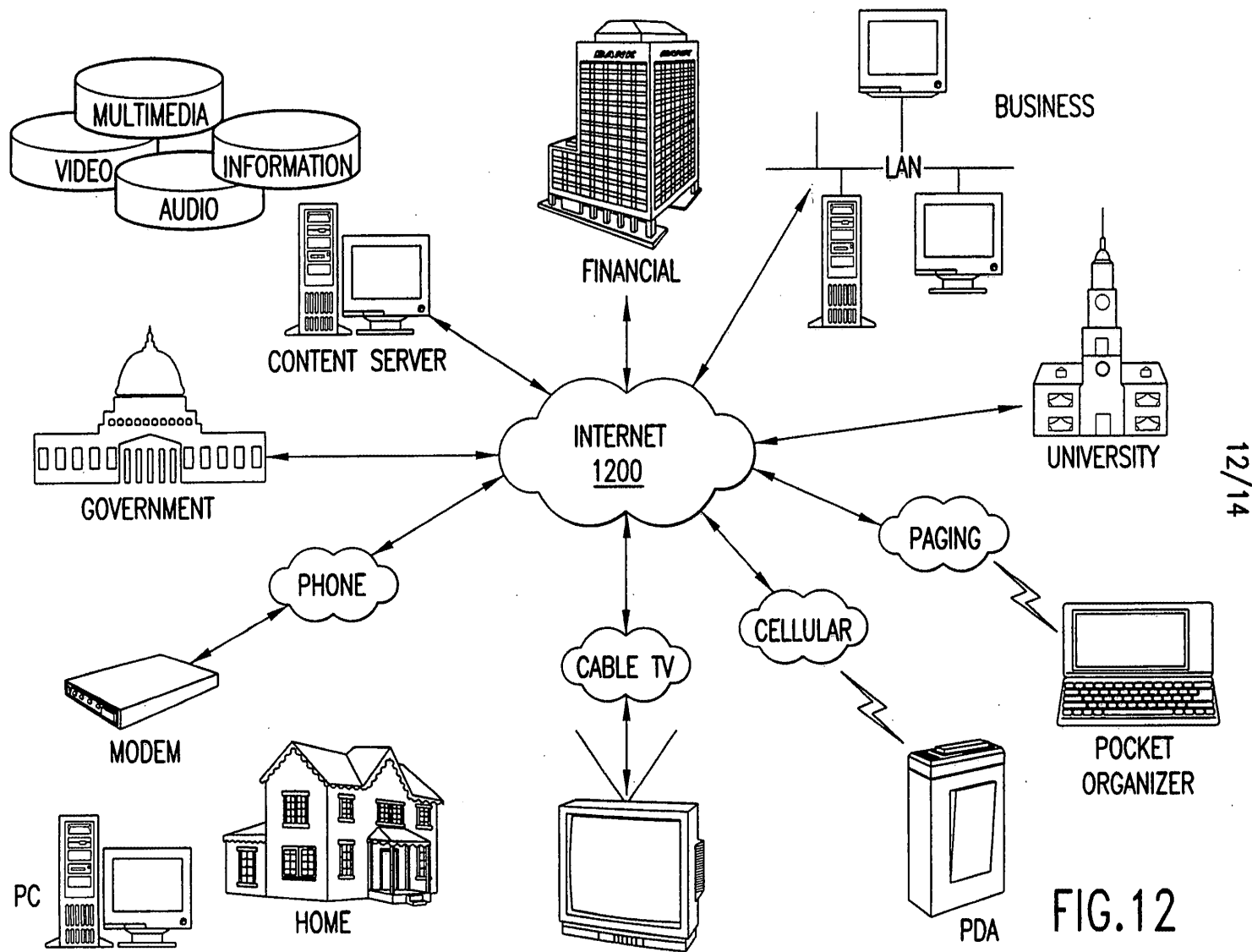
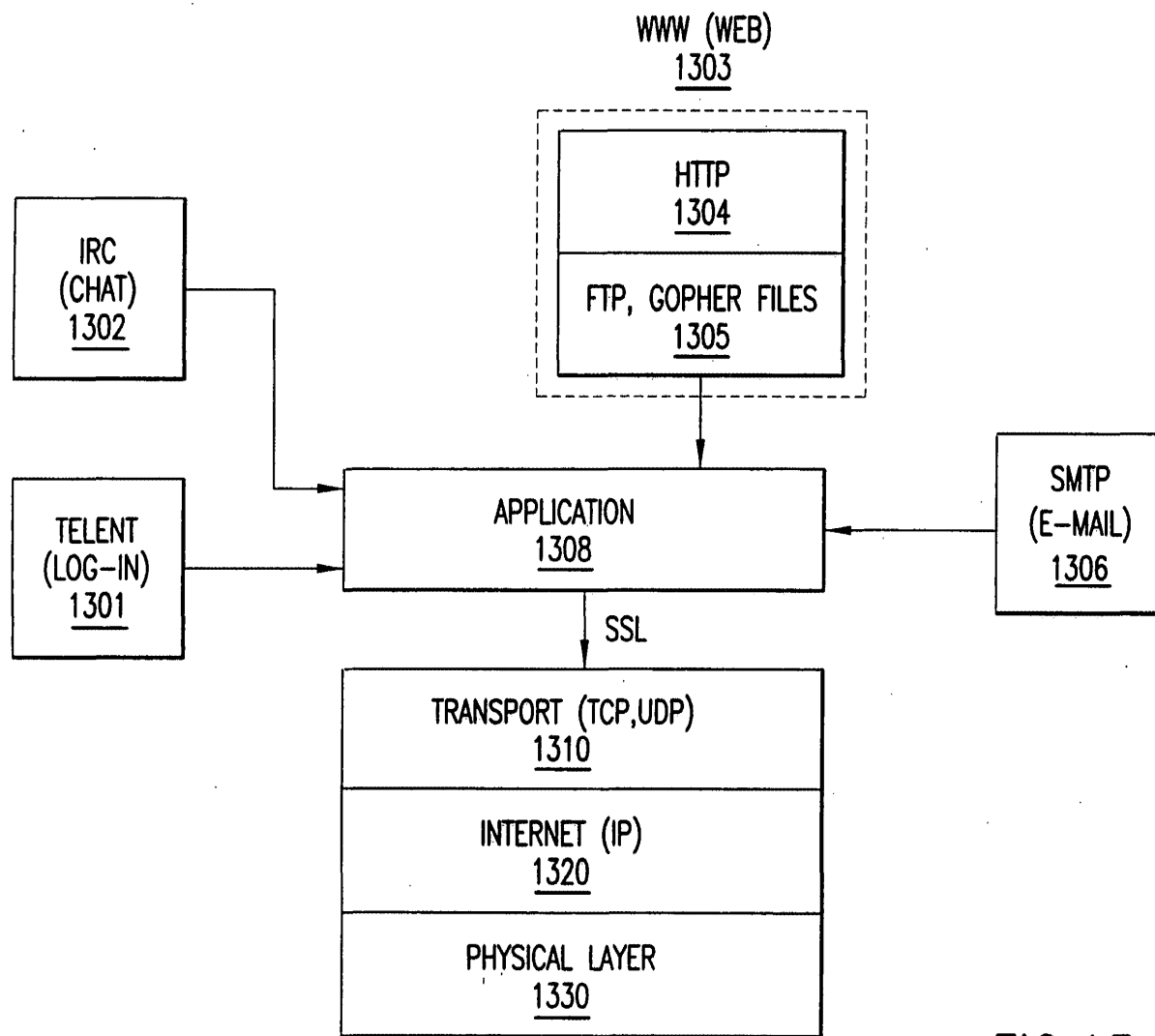


FIG.11C





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FIG.13

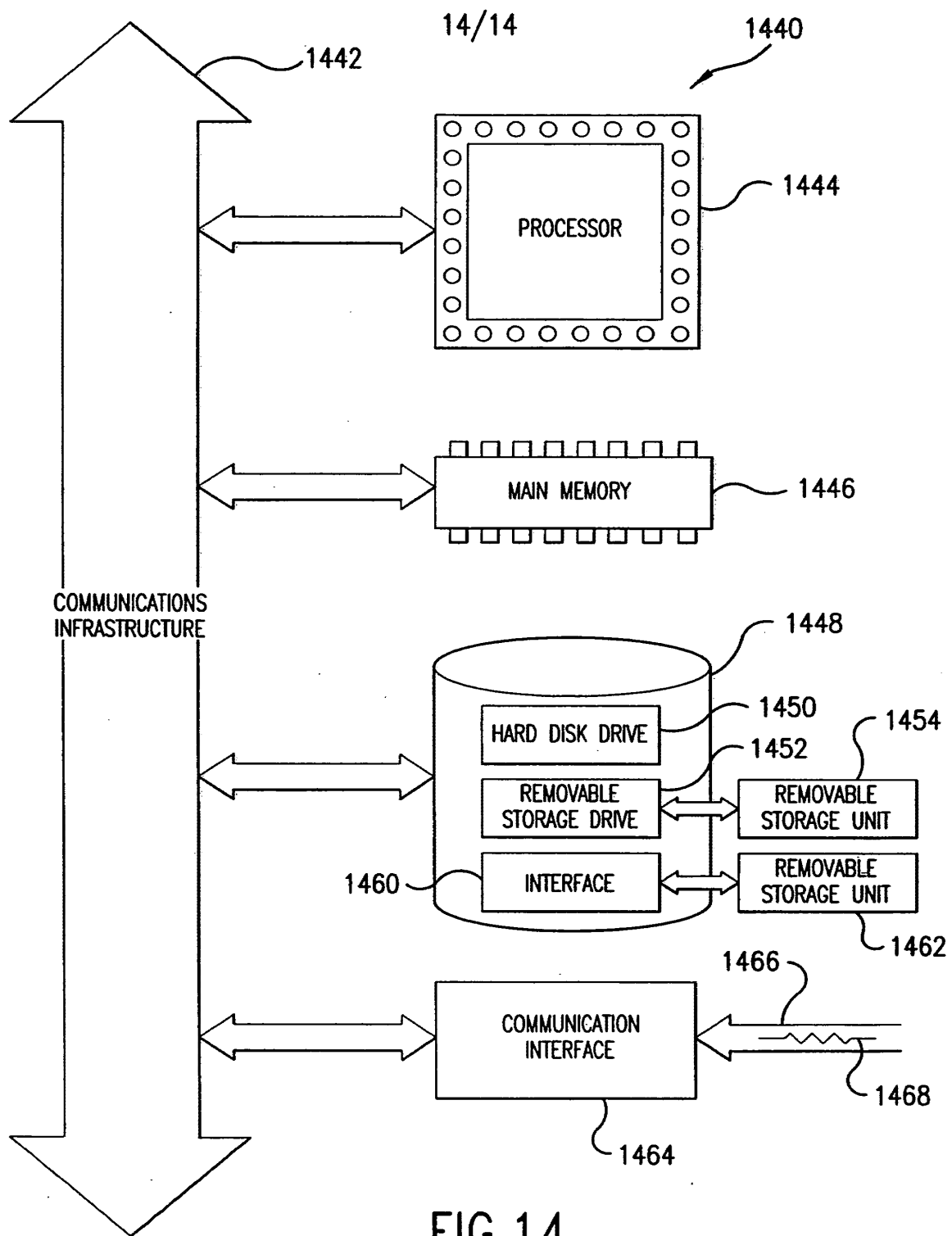


FIG. 14

Declaration for Patent Application

Docket Number: 2018.0040001

As a below named inventor, I hereby declare that:

My residence, mailing address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter that is claimed and for which a patent is sought on the invention entitled System and Method Related to Generating and Tracking an Email Campaign, the specification of which is attached hereto unless the following box is checked:

- ☐ was filed April 25, 2001;
as United States Application Number or PCT International Application Number 09/841,186; and
was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information that is material to patentability as defined in 37 C.F.R. § 1.56, including for continuation-in-part applications, material information that became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or (f), or § 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or § 365(a) of any PCT international application, which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Claimed

(Application No.)

(Country)

(Day/Month/Year Filed)

☐ Yes ☐ No

(Application No.)

(Country)

(Day/Month/Year Filed)

☐ Yes ☐ No

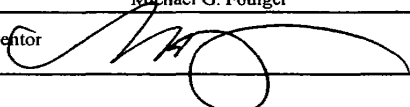
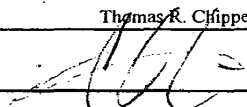
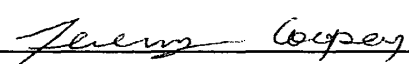
Send Correspondence to:

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 New York Avenue, N.W.
Suite 600
Washington, D.C. 20005-3934

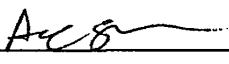
Direct Telephone Calls to:

(202) 371-2600

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor	Michael G. Foulger
Signature of sole or first inventor	 Date 7/25/01
Residence	Novato, CA
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Signature of second inventor	 Date 7/25/2001
Residence	~~Cotati, CA~~ Petaluma, CA
Citizenship	U.S.
Mailing Address	~~7729 Isabel Drive, Cotati, CA 94931~~ 554 Larner St, Petaluma, CA 94952
Full name of third inventor	Jeremy S. Cooper
Signature of third inventor	 Date 7/25/2001
Residence	Petaluma, CA
Citizenship	U.S.
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Appl. No. to be assigned
Docket No. 2018.0040001

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Signature of fourth inventor		Date 7/25/01
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Citizenship	U.S.	
Mailing Address	199 H. H. Blvd, 417 C St. Apt #1, Petaluma, CA 94952	

P:\USERS\ALENART\JUSW\2018.0040001\declaration

(Supply similar information and signature for subsequent joint inventors, if any)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

FOULGER *et al.*

Appl. No.: To Be Assigned

Filed: June 14, 2006

For: **System and Method Related to
Generating an Email Campaign (As
Amended)**

Confirmation No.: To Be Assigned

Art Unit: To Be Assigned

Examiner: To Be Assigned

Atty. Docket: 2018.0040002

**Authorization to Treat a Reply as Incorporating an
Extension of Time Under 37 C.F.R. § 1.136(a)(3)**

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

The U.S. Patent and Trademark Office is hereby authorized to treat any concurrent or future reply that requires a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. The U.S. Patent and Trademark Office is hereby authorized to charge all required extension of time fees to our Deposit Account No. 19-0036, if such fees are not otherwise provided for in such reply.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Bryan S. Wade
Attorney for Applicants
Registration No. 58,228

Date: June 14, 2006

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

544998_1.DOC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Foulger *et al.*

Appl. No.: *(to be assigned)* (Continuation of
Appl. No. 09/841,186, filed April 25, 2001)

Filed: *(herewith)*

For: **System and Method Related to
Generating an Email Campaign** (*as
amended*)

Confirmation No.: *(to be assigned)*

Art Unit: *(to be assigned)*

Examiner: *(to be assigned)*

Atty. Docket: 2018.0040002

Preliminary Amendment Under 37 C.F.R. § 1.115

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In advance of prosecution, Applicants submit the following amendments and remarks. This Preliminary Amendment is provided in the following format:

- (A) Each section begins on a separate sheet;
- (B) Starting on a separate sheet, amendments to the title and the specification by presenting a replacement title and replacement paragraphs marked up to show changes made;
- (C) Starting on a separate sheet, a complete listing of all of the claims:
 - in ascending order;
 - with status identifiers; and
 - with markings in the currently amended claims;
- (D) Starting on a separate sheet, the Remarks.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent

abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments

In the Title:

Please amend the title as follows:

SYSTEM AND METHOD RELATED TO GENERATING ~~AND TRACKING~~
AN EMAIL CAMPAIGN.

In the Specification:

Please replace paragraph [0001] of the specification with the following heading
and paragraph:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. Patent Application No. 09/841,186,
filed April 25, 2001, which claims the benefit of U.S. Provisional Application No.
60/199,355, filed April 25, 2000. U.S. Patent Application No. 09/841,186 is
incorporated herein by reference in its entirety.

In the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

1-19. (Canceled)

20. (New) A method for conducting an email campaign, comprising the steps of:

- (1) receiving an email target database;
- (2) generating an email campaign template related to at least one email target

in the received email target database, wherein step (2) comprises:

- (a) generating a message template, and
- (b) generating a configuration file to contain data related to each of the at least one email target, wherein the data is insertable in the generated message template; and

(3) sending to each of the at least one email target a corresponding custom email, wherein the custom email is formed from the email campaign template.

21. (New) The method of claim 20, wherein step (1) comprises the step of:

- (a) generating the email target database.

22. (New) The method of claim 21, wherein step (a) comprises the steps of:

- (i) collecting at least one raw document;
- (ii) parsing said collected at least one document;

- (iii) categorizing said parsed at least one document into at least one category;
 - (iv) inserting said at least one document into a database; and
 - (v) removing documents from the database corresponding to duplicate email addresses.
- 23. (New) The method of claim 20, wherein step (1) comprises the step of:
 - (a) requesting an email target database according to a structured query language statement.
- 24. (New) The method of claim 20, wherein step (1) comprises the step of:
 - (a) receiving an email target database from a database vendor.
- 25. (New) The method of claim 20, wherein step (b) comprises the steps of:
 - (i) generating a custom uniform resource locator address for each of the at least one email target; and
 - (ii) inserting the generated custom uniform resource locator address for each of the at least one email target into the configuration file.
- 26. (New) The method of claim 25, wherein step (i) comprises the steps of:
 - (A) generating a hash from a campaign ID, a message template version ID, a user reference ID, and a private key, for each of the at least one email target; and

(B) appending a first portion of the generated hash for each of the at least one email target to a host web address to form the custom uniform resource locator address for each of the at least one email target.

27. (New) The method of claim 26, wherein the host web address is equal to:

hostname/module?token

where hostname is replaced with an email campaign host Internet address,

module is replaced with an identifier for software located at the email campaign host directed to processing the custom uniform resource locator address for each email target after it is selected, and

token is replaced with any alphanumeric identifier for unique information related to the customized uniform resource locator address for each of the at least one email target.

28. (New) The method of claim 20, wherein step (3) comprises the step of:

(a) forming the custom email for each of the at least one email target from the generated text message template and the generated configuration file.

29. (New) A system to generate an email campaign, comprising:

an email campaign generator that generates an email campaign template from an email target database, wherein said email target database comprises a plurality of email targets; and

an email campaign engine that generates a custom email corresponding to each of said plurality of email targets, wherein said custom email is formed from said email campaign template, wherein said email campaign engine sends said custom email to each of said plurality of email targets;

wherein said email campaign template comprises

a text message, and

a configuration file that includes data from said email target database corresponding to each of said plurality of email targets.

30. (New) The system of claim 29, wherein said email campaign engine makes a copy of said text message to generate said custom email.

31. (New) The system of claim 30, wherein said email campaign engine replaces at least one custom tag in said text message copy with a corresponding portion of said configuration file data.

32. (New) The system of claim 29, wherein said email campaign generator comprises a custom uniform resource locator generator that creates a custom uniform resource locator address for each of said plurality of email targets, wherein said configuration file includes said custom uniform resource locator address in said data.

33. (New) The system of claim 32, wherein said custom uniform resource locator generator generates a hash from a campaign ID, a message template version ID, a user reference ID, and a private key, for each of said plurality of email targets, and appends at

least a portion of the generated hash to a host web address to form said custom uniform resource locator address for each of said plurality of email targets.

34. (New) The system of claim 33, wherein said host web address is equal to:

hostname/module?token

where hostname is replaced with an email campaign host Internet address,

module is replaced with an identifier for software located at the email campaign host directed to processing said custom uniform resource locator address for an email target after it is selected, and

token is replaced with any alphanumeric identifier for unique information related to said custom uniform resource locator address for said email target.

Remarks

Upon entry of the foregoing amendment, claims 20-34 are pending in the application, with claims 20 and 29 being the independent claims. Claims 1-19 are sought to be canceled without prejudice to or disclaimer of the subject matter therein. New claims 20-34 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Conclusion

Prompt and favorable consideration of this Preliminary Amendment is respectfully requested. Applicants believe the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Bryan S. Wade
Attorney for Applicant
Registration No. 58,228

Date: 6/14/06

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

543033v1

APPLICATION DATA SHEET

Electronic Version v14
Stylesheet Version v14.1

Applicant Information:

Inventor 1:

Applicant Authority Type:	Inventor
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Country of Residence:	US
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City of Mailing Address:	Novato
State of Mailing Address:	CA
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Country of Mailing Address:	US
Phone:	
Fax:	
E-mail:	

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Country of Residence:	US
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Address-2 of Mailing Address:	
City of Mailing Address:	Petaluma

State of Mailing Address: CA
Postal Code of Mailing Address: 94952
Country of Mailing Address: US
Phone:
Fax:
E-mail:

Inventor 3:

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State of Mailing Address: CA
Postal Code of Mailing Address: 94952
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Fax:
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Inventor 4:

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Country of Residence: US
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Address-2 of Mailing Address:		
City of Mailing Address:	Petaluma	
State of Mailing Address:	CA	
Postal Code of Mailing Address:	94952	
Country of Mailing Address:	US	
Phone:		
Fax:		
E-mail:		
Correspondence Information:		
Customer Number:	26111	*26111*
Application Information:		
Title of Invention:	System and Method Related to Generating an Email Campaign	
Application Type:	regular, utility	
Attorney Docket Number:	2018.0040002	
Botanic Information:		
Publication Information:		
Suggested Figure for Publication -		
Suggested Classification -		
Suggested Technology Center -		
Total Number of Drawing Sheets - 14		
Representative Information:		
practitioner(s) at Customer Number:		
26111	*26111*	
as our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.		
Domestic Priority Information:		

This is a Continuation of US application number 09/841,186, filed 2001-04-25.

U.S. application number 09/841,186, filed 2001-04-25 is a Non-Provisional of US provisional application number 60/199,355, filed 2000-04-25.

Foreign Priority Information:

Assignee Information:

Assignee 1:

Organization Name:

Address-1 of Mailing Address:

Address-2 of Mailing Address:

City of Mailing Address:

State of Mailing Address:

Postal Code of Mailing Address:

Country of Mailing Address:

Phone:

Fax:

E-mail:

544919_1.DOC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

FOULGER *et al.*

Appl. No.: To Be Assigned

Filed: June 14, 2006

For: **System and Method Related to
Generating an Email Campaign (As
Amended)**

Confirmation No.: To Be Assigned

Art Unit: To Be Assigned

Examiner: To Be Assigned

Atty. Docket: 2018.0040002

Information Disclosure Statement

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent

application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- ☒ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.
- ☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.

Atty. Dkt. No. 2018.0040002

- ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ c. Attached is our PTO-2038 Credit Card Payment Form in the amount of \$_____ in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our PTO-2038 Credit Card Payment Form in the amount of \$_____ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

Atty. Dkt. No. 2018.0040002

- ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- ☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below in accordance with 37 C.F.R. § 1.98(a)(3).

Atty. Dkt. No. 2018.0040002

- ☐ 7. Copies of documents ***Reference TE*** are submitted. However, in accordance with 37 C.F.R. § 1.98(a)(2), no copies of U.S. patents and patent application publications cited on the attached IDS Forms are submitted.
- ☒ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No.09/841,186, filed April 25, 2001, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).
- ☒ 9. It is expected that the examiner will review the prosecution and cited art in the parent application no(s). 09/841,186 in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

Atty. Dkt. No. 2018.0040002

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Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Bryan S. Wade
Attorney for Applicants
Registration No. 58,228

Date: June 14, 2006

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Atty. Dkt. No. 2018.0040002

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Application Number	To Be Assigned
				Filing Date	June 14, 2006
				First Named Inventor	Michael G. FOULGER
				Art Unit	To Be Assigned
				Examiner Name	To Be Assigned
Sheet	1	of	1	Attorney Docket Number	2018.0040002

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	US1	5,818,447	10/1998	WOLF et al.	
	US2	5,966,695	10/1999	MELCHIONE et al.	
	US3	5,978,799	11/1999	HIRSCH	
	US4	6,854,007	02/2005	HAMMOND	
	US5	6,721,784	04/2004	LEONARD et al.	
	US6	5,937,162	08/1999	FUNK et al.	
	US7	6,360,254	03/2002	LINDEN et al.	
	US8	6,377,936	04/2002	HENRICK et al.	
	US9	5,966,695	10/1999	MELCHIONE et al.	
	US10	5,793,972	08/1998	SHANE	
	US11	6,618,747	09/2003	FLYNN et al.	
	US12	6,101,485	08/2000	FORTENBERRY et al.	
	US13	6,694,353	02/2004	SOMMERER	
	US14	6,055,510	04/2000	HENRICK et al.	
	US15	6,668,281	12/2003	AYYADURAI	
	US16	6,549,950	04/2003	LYTLE et al.	
	US17	6,449,635	09/2002	TILDEN et al.	
	US18	6,377,936	04/2002	HENRICK et al.	
	US19	6,170,011	01/2001	BECK et al.	
	US20	5,265,033	11/1993	VAJK et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
	FP1	WO 00/20975 A1	04/2000			
	FP2					
	FP3					
	FP4					
	FP5					
	FP6					
	FP7					
	FP8					
	FP9					

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				Examiner Name	To Be Assigned
Sheet	1	of	1	Attorney Docket Number	2018.0040002

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published	T ²
	NPL1	ANDERSON, D., "E-mail or Me-Mail?" The Industry Standard, IDG.net, printed from http://www.thestandard.com/article/display/0,1151,12422,00.html , 4 pages (March 6, 2000).	
	NPL2	CROSS, R. and NASSEF, A., "E-Mail Direct Marketing Comes of Age," Direct Marketing, Hoke Communications, Vol. 62, No. 6, pp. 44-45 (October 1999).	
	NPL3	"Top Ten Strategies for Direct Email Success," Boldfish Corporation, Printed from http://www.boldfish.com/BF-emguide/top-ten.html , 7 pages (January 1, 2000).	
	NPL4	English-language Abstract of Japanese Patent Publication No. 2000020421, European Patent Office, 1 page (January 21, 2000 - Date of publication of application).	
	NPL5	Copy of International Search Report from PCT Application No. PCT/US01/13137, 7 pages, mailed August 28, 2002.	
	NPL6		
	NPL7		
	NPL8		
	NPL9		
	NPL10		

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Examiner Signature		Date Considered	
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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

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PATENT APPLICATION FEE DETERMINATION RECORD				Application or Docket Number																																					
Substitute for Form PTO-875				11452431																																					
APPLICATION AS FILED – PART I																																									
(Column 1)		(Column 2)		(Column 3)																																					
FOR	NUMBER FILED	NUMBER EXTRA																																							
BASIC FEE (37 CFR 1.16(a), (b), or (c))																																									
SEARCH FEE (37 CFR 1.16(k), (l), or (m))																																									
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))																																									
TOTAL CLAIMS (37 CFR 1.16(i))	15	minus 20 =																																							
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2	minus 3 =																																							
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR																																								
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))																																									
* If the difference in column 1 is less than zero, enter "0" in column 2.																																									
APPLICATION AS AMENDED – PART II																																									
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AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA																																						
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AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA																																						
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* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.																																									

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