

FORM 1082

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Transmitted herewith for filing is the patent application of

Inventor: Damon C. Torres

For: AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER

Enclosed are:

- ☒ 8 sheets of drawing.
☐ An assignment of the invention to
☐ A Declaration and Power of Attorney.
☒ A verified statement to establish small entity status under 37 CFR 1.9 and 37 CFR 1.2
☐ Claim to Right of Priority w/certified copy of application no(s).
☒ This application claims the benefit of U.S. Provisional Application No. 60/020,360 filed 9/03/96.

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RATNER AND PRESTIA
Suite 301,
One Westlakes, Berwyn
P. O. Box 980
Valley Forge, PA 19482-0980
(610) 407-0700

Respectfully submitted,

Kenneth N. Nigon
Kenneth N. Nigon
Reg. No. 31,549

mm

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AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER

BACKGROUND OF THE INVENTION

Technical Field

This invention relates generally to computer networks, and specifically to a method of sequencing and scheduling web pages, via a client-side software application.

The worldwide network of computers commonly known as the "Internet" has grown tremendously since the creation of a subset known as the "World Wide Web" (WWW or Web), popularized in 1993. The emergence of the Web, and its accompanying standards enabled users to move beyond traditional on-line data exposure, which required knowledge of protocols and other low-level computer constructs, to a much more filtered and full-featured interface in the form of a "Web Browser." The Web Browser filters out the computer constructs, displaying only pertinent content, such as text, images, animations and sounds, while hiding from the user the computer codes that are used to negotiate access, generate and display this content.

Some of the standards popularized by the web are Hypertext Transfer Protocol (HTTP), Hypertext Markup Language (HTML) and the Uniform Resource Locator (URL). HTTP allows HTML documents, which carry many forms of information, from text and images, to audio and video, to be easily found via a URL from a collection of networks known as the Internet. These networks have public and private files which are accessed via routing tables. The routing tables reside on Domain Name Servers (DNS) and are regularly updated.

Two innovations provided by the Browser environment, HTTP and the Internet are: specialized display of data (certain text and graphics) and “Hyperlinks” which appear as “clickable-buttons” or “links” made of text or graphics in the Graphical User Interface (GUI) presented by the Browser. These links contain an address for another location on the Internet. Instead of seeing computer language full of telecommunications protocols and an occasional listing of a graphic file’s name, the user sees only human pertinent text and an automatically displayed image within this text. The user is shown graphical or textual links to facilitate navigation instead of having to properly enter complex path names.

This combination of features, coupled with the ease of use that HTML provides as a page publishing format, have proved to be very popular, leading to a mass adoption of this new medium by many constituencies. These include education, most areas of business (publishing, finance, commerce, entertainment, etc.) and government. Given the increasing adoption of the Web, many non-technically oriented users use this new medium to go from page to page, shifting from one computer network to the next simply by making decisions on which links to click. Search engines which index the Web allow these users to quickly locate URLs and their associated links. In addition, content aggregators collect and publish collections of Web pages. In just a few years, the Web has evolved from static pages to pages containing animation, personalized data, commerce-level security and streaming audio and video. A more recent innovation is the “Push Technology” model which is found in the more recently released browsers.

Push technology, pioneered by PointcastTM, has been adopted by NetscapeTM and MicrosoftTM, the two browser giants, as the next way to connect viewers with content. As implemented by Pointcast, push technology began in 1996 as a personalized data gathering service. Users select content sources from a list and the Pointcast service automatically provides updated information which is displayed by the user’s screen saver in a uniform format. Information providers who send information to users using the Pointcast system must first format their information according to requirements set by Pointcast. Thus, the “pages” of information displayed by the Pointcast screen saver are specially prepared screens. A user of the Pointcast system can access information only from those sources which have prepared information in the Pointcast format.

By collecting user interest profiles, the current "4.x" level browsers can constantly update a specific set of topics, from news, sports and weather, to financial and entertainment content. Thus, push technology enables information to come to the user instead of requiring the user to seek out the information. This not only facilitates a new distribution method for publishers and advertisers, it fosters new community models and demographics to go with them. As web browsing has evolved it has changed from a mere novelty, to a relied upon conduit of information flow.

Recently, problems with access to a major on-line service provider produced lawsuits stemming from lack of access to mission-critical information, in both receipt and transmission. As this technology has moved from budding curiosity browsing to true reliance, the blossoming of the technology has yet to show what mature fruit it will provide. Commerce is a large part of the development of the medium as companies like Cisco and Boeing conduct exclusive web-based sales in excess of one billion dollars. In addition, consumer and small business oriented vendors such as Dell have sales in excess of \$1 million per day via their website. But what other services, beyond a catalog of information and products, will the Internet and its Web offer? The subject invention proposes a next-level of functionality that may provide an insight.

Summary of the Invention

The subject invention is embodied in an adjunct to a web browser which causes the click of a single "link" to trigger the presentation of a series of extant pages instead of one page at a time. This series of pages (or "Chain" of links) may contain one or several topics of information from several sources. The information conveyed by the Chain may be interspersed with advertising and public service announcements (PSAs). The advertisements and PSAs may occur no more frequently than typically occurs in television programming and may be adjusted for different pacing attributes of individual users. While the invention may automate a number of the decisions that a user makes in viewing a program of web content, it in no way inhibits the interactivity currently present on the Web. The decision-making process is not inhibited it is optional, allowing for preprogramming, navigating the chains on-the-fly or simply watching a series of pre-edited pages. The present invention serves

as an enhancement which refocuses the state of content delivery via the Internet, TV/PC hardware and software offerings.

The present invention is embodied in a method of accessing and providing information content from a pre-stored list of content sources (Chain of links). Each link in the Chain includes both an address from which the information may be accessed and an indication of the duration for which the content will be presented. For each link, the method locates the content source, accesses the content and presents it for the indicated duration.

According to one aspect of the invention, while the requested information is being presented, the method queues and caches the next page, then loads the next page for viewing.

According to another aspect of the invention, a method is provided by which Chains of content sources may be generated. A user may select and sequence content from a variety of sources by several methods including a bookmark list, a list of search results and through the creation of a Chain of links by a "drag-and-drop" technique.

According to yet another aspect of the invention, a method is provided for generating and publishing these Chains. This method includes a filter which customizes a preexisting Chain by automatically conforming variable items in the Chain to a predefined user profile.

Brief Description of the Drawings

Figure 1 is a block diagram which illustrates the Internet and the World Wide Web environment in which the invention operates.

Figure 2 is a block diagram of a hardware system for utilizing the present software invention.

Figure 3 is a flow-chart diagram which is useful for describing a software application which runs on a server and sequences and displays URLs and predefined Chains automatically in accordance with timer settings while monitoring the navigation decisions of the user, if any.

Figure 4 is a flow-chart diagram of a client-side software application or Applet, which processes URLs and predefined Chains automatically while monitoring the timer settings and navigation decisions of the user.

5 Figure 5 is a flow-chart diagram which illustrates the process by which initial Chains of content are personalized and delivered to the user.

Figure 6 is a flow-chart diagram which illustrates a method of formatting individual pages and collections of pages for use with the page scheduling and sequencing software shown in Figures 3 through 5.

10 Figure 6A is a graphical depiction of a process for editing a Chain of links.

Figure 7 is a computer screen diagram of an exemplary user interface for the invention that is useful for describing features of the invention.

Detailed Description

15 Figure 1 is a simplified block diagram which is useful for describing the connectivity of users and content providers on the Internet. Briefly, the Internet includes a large collection of content providers 10 which may be accessed by the users 12. Typically, a user accesses content on a "server" by establishing a data communications connection to the server through the network of computers 14, 16 defined by the Internet. Each server 10 operates a "web site" which includes data files that contain text, images, audio or video content. The web site typically includes 20 a group of linked HTML documents or pages that contain links to the data files. A user 12 may access the content in a file by simply selecting one of these links. The file may be transferred to a cache in the user's computer and presented using the browser or the content may be provided directly by the server 10 to the user 12 as an encoded data stream (e.g. an audio program) which is decoded and played out by the 25 user's computer 12.

Content accessed by the browser may not be in a file on a remote computer but may be generated by the remote computer and transmitted to the user directly. Much of the data that may be accessed by a browser on a remote computer

is classified by Multipurpose Internet Mail Extension (MIME) type. One MIME type is an HTML file, another is a JPEG file, a still picture that is encoded according to the standard developed by the Joint Picture Experts Group. Mime types can also be proprietary data. In this instance, the browser may need to be configured with a
5 "plug-in" program in order to decode and present the proprietary data. An example of such a plug-in is the MacromediaTM flash technology which allows streaming animation to be displayed with accompanying audio.

For more information on MIME types, see Netscape's User Handbook at <http://home.netscape.com/eng/mozilla/1.1/handbook/docs/answers.html>,

10 HTTP (HyperText Transfer Protocol) servers use HTML formatting. Netscape software has the built-in capability to read HTML-formatted pages (as well as the GIF, JPEG, and XBM graphic file formats). Netscape can interpret many other file formats with the help of external helper applications. To accommodate the file formats requiring helper
15 applications, Netscape keeps a mapping of file formats to helper applications.

MIME (Multipurpose Internet Mail Extensions) is a standardized method for organizing divergent file formats. The method organizes file formats according to the file's MIME type. When Netscape software retrieves a
20 file from a server, the server provides the MIME type of the file. Netscape uses the MIME type to establish whether the file format can be read by the software's built-in capabilities or, if not, whether a suitable helper application is available to read the file.

For servers that do not provide a MIME type with a file, Netscape
25 interprets the file's extension (a suffix appended to a file name). For example, the .HTML extension in the file name index.html suggests a file in the HTML format. Likewise, a .zip extension suggests a compressed file, an .rtf extension suggests a file in the Rich Text Format, and so on.

30 The Internet content referred to as a "Chain" in this application may be implemented as a new MIME type.

Today it is taken for granted that, to access services, information and entertainment on the Web, a user must make certain choices, position the mouse pointer and click the mouse buttons appropriately to indicate the decisions. The inventors have determined that, in a typical Web access, these selections are made at a rate of approximately once per minute. The result of each click is another page and another set of decisions. Typically, a user is expected to click one of the several dozen links provided on any given page, (see, for example, cnn.com). Alternatively, a user may type in a URL or access a bookmark to visit a favorite search engine. In addition, a user may access a collection of "channels" of "push content" via Netscape Communicator's Netcaster or Microsoft Internet Explorer's Active Desktop and sit back for a few seconds to view an animated presentation of a specific publisher's offerings. The user may even choose a headline of a story presented in Pointcast's screen saver to receive more information about that topic grouping within the application, or to transfer to a relevant website. All of these methods typically require a significant amount of user effort and decision-making to drive the web surfing experience.

Although the users and servers are shown as separate machines in Figure 1, it is well known that a computer being used as a server may host users and may also serve as a conduit for connecting a user to a remote server.

Figure 2 is a block diagram which illustrates the basic layout of a typical user's computer, be it a personal computer (PC) or a network computer (NC), as typified by webtvTM or a Java StationTM. The computer may also be a dedicated workstation coupled to a local area network or a terminal connected to a mainframe computer which is, in turn, coupled to the Internet. The user requires no special hardware to use this invention. No additional cards with TV tuners are required, but they can be used as an enhancement. This diagram illustrates one possible environment for the invention and should not be interpreted as limiting the invention. It is contemplated that the invention may be implemented using future technologies which may have radically different hardware, including but not limited to handheld devices, public kiosks, and even "credit card-sized" configurations.

The exemplary system includes a microprocessor 32 a random access memory (RAM) 34, a memory management circuit, a disk drive 36, a floppy disk

drive 37, a read only memory (ROM) 33 which includes the basic I/O system (BIOS) for the computer system, a CD ROM drive 42, a modem 50, a digital signal processor 43, a keyboard controller 38, a mouse controller 39, a video controller 40, and an audio controller 41 which are all connected by a system bus 31. A keyboard 22, a mouse 23 and a graphic display monitor 24 are connected to the keyboard controller 38, mouse controller 39, and video controller 40. Stereo speakers 25A and 25B are connected to the audio controller 41. In the exemplary system, the connection to the on-line-service provider 16 (shown in Figure 1) is made through the modem 50 via a telephone line 56.

As shown in Figure 2, the memory 34 includes an operating system 60, for example, Windows 95TM; a browser 62 for example, Netscape NavigatorTM 4.0; and a cache memory 63. The hard disk 36 is the main data storage device for the system shown in Figure 1. It includes the software needed to run the browser and libraries of software used by the operating system to control the operation of all of the components that are connected to the system bus 31. The hard disk 36 also includes a disk cache (not shown) for the browser. When data on a remote computer is accessed by the browser, it may be transferred by Hypertext Transfer Protocol (HTTP) or File Transfer Protocol (FTP) and stored in this disk cache temporarily.

The component of the invention which is used on the user computer 12 may be, for example, a browser plug in. While, in this example, the user component is a browser plug-in, it is contemplated that it may be an Applet which runs on a virtual computer defined by the browser, it may also be a stand-alone program, which includes the functionality that is typically provided by a browser, or it may be a distributed application suitable for use with a network computer (NC). The user component is described below with reference to Figure 4 as the program RoboSurfTM.

A complementary program exists on the server. This component is described below with reference to Figure 3 as the program RoboSendTM. RoboSend may perform the actual transfer operations to obtain the pages from the web sites. This may be advantageous if, for example, the server has a relatively high-bandwidth connection to the Internet, such as a T1 connection. The server may obtain the content more quickly than the user could and then stream the content to the user over the user's lower bandwidth connection.

In addition to RoboSurf and RoboSend, the exemplary system includes RoboGuideTM, described below with reference to Figure 5, a program that allows several users to access a prepared Chain of links and have it customized to their respective preferences, and RoboSitesTM, described below with reference to Figure 6, publishing software which helps a publisher to prepare Chains. The entire suite of programs is referred to below as RoboCast.

Figure 3 is a flow-chart diagram which illustrates the operation of the server-side application, RoboSend. The first two steps in Figure 3 represent activities occurring at the user's computer 12. At step 70, the user starts to access the Internet or other network via a Personal Computer (PC) a Network Computer (NC), Web-Enabled TV Set, or other similar device. At step 72, the user encounters a URL, for example, within a screen saver, an e-mail message, or a website. At step 72, the user requests the URL which is designated as a first link in a Chain of pages. The URL may be so designated by its association within a list generated by a publisher, by results that are automatically generated by a search engine or because it is the first URL in a Chain of URL's that was manually collected by the user.

The selection of the URL initiates a sequence of events in the application RoboSend which is running on the server 10, shown in Figure 1. At step 74, the Server parses the request into task sets, initiating the look-up of the sources indicated by the URL. This step gathers the relevant data and custom packages it for the browser 62, shown in Figure 2. At step 76, if the requested URL includes dynamic content, RoboSend determines if this user is enabled to receive dynamic content (i.e. generated by a database as a HTML page with up-to-the-minute information on that page), or pre-defined content (i.e. a pre-existing HTML page that was created prior to the request). This determination may be made, for example, from user profile information, transferred to the server with the "cookies" when the user first connected to the server's web page. If dynamic content is allowed then, at step 78, RoboSend checks the user profile for information that may be used to determine what dynamic content the user should receive. For example, is there a particular sports team preference; a demographic; or a pre-set profile as specified in the software? This information is used as selection criteria which is sent to the database and, at step 78, a page, conforming to the user's preferences, is retrieved from the server.

At step 80, if the page addressed by the URL does not include dynamic content or if the user is unable to receive dynamic content, a page having pre-defined content is retrieved.

At step 82, either the dynamic or pre-defined URL is accessed and the
5 content associated with the URL is retrieved, encoded and delivered to the browser at step 84. The content provided from the location addressed by the URL may be simple HTML documents, advanced DHTML, or even future versions of XML. The delivered information may contain references for many other MIME types, including animation, streaming and non-streaming audio and video, Virtual Reality Modeling
10 Language (VRML) Quicktime VR, and front-ends for several flavors of database applications, to name a few.

As described below with reference to Figure 4, the content delivered by RoboSend to the browser at step 84 is presented to the user. This step is inherent in the operation of the browser 62 (shown in Figure 2), accordingly, it is not described
15 in detail. At step 86, a timer is started in response to a message produced by the browser 62 indicating that the retrieved content has been delivered and is ready to be presented. This timer is set from a value provided in the Chain which indicates an amount of time that content accessed from the associated URL is to be displayed.

At step 88, RoboSend determines if the user has selected another URL
20 before the timer expires. If so, the program will do one of two things: 1) forward that user away from the predetermined course of the Chain that was entered at the beginning of this process and take them on another course; or 2) skip them forward on the predetermined course that they are having played for them pursuant to the selected Chain. This latter scenario is advantageous for a quick reader, or someone who has
25 seen the presented content before, or in the case of content that the viewer chooses to skip (even an advertisement or PSA).

If the user has selected a new URL during the display time allowed by the timer, then, at step 90 RoboSend determines whether the next URL is a Chain or not. This may be determined simply by the lack of new URL requests. It may also
30 be determined by checking the header information of the new URL, as described below with reference to Table 1. As shown in step 93, the user's decisions are

recorded to a database at this point, providing a list of feedback for advertisers and content providers in some cases. If, for example, an advertisement for cat food is displayed, a user may skip over the advertisement or otherwise indicate that cat food advertisements are not interesting. This information is recorded at step 93 and used to
5 direct only advertisements that are of interest to the user.

The Next Page Request at step 94 is identical to the previous page request except that it has changed the course of events to be played to the viewer, i.e. from sports news to weather forecast based on a URL located in a rained out game notice. This tangent may also able to be diverted back to the prior course by using the
10 application's "surf" feature (described below with reference to Figure 7) which, when clicked for the first time, remembers where the user left the initial Chain and returns the user to that point in the Chain upon the second click of that surf button. Alternatively, the history feature, inherent in most browsers, may be used to return the user to pages that were presented moments before or days before.

15 If, at step 88, the user does not interact with the system within the allotted time (which is set by the user or publisher), the timer expires at step 92 and that signals the request for another page, thus enabling the play sequence of automatic surfing.

At step 96, this next page request asks the server for the next link in the
20 Chain, thus effecting the play sequence that is germane to this invention. While this sequence has been described as a simple sequential display of preprogrammed URLs, it is contemplated that, in more complex forms, this process may stream URLs to the viewer, while monitoring the user's habits (e.g. which sites are skipped and which sites the user views for the full display time) and injecting news, advertising and PSAs
25 into the datastream.

If the URL selected at step 88, before the time-out, is not another Chain, the RoboSend process stops at step 98. Because there is no cue to automatically play the next page, the browser 62 reverts to traditional web browsing, one page at a time. The RoboGuide screen saver will activate in a set period of time, providing, as a
30 screensaver, the latest "Promo chain" of relevant content that it has downloaded in the background. Because this screensaver function of displaying downloaded content has

been similarly used by Pointcast in its SmartscreenTM technology, it is not described in detail herein.

Figure 4 is a flow-chart diagram which illustrates the operation of the exemplary user component of the system, the program RoboSurf. Briefly, this program allows a user to schedule, personalize and play content obtained from Web addresses. Using RoboSurf, a user may access almost any accessible website as a link in a Chain. While RoboSurf is described as a browser plug-in, it may be an Applet, stand-alone program or distributed application for an NC.

The process illustrated by Figure 4 begins at step 110. At this step, RoboSurf accesses a default list of URLs that may be generated by one of several sources: 1) RoboCast's web server network that will supply a general listing of available Chains; 2) a pre-selected list generated by the server in response to information obtained about the user from a Profiler program (e.g. chains defined for an Intranet described below with reference to Figure 6); 3) the results of a Search initiated through the RoboCast suite or through a non-affiliated search engine; 4) an e-mail message, 5) the contents of a screen saver's play queue; or 6) other future delivery methods.

At step 112 the URL is delivered to the browser 62 by one of these methods in a traditional manner. This corresponds to step 84 of Figure 3, described above. Also at step 112, the URL is received by the browser via the open location or open file hook and its content begins to be presented to the user. Once RoboSurf begins to display the content, it starts a timer, at step 114. This timer has a duration that is determined from the link in the current Chain that corresponds to this URL.

At step 116, while the timer is running, RoboSurf monitors the user's actions to determine if the user wants to manually override the play sequence by clicking a URL before the time-out. The user may act in several ways to override the play sequence. First, the user may select a link on the displayed page. In this instance, if the selected link is itself a Chain, this selected Chain simply replaces the current Chain. Second, the user may click on the Surf button, in the control buttons 7, shown in Figure 6, and then select a link on the displayed page. By pressing the Surf button, the user temporarily suspends the display of the original chain, to

investigate links on one of the pages. When this investigation is complete, the Chain may be restarted at the point of departure by simply clicking on the Surf button a second time.

At step 118 if the user has not selected any URLs, the time-out occurs and the play sequence resumes at step 120. In the exemplary embodiment of the invention, this step highlights the next item in the schedule window 2 (shown in Figure 6), selects the corresponding URL and branches back to step 112, causing RoboSend to deliver the content at the requested URL to the browser 62.

Alternatively, if the user does select a new URL at step 116, step 122 is executed to determine if the selected URL is a link in the current chain or in another chain that has already been cached locally. If the new URL is part of a Chain that has already been cached, step 124 updates the schedule window 2 to show the links of the Chain and to highlight the URL in the Chain. The entry for the selected URL is highlighted in the schedule window and the URL is passed to step 112.

At step 126, if the selected URL is not another cached Chain, or not another non-cached Chain, RoboSurf treats the document as a traditional browser would, loading it into the viewing area, leaving the page up and branching to the end of RoboSurf session, step 130. If, however, the selected URL is part of a non-cached chain, then, RoboSurf passes the URL to step 72 of RoboSend (shown in Figure 3) so that the full chain may be recovered and supplied to RoboSurf. After the RoboSurf session ends at step 130, step 132 is executed which, after a suitable delay with no activity, activates RoboSurf as a screen saver. In this mode, RoboSurf may automatically display selected Chains or a "Promo Chain" of the day's offerings locally cached at the user's computer or available to the user through RoboSend on the server.

Figure 5 is a flow-chart diagram which illustrates the operation of the RoboGuide component of the RoboCast program suite. RoboGuide is a helper application that provides a viewing guide which offers a personalized look at various chains of content that have been cached at the server. RoboGuide interacts with information produced by the Profiler to modify the cached Chains to eliminate content or add alternate content according to a user's preferences.

RoboGuide starts at step 150 where the user starts access to the Internet or other network via a Personal Computer (PC) a Network Computer (NC), Web-Enabled TV Set, or other similar device. The user encounters a URL which has been designated as the first link in a Chain of pages by a publisher. This URL may be
5 encountered, for example, within a screen saver, an e-mail message, or a website.

At step 152. the server component tracks this usage, and sends a request to RoboSend. This is a method of regularly registering the users of the service and tracking their usage. Third party tracking and advertisement insertion software may be used in this scenario in addition to the processes described here.

10 At step 154, the RoboSend server program retrieves a Chain definition from the database with an adaptive filtering technique to personalize the content delivered for each user or groups of users. An exemplary filtering process may be that which is available from Firefly.net, described below. This filtering is based on rating the pages (e.g. rating a cat food advertisement as inappropriate if the user
15 profile does not indicate that the user has a cat or if the user indicates disinterest in cat food advertisements either explicitly by clicking on an on-screen "button" (not shown) indicating disinterest or implicitly as may be inferred from a pattern of skipping over cat food advertisements when they are presented). The information generated by the Profiler is fed to the server based on "cookie technology," a common method of
20 maintaining information about a client on the web. The server reads the cookie for preferences and date information then feeds a personalized request to the database which sends a dynamically generated list of URLs to the user. At step 156, when the server sends the data to the client.

At step 158, RoboSurf parses the data and displays the links in the Chain
25 in its Schedule window 2 (shown in Figure 6). If the user decides to access the Chain, RoboSurf passes the first URL in the chain back to RoboSend at step 72 (shown in Figure 3) and the process of playing the chain commences, as described above.

The following description of an exemplary filtering technique used by
30 Firefly.net was obtained from their Web site at
<http://www.firefly.net/products/CollaborativeFiltering.html#Summary>.

Collaborative filtering technology is a powerful technology that can effectively address the problem of information and content overload, especially in highly subjective domains. Collaborative filtering systems use human intelligence instead of machine intelligence to address the limitations of content-based filtering systems. By leveraging human opinions, collaborative filtering systems automate the word of mouth process among users. Automated Collaborative Filtering (ACF) systems automate the word of mouth process on a global scale across hundreds of thousands of users and catalog items. Most ACF systems recommend items using the following three step process:

1. Capture a set of opinions from the user in the form of numerical ratings for items
2. Compute a set of "nearest neighbor users" for the user. These nearest neighbor users are users with opinions most like the given user.
3. Use the nearest neighbors ratings to compute a set of recommendations for the given user. While standard ACF systems are effective in subjective domains, they suffer from certain limitations that may cause them to make incorrect conclusions in broad domains. This is mainly due to their tendency to ignore information about the items being recommended, even when such information is readily available.

Feature-Guided Automated Collaborative Filtering (FGACF) is Firefly Network Inc.'s powerful technology that combines the benefits of collaborative filtering with those of content-based filtering to overcome the limitations that affect standard ACF systems. FGACF utilizes simple feature information about items in a catalog to dynamically partition the space of items on a personalized basis, so as to more effectively apply the ACF algorithm in the appropriate sub-space.

Designers and developers of commercial collaborative filtering systems need to address several challenging issues. The foremost issue in building large scale collaborative filtering systems is the scalability of the system. The accuracy of the underlying collaborative filtering

technology, and the set of functionality offered, are important factors for designers of such systems.

Firefly Network Inc.'s Catalog Navigator product is scalable to handle loads of hundreds of thousands of users, catalog sizes in the half million range, with number of ratings in the millions, and still provide sub-second response times to queries. It has already been successfully deployed in applications on high-traffic sites. In addition, the Catalog Navigator is the only commercial implementation this powerful FGACF technology and offers one of the most comprehensive sets of catalog and community navigation functionality to a customer.

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The RoboSites program is a publishing software module that enables the user to do three things: first, make Web pages more reader-friendly when using RoboSurf, by utilizing formatting parameters, such as restraining page size to a default screen size and cueing automatic playing of audio upon displaying a new page; second, make pages into parts of a Chain of content and third, encode pages with certain demographic and keyword-based information to aid the filtering operation.

Table 1 shows exemplary HTML code that may be added by the RoboSites module to the Web pages or other content that it formats. Note that the HTML of a page can be altered in this way between downloading it from a server and presenting it to the user. This "Tagging" process only requires a few milliseconds and can be done on the fly.

Essentially, this module uses the abilities of a HTML page publishing package like Pagemill from Adobe (www.adobe.com) to add HTML code of the type shown in Table 1.

Table 1

```

<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 3.0//EN">
  <html>
    <head>
      <title>RoboGuide 11/3/97</title>
      <META name="author"      content="© 1997 Damon Torres,
5      Brian Foy">
      <META name="generator"   content="RoboSites
10      1.0">
      <META name="keywords"    content="news, sports,
      weather, lifestyles, jane q. public, nyc weather, san
      francisco weather, washington d.c. weather, yankees,
      knicks, non-violent news, parenting info, content filter
15      530145x2a, ad filter 398543*kjfd23, psa filter
      19284jksd8sfj*659">
      <META name="description" content="Jane Q. Public's
      personalized news, sports and weather. Contains preferences
      for cities, teams, content filters (i.e. sex, violence,
20      language) and preferences for advertising and public
      service announcement categories. Wildcard paramaters are
      indicated by an asterix (*).">

      <META HTTP-EQUIV="Expires" content="Tue, 04
      Nov 1997 18:45:23 GMT">

25      <!-- see
      http://www.sandia.gov/sci_compute/elements.html for details
      -->
      <LINK rel="previous" href="some url">
      <LINK rel="next"      href="some url">
30      <LINK rel="toc"      href="url of channel
      description"><!--
      toc=Table of

      Contents-->

      </head>

35      <body>

      <!-- content goes here -->
      </body>
      </html>

```

Figure 6 is a flow chart diagram that is useful for describing the
 operation of RoboSites, the publishing tool used to create and modify Chains for

viewing via RoboGuide, RoboSurf and/or RoboSend. The first step represents activities occurring at the user's computer 12. At step 200 the user access the program described in this flowchart. At step 210 the user selects between editing an existing Chain or creating a new one. This can be an existing chain that has been
5 previously made, or a chain that another content provider has published. If the user is creating a new chain, the pages, or links of the chain, can be gathered from their local hard drive or server or from a remote server. Step 212 indicates that the user will be presented with a dialog box. Step 214 shows exemplary the dialog box options for setting general preferences for all of the pages that will be linked, such as duration for
10 all pages, duration estimate based on word count, and default "page turn" sound to accompany an automatic page delivery.

At step 216 the user has chosen to load a previously defined chain, and, at step 218 the computer requests and loads the chain from the local or remote drive. Beginning at step 220 the user has many options, presented by an interface that will
15 allow the user to choose to "Add, Edit or Cut" a link for the chain they are building. This can be accomplished graphically, as shown for example, in Figures 6A or via a list. In step 222 the user may Add a link from a standard dialog box that enables browsing from all available drives and from a special cache area that RoboSites, RoboSurf and/or RoboSend produce. This cache area allows users to collect URLs
20 from the Internet by, for example, browsing, implementing searches, or culling their e-mail for chains. At step 224 the user adds the link at the chosen spot.

At step 226 the user has the option to commit to changes or cancel and start again. At step 228 the Modify Choice selection gives the user options 230 to edit the parameters of the "next" link (i.e. changing the next link destination or previous
25 link in the chain from a local news link to a local weather link). The duration choice pertains to how long the link will be displayed before a subsequent link is loaded. This can be done on a per page basis, since some pages require more time than others. The expiration option allows the publisher to choose a "kill date" for the link, automatically triggering a replacement search, or a skip to next action. This is useful
30 for dated information such as weather.

At step 232 the user has the option to delete a link from the chain. Again, this can be done graphically (as shown in Figure 6A) or via a list. This step

leads to step 234 where a the previous chain is linked to the deleted page's next link. Step 236 allows the user to choose to continue adding, editing and/or cutting by branching back either to step 220 or 238, to save the work and/or export it for a preview or viewing by others. If the user does not choose to save or export, then, at step 244, the program reverts to the last saved version or cancels the session. If the user does export then, at step 240 the program writes the changes to the local disk 36 (shown in Figure 2). The RoboSites program may, in turn, write header information to the files to which the user may access locally or even to remote server files. It should be noted that the writing of header information into the HTML documents is an option, providing a convenience for RoboSurf and RoboSend. The page playing actions can be achieved without this header information present. The publisher completes its work at step 242 where it gives the option to preview for the publisher using RoboCast browser enhancements, or to publish for other RoboCast product users.

Figure 7 is a screen diagram of the interface presented by the RoboSurf program. Item 1 on the screen is an interface to the Profiler program. This program allows a user to specify several profiles for RoboSurf. The user may select from prepared profiles, for individuals or groups for example, "Internet Professional," "Lawyer," "Student," "Family.1" and "Girl: Preschool" and modify these or create a new profile. In the Profiler window, the User field allows a name to be attached to the profile. The Schedule field allows a user to associate the profile with a particular Chain, also referred to as a Schedule. In this instance, the Chain of URLs being displayed in the Schedule window 2 is named "After Dinner." The Reviews field allows a user to specify one of several sources for website or chain reviews. Using the Ratings field, the user can specify limitations on the type of website or chain that will be reviewed using the familiar MPAA rating system. The Censor Level field may be used to control the Web content that the user will see. Different Censor Levels will allow different types of content to be displayed. The RoboSurf program may compare the specified Censor Level to voluntary content ratings obtained from the Web pages or it may interface with an existing content monitoring system such as Cyber Patrol to ensure that undesirable content is blocked. The final field in the Profiler window allows a user to specify a Help or Guide function. It is contemplated that both text-oriented and voice synthesized help would be available. For voice-

synthesized help, the user may identify a particular voice with a name (e.g. "Chris") as shown in Figure 7.

Item 2 in Figure 7 is the Schedule window. As described above, this window shows the current Chain of URLs that is being displayed by RoboSurf. The window contains a brief textual description of each URL and a time in hours and minutes and seconds for which content provided from the URL will be displayed. The URL from which content is currently being displayed is highlighted. Each URL in the schedule list also includes a small box which is marked with an "x" after a URL has been viewed and may be marked with a "√" to indicate that the user wants to return to this site.

Item 3 in Figure 7 are controls for volume, channel and speed. The volume control works as would be expected to increase or decrease the level of sound provided. The Channel button allows a viewer to move a pointer up and down in the channel window to select a new channel. As used in this description, a "channel" is a collection of web pages linked into a chain by a content provider. The Speed button allows a user to specify the amount of time between content pages. The "*" button on each of the volume, channel and speed buttons brings up a separate dialog box in which specific entries may be entered manually.

Item 4 in Figure 7 is the progress bar. This bar displays progress of the system in whatever it has been requested to do. During play mode, this bar displays progress through the chain as a percentage of time remaining in the display of the Chain. In search mode, the bar may display progress in a search and the preparation of a chain of links derived from the search. In gather mode, the bar may display the progress of the gathering operation.

Item 5 in Figure 7 are the programming bars. The Search button allows the user to establish criteria for a search of the Internet for URLs to be included in a Chain. The Pick button lets a user select categories within established information sources in order to make selections within the specified sites. Once Search Criteria and Pick categories have been established, the Gather button retrieves information from the selected sources according to the user's criteria at a specified time and frequency. The Schedule button allows the user to group site content by topic and

then set the time when specific group will be played. The Play button begins the presentation of information. In the exemplary embodiment of the invention, the Play button also lets a user set parameters such as size of the content window, length of time each item is displayed and, if RoboSurf is being used as a screen saver, screensaver activation parameters (e.g. delay time, autostart position of cursor and password).

The Channel window 6 displays chain publishers that may be accessed by a "point and click" operation. This window is analogous to a "favorite places" list in a conventional browser.

The Control window 7 contains buttons which allow a user to Skip backwards and forwards through the chain displayed in the Schedule window, Play the information provided from the Chain of URLs, Stop playing this information, Print the information that is currently being viewed, and Mark the current page for later viewing.

In the exemplary embodiment of the invention, the Mark button interacts with the Play and Print buttons. While viewing a chain, a user may mark individual pages. After viewing the chain, the user may specify that the marked pages be displayed again, queued for printing or displayed and printed. This feature may be activated, for example, through the play or print buttons by activating the buttons with a modifier key, for example, the right mouse button.

In addition to these buttons, the control window also includes an Add/Up button which allows a user to add pages to a chain when it is being set up in schedule mode and allows a user to move up the hypertext links that are being displayed on the screen during play mode. The Cut/Down button conversely allows a user to delete a site from the chain during schedule mode and move down the hypertext links during play mode. The function of the Surf button is described above. This button allows a user to temporarily suspend the viewing of a Chain with a first button press and resume at the suspended site with a second button press.

Although it is not shown, the inventors contemplate providing a separate remote control hardware device having all of the items in windows 5, 6 and 7 of the RoboSurf display shown in Figure 7.

The e-mail and video phone buttons, item 9 on the display shown in Figure 7, invoke third-party software packages, one for e-mail and one for a video telephone product.

Item 10 in the display is the content window. This is where all of the content which is Found, Picked, Gathered, Reviewed, Rated, Censored, Edited and Scheduled is finally and automatically played. The process of playing the content is like television mixed with radio, newspapers and a research library. Can be made full-screen.

While the invention has been described in terms of an Internet browser application which allows a user to view or create Chains of content from various sites, it is contemplated that it may be used for other purposes. For example, the invention may be used as a jukebox to schedule and present successive audio or video recordings or to schedule and view pay-per-view movies or videos.

What is Claimed:

1 1. An automated content displayer which is used to sequentially
2 presents information derived from selected sites, comprising:

3 means for storing a list of selected sites, each item of the list having
4 addresses for pages of the site and an amount of time for which information from the
5 site is to be presented;

6 means of selecting a first item from the list;

7 means, responsive to the address of the selected item, for retrieving
8 information content from the site indicated by the item;

9 means, for providing the retrieved information content; and

10 means, responsive to the amount of time of the selected item for
11 selecting a next item in the list after the retrieved information content has been
12 presented for the amount of time.

460050 " 60250

ABSTRACT

A method of sequencing and scheduling web pages, via a client-side software application that collects URLs and feeds them to a Web browser, so that the amount of clicks and decisions are reduced when browsing the Internet. The method
5 begins after a computer user with Net-access encounters a URL that leads to a collection of other URLs that the software application has arranged to be presented in a continuous, sequenced manner. This collection of pages then plays automatically, going from one page to the next without the user being required to make a decision or click. The decision-making process is not inhibited, it is made optional. A method of
10 inserting full-screen advertising, public service announcements, news, etc. has been developed. The server software application module described herein allows a publisher to stream URLs to a user who does not have the client-side software. The publishing module allows a user to format pages to a particularly desirable size and characteristic that promotes readability during a sequenced viewing session. This same
15 module can publish collections of links for others to view as a whole sequence, accessible via e-mail, screen saver or by web page.

Applicant or Patentee: Damon C. Torres

Serial or Patent No.: 60/025,360

Filed or Issued: September 3, 1996

Attorney's Docket No.: IWY-010

For: INTERNET CONTENT SCHEDULER AND PLAYER

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
STATUS (37 CFR 1.9(f) and 1.27(c) - SMALL BUSINESS CONCERN**

I hereby declare that I am

- ☒ the owner of the small business concern identified below:
☐ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN The I-Way Company, Inc.

ADDRESS OF CONCERN 245 East 11th Street, Suite 5J/5K, New York, NY 10003

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18. and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third-party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed, to and remain with the small business concern identified above with regard to the invention, entitled INTERNET CONTENT SCHEDULER AND PLAYER by inventor(s) Damon C. Torres described in

- ☐ the specification filed herewith.
☒ application serial no. 60/025,360, filed September 3, 1996
☐ patent no. _____, issued _____

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights in the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME N/A

ADDRESS _____

☐ INDIVIDUAL

☐ SMALL BUSINESS CONCERN

☐ NONPROFIT ORGANIZATION

NAME _____

ADDRESS _____

☐ INDIVIDUAL

☐ SMALL BUSINESS CONCERN

☐ NONPROFIT ORGANIZATION

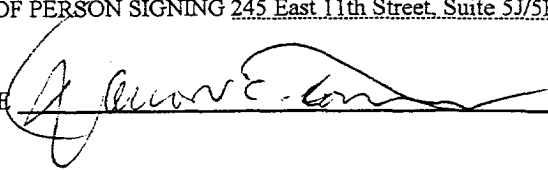
I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small business entity is no longer appropriate. (37 CFR 1.28(b)).

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, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Damon C. Torres

TITLE OF PERSON OTHER THAN OWNER President

ADDRESS OF PERSON SIGNING 245 East 11th Street, Suite 5J/5K, New York, NY 10003

SIGNATURE 

DATE 10/16/96

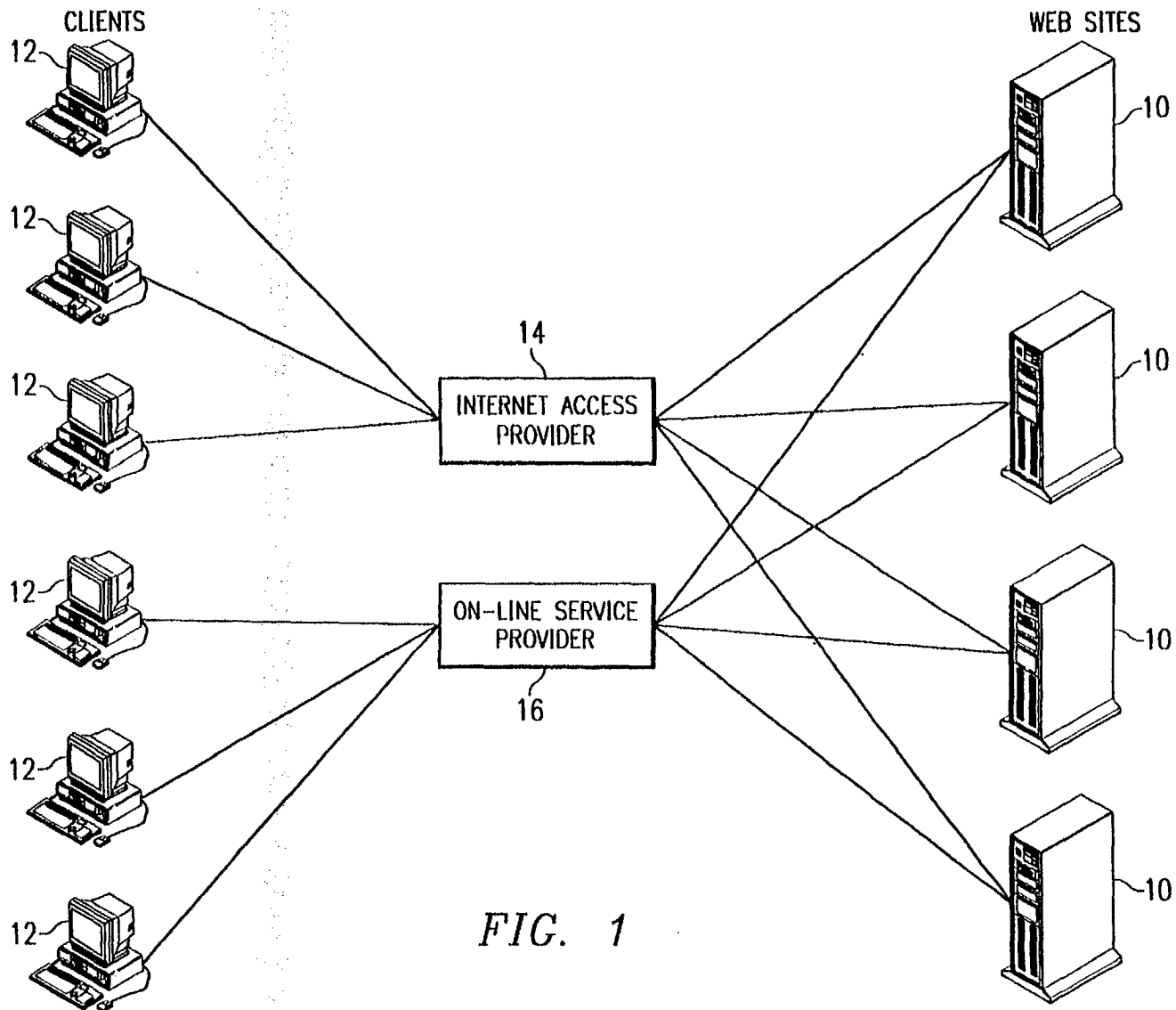


FIG. 1

FIG. 2

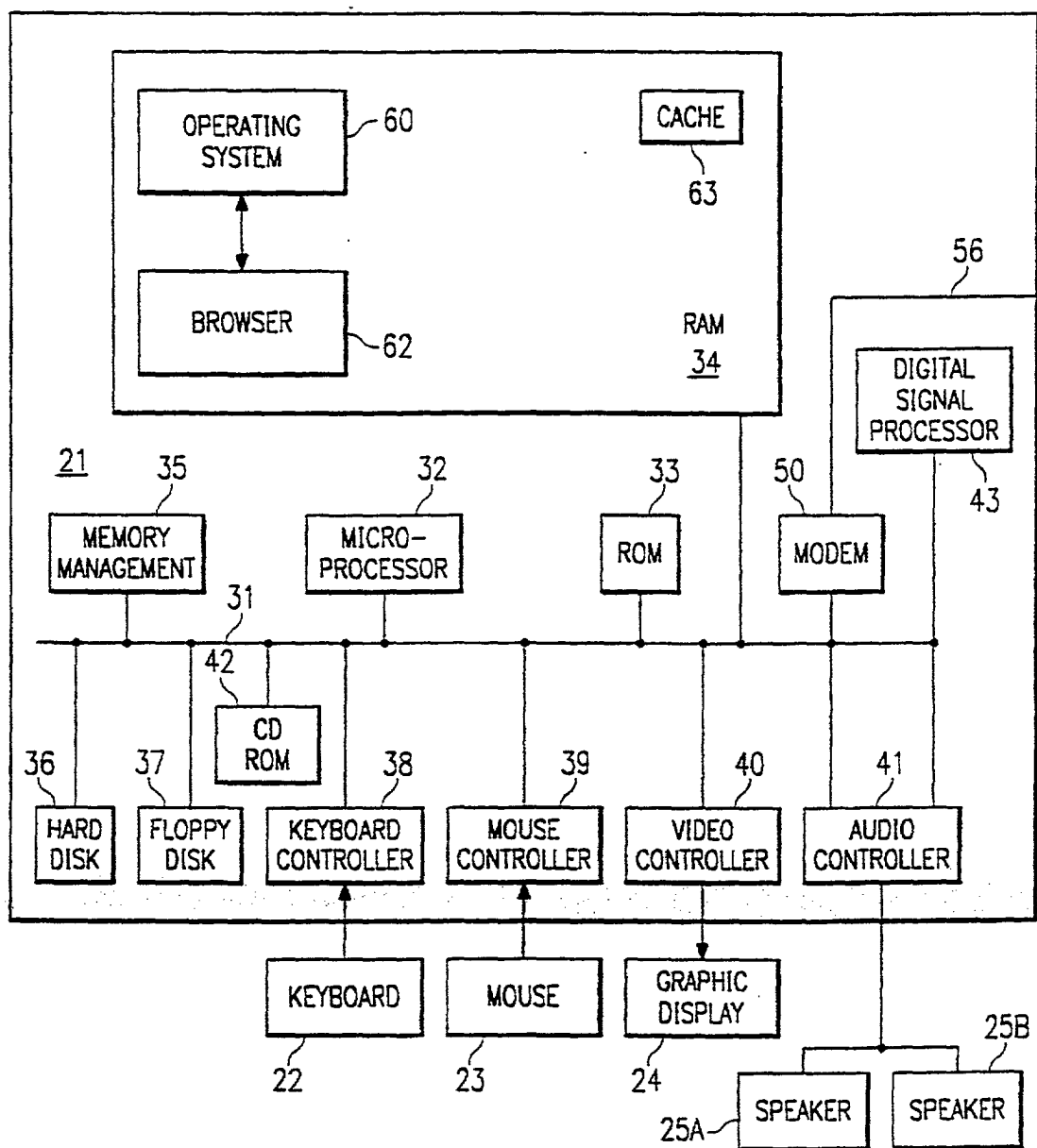


Figure #3
Robosend

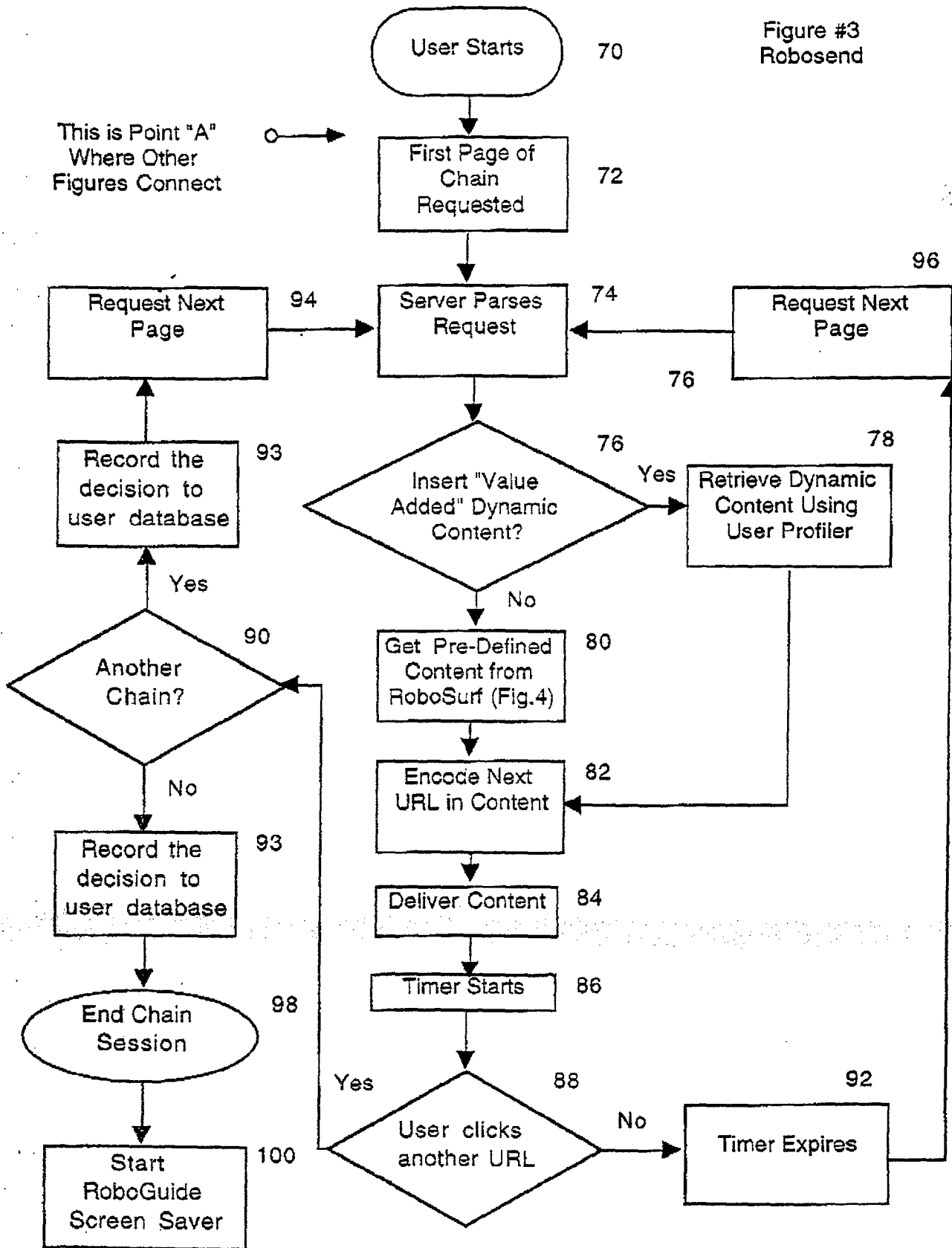
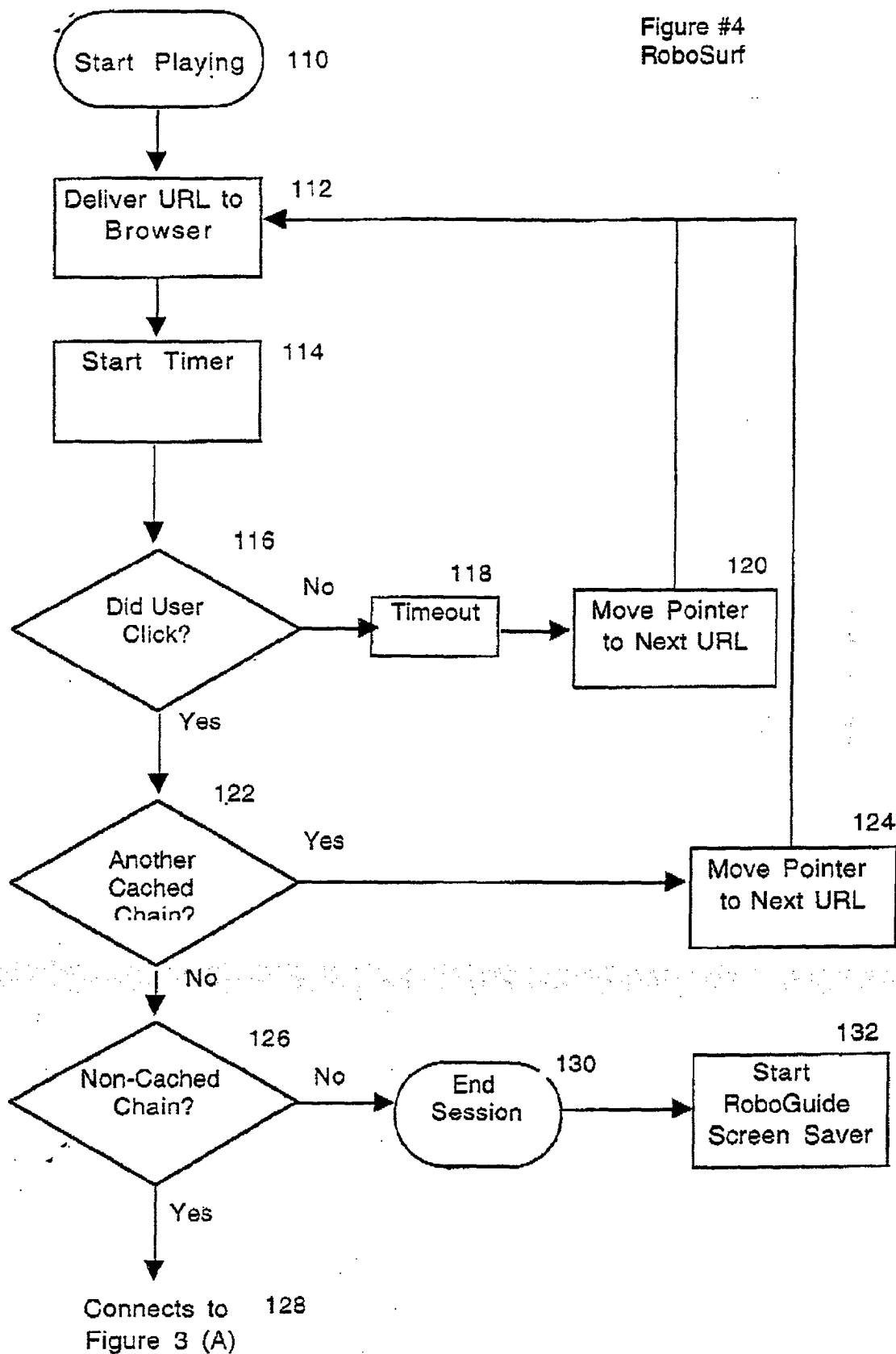


Figure #4
RoboSurf



Client gets
Flowbot URL
manually or
by screen
saver

150

Figure #5
RoboGuide

Web Server
Forwards
Request to
RoboSend

152

RoboSend
Retrieves
Chain
Definition
from Database

154

Personalization
information
dictates selection
of individual links
for Chain content

155

Sends Data to
Client

Many file types
supported

156

Client Parses
Data

158

Continued in
Figure 3 (A)

160

FIGURE 6

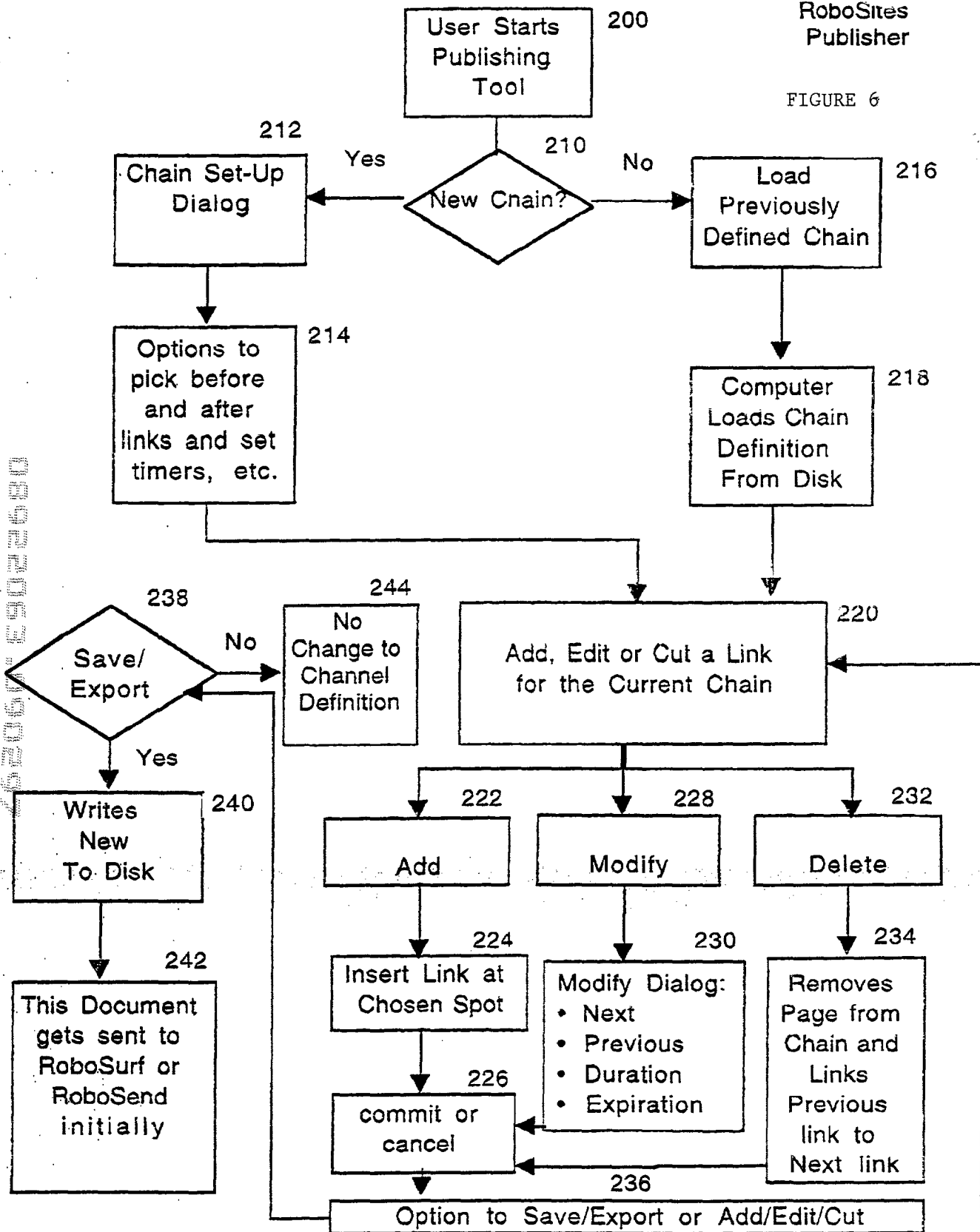
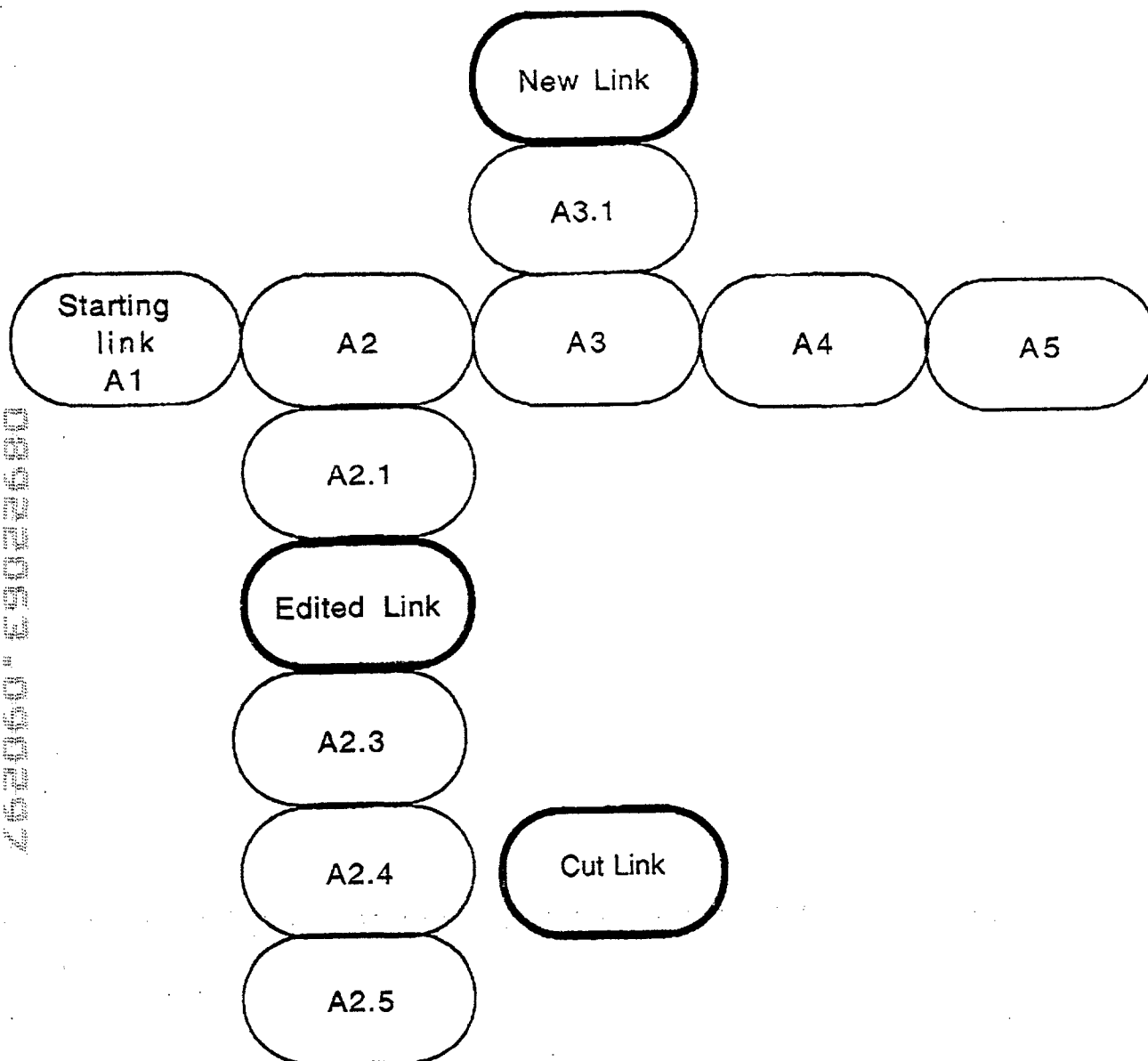
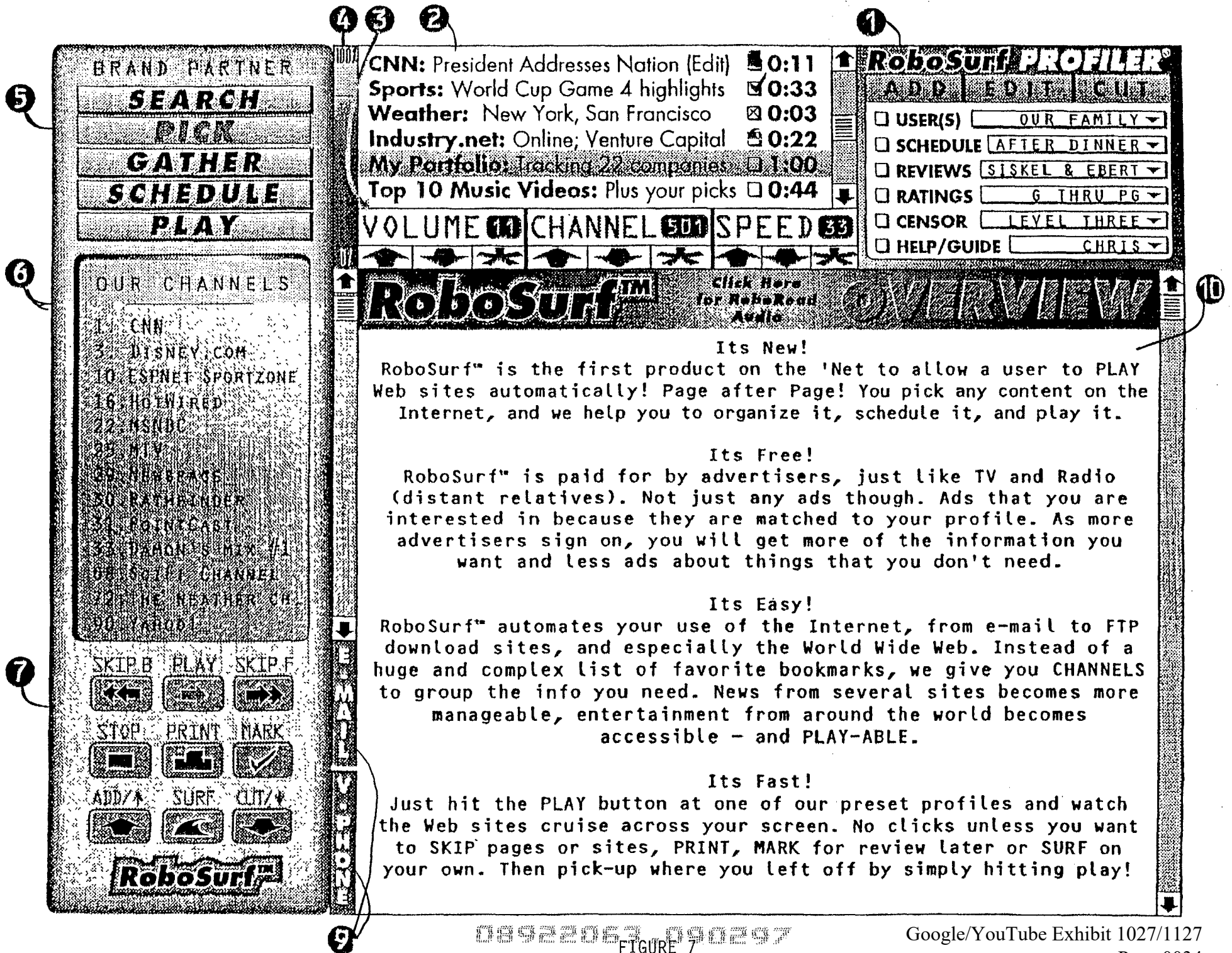


Table for RoboSites
Publisher

FIGURE 6A





PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 1996

Application or Docket Number

922063

CLAIMS AS FILED - PART I

(Column 1)

(Column 2)

SMALL ENTITY

OR

OTHER THAN
SMALL ENTITY

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE		
TOTAL CLAIMS	1 minus 20 = *	/
INDEPENDENT CLAIMS	1 minus 3 = *	/
MULTIPLE DEPENDENT CLAIM PRESENT		

RATE	FEE
	385.00
x\$11=	↑
x40=	
+130=	
TOTAL	↓

RATE	FEE
	770.00
x\$22=	
x80=	
+260=	
TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

SMALL ENTITY

OR

OTHER THAN
SMALL ENTITY

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	* 20	Minus	** 20	=
	Independent	* 3	Minus	*** 3	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				

RATE	ADDI- TIONAL FEE
x\$11=	
x40=	
+130=	
TOTAL ADDIT. FEE	g

RATE	ADDI- TIONAL FEE
x\$22=	
x80=	
+260=	
TOTAL ADDIT. FEE	

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				

RATE	ADDI- TIONAL FEE
x\$11=	
x40=	
+130=	
TOTAL ADDIT. FEE	

RATE	ADDI- TIONAL FEE
x\$22=	
x80=	
+260=	
TOTAL ADDIT. FEE	

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				

RATE	ADDI- TIONAL FEE
x\$11=	
x40=	
+130=	
TOTAL ADDIT. FEE	

RATE	ADDI- TIONAL FEE
x\$22=	
x80=	
+260=	
TOTAL ADDIT. FEE	

* 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.

MULTIPLE DEPENDENT CLAIM FEE CALCULATION SHEET (FOR USE WITH FORM PTO-876)							SERIAL NO.	FILING DATE			
							APPLICANT(S)				
CLAIMS											
	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT						
	IND.	DEP.	IND.	DEP.	IND.	DEP.		IND.	DEP.	IND.	DEP.
1	1						61				
2							62				
3							63				
4							64				
5							65				
6							66				
7							67				
8							68				
9							69				
10							70				
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36							96				
37							97				
38							98				
39							99				
40							100				
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
TOTAL IND.	1						TOTAL IND.				
TOTAL DEP.	0						TOTAL DEP.				
TOTAL	1						TOTAL				

IWY-080

SECTOR
PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Damon C. Torres : Attention:
Serial No.: 08/922,063 : Box Missing Parts
Filed: September 2, 1997 : Art Unit: 2771
FOR: AUTOMATED INTERNET : Examiner:
CONTENT SCHEDULER AND
DISPLAYER

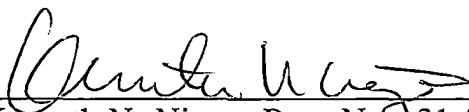
RESPONSE TO 37 CFR 1.53(f) LETTER
NOTICE TO FILE MISSING PARTS OF APPLICATION
FILING DATE GRANTED

Assistant Commissioner for Patents
Washington, DC 20231

S I R :

Responsive to the Office Letter dated January 9, 1998, enclosed is the Declaration/Power of Attorney in compliance with 37 CFR 1.63. Also enclosed is a copy of Form PTO-1533 and a check in the amount of \$65.00 to cover the required surcharge fee.

Respectfully Submitted,

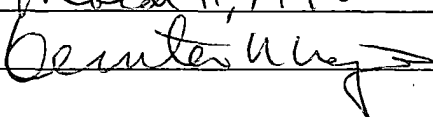

Kenneth N. Nigon, Reg. No. 31,549
Attorney for Applicant

Dated: March 11, 1998

P.O. Box 980
Valley Forge, PA 19482-0980
(610) 407-0700

The Assistant Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. 18-0350 of any fees associated with this communication.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231 on:

March 11, 1998




**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO./TITLE
--------------------	---------------------	-----------------------	---------------------------

08/922,063

09/02/97

TORRES

D

INV-080

0242/0109

NOT ASSIGNED

RATNER AND PRESTIA
SUITE 301
ONE WESTLAKES BERWYN
P O BOX 980
VALLEY FORGE PA 19482

2771

DATE MAILED:

01/09/98

**NOTICE TO FILE MISSING PARTS OF APPLICATION
Filing Date Granted**

An Application Number and Filing Date have been assigned to this application. However, the items indicated below are missing. The required items and fees identified below must be timely submitted **ALONG WITH THE PAYMENT OF A SURCHARGE** for items 1 and 3-6 only of \$ 65.00 for a ☐ large entity ☒ small entity in compliance with 37 CFR 1.27. The surcharge is set forth in 37 CFR 1.16(e). Applicant is given **TWO MONTHS FROM THE DATE OF THIS NOTICE** within which to file all required items and pay any fees required above 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).

If all required items on this form are filed within the period set above, the total amount owed by applicant as a

☒ large entity ☒ small entity (verified statement filed), is \$ 65.00.

☐ 1. The statutory basic filing fee is:

- ☐ missing.
- ☐ insufficient.

Applicant must submit \$ _____ to complete the basic filing fee and/or file a verified small entity statement claiming such status (37 CFR 1.27).

☐ 2. Additional claim fees of \$ _____, including any multiple dependent claim fees, are required.

Applicant must either submit the additional claim fees or cancel additional claims for which fees are due.

☒ 3. The oath or declaration:

- ☒ is missing.
- ☐ does not cover the newly submitted items.
- ☐ does not identify the application to which it applies.
- ☐ does not include the city and state or foreign country of applicant's residence.

An oath or declaration in compliance with 37 CFR 1.63, including residence information and identifying the application by the above Application Number and Filing Date is required.

☐ 4. The signature(s) to the oath or declaration is/are:

- ☐ missing.
- ☐ by a person other than inventor or person qualified under 37 CFR 1.42, 1.43, or 1.47.

A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.

☐ 5. The signature of the following joint inventor(s) is missing from the oath or declaration:

An oath or declaration listing the names of all inventors and signed by the omitted inventor(s), identifying this application by the above Application Number and Filing Date, is required.

☐ 6. A \$ _____ processing fee is required since your check was returned without payment (37 CFR 1.21(m)).

☐ 7. Your filing receipt was mailed in error because your check was returned without payment.

☐ 8. The application does not comply with the Sequence Rules.

See attached "Notice to Comply with Sequence Rules 37 CFR 1.821-1.825."

☐ 9. OTHER:

Direct the response and any questions about this notice to "Attention: Box Missing Parts."

A copy of this notice MUST be returned with the response.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO./TITLE
--------------------	---------------------	-----------------------	---------------------------

08/922,063

09/02/97

TORRES

D

IWY-080

0242/0109

RATNER AND PRESTIA
SUITE 301
ONE WESTLAKES BERWYN
P O BOX 980
VALLEY FORGE PA 19482

NOT ASSIGNED

2771

DATE MAILED:

01/09/98

NOTICE TO FILE MISSING PARTS OF APPLICATION Filing Date Granted

An Application Number and Filing Date have been assigned to this application. However, the items indicated below are missing. The required items and fees identified below must be timely submitted ALONG WITH THE PAYMENT OF A SURCHARGE for items 1 and 3-6 only of \$ 65.00 for a ☐ large entity ☒ small entity in compliance with 37 CFR 1.27. The surcharge is set forth in 37 CFR 1.16(e). Applicant is given TWO MONTHS FROM THE DATE OF THIS NOTICE within which to file all required items and pay any fees required above 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).

If all required items on this form are filed within the period set above, the total amount owed by applicant as a ☐ large entity ☒ small entity (verified statement filed), is \$ 65.00.

☐ 1. The statutory basic filing fee is:

- ☐ missing.
- ☐ insufficient.

Applicant must submit \$ _____ to complete the basic filing fee and/or file a verified small entity statement claiming such status (37 CFR 1.27).

☐ 2. Additional claim fees of \$ _____, including any multiple dependent claim fees, are required.

Applicant must either submit the additional claim fees or cancel additional claims for which fees are due.

☒ 3. The oath or declaration:

- ☒ is missing.
- ☐ does not cover the newly submitted items.
- ☐ does not identify the application to which it applies.
- ☐ does not include the city and state or foreign country of applicant's residence.

An oath or declaration in compliance with 37 CFR 1.63, including residence information and identifying the application by the above Application Number and Filing Date is required.

☐ 4. The signature(s) to the oath or declaration is/are:

- ☐ missing.
- ☐ by a person other than inventor or person qualified under 37 CFR 1.42, 1.43, or 1.47.

A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.

☐ 5. The signature of the following joint inventor(s) is missing from the oath or declaration:

An oath or declaration listing the names of all inventors and signed by the omitted inventor(s), identifying this application by the above Application Number and Filing Date, is required.

☐ 6. A \$ _____ processing fee is required since your check was returned without payment (37 CFR 1.21(m)).

☐ 7. Your filing receipt was mailed in error because your check was returned without payment.

☐ 8. The application does not comply with the Sequence Rules.

See attached "Notice to Comply with Sequence Rules 37 CFR 1.821-1.825."

☐ 9. OTHER:

Direct the response and any questions about this notice to "Attention: Box Missing Parts."

A copy of this notice MUST be returned with the response.

03/20/1998
02 Customer Service Center
Initial Patent Examination Division (703) 308-1202

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office 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 which is claimed and for which a patent is sought on the invention entitled

AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER,

the specification of which is attached hereto unless the following box is checked:

☒ was filed on September 2, 1997 as
United States Application Number or PCT International Application Number 08/922,063
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 which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

Priority Not Claimed

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	☐
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	☐

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

60/020,360 September 3, 1996
(Application Number) (Filing Date)

(Application Number) (Filing Date)

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Number)

(Filing Date)

(Status - patented, pending, abandoned)

(Application Number)

(Filing Date)

(Status - patented, pending, abandoned)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

Paul F. Prestia	Reg.No. 23,031	Robert L. Andersen	Reg.No. 25,771	Rocco L. Adornato	Reg. No. 40,480
Allan Ratner	Reg.No. 18,717	Lawrence E. Ashery	Reg.No. 34,515		
Andrew L. Ney	Reg.No. 20,300	Christopher R. Lewis	Reg.No. 38,201		
Kenneth N. Nigon	Reg.No. 31,549	Steven E. Koffe	Reg.No. 37,163		
Kevin R. Casey	Reg.No. 32,117	Allan M. Wheatcraft	Reg. No. 38,307		
Benjamin E. Loace	Reg.No. 33,412	Louis W. Beardell, Jr.	Reg.No. 40,506		
James C. Simmons	Reg.No. 24,842	Ian M. Hughes	Reg.No. 41,083		

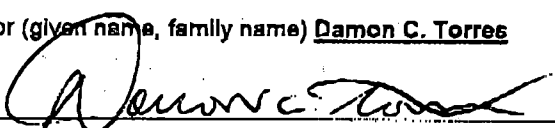
Address all correspondence to: Kenneth N. Nigon

Ratner & Prestia, Suite 301, One Westlakes, Berwyn, P.O. Box 980, Valley Forge, PA 19482-0980

Address all telephone calls to: Kenneth N. Nigon at (610) 407-0700.

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 (given name, family name) Damon C. Torres

Inventor's signature 

Date 3/9/98

Residence 89 5th Street, Suite 700, New York, NY 10003

Citizenship U.S.A.

Post Office Address 89 5th Street, Suite 700

New York, NY 10003

#4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Damon C. Torres : Attn: Box Missing Parts
Serial No.: 08/922,063 : Art Unit: 2771
Filed: September 2, 1997 : Examiner:
FOR: AUTOMATED INTERNET :
CONTENT SCHEDULER :
AND DISPLAYER :

REQUEST FOR EXTENSION OF TIME

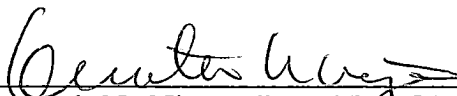
Assistant Commissioner for Patents
Washington, D.C. 20231

S I R :

In the subject application, it is requested that the shortened period for response to the Official Action dated January 9, 1998 be extended one month until April 9, 1998.

Enclosed is the Patent Extension fee under 37 C.F.R. § 1.17(a).

Respectfully submitted,

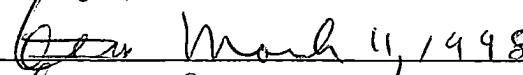
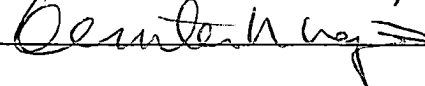

Kenneth N. Nigon, Reg. No. 31,549
Attorney for Applicant

Dated: March 11, 1998

Suite 301
One Westlakes, Berwyn
P.O. Box 980
Valley Forge, PA 19482-0980
(610) 407-0700

The Assistant Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. 18-0350 of any fees associated with this communication.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on:


March 11, 1998


03/20/1998 NVILLARI 00000054 08922063
01 FC1215 55.00 DP



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, DC 20231

SM

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/922,063	09/02/97	TORRES	SM

RATNER AND PRESTIA
SUITE 301
ONE WESTLAKES BERWYN
P O BOX 980
VALLEY FORGE PA 19482

LM02/0929

WALLACE, M EXAMINER

2776 ART UNIT PAPER NUMBER

09/29/98
DATE MAILED:

5

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

Commissioner of Patents and Trademarks

Tom Goldworthy
212-620-0007.

Dr. Montez
Softer and Horan, LLP.

Joe Softer.

Robert.

Horan.

212-677-2880.

Office Action Summary

Application No.
08/922,063

Applicant(s)

Torres

Examiner
Michael Wallace

Group Art Unit
2776



☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ 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.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1 is/are pending in the application.

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

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

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

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2776

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson et al. (USP 5,809,247) in view of Davis et al. (USP 5,796,952).

Applicant has claimed an automated content displayer which is used to sequentially present information derived from selected site comprising the following limitations.

Means for storing a list of selected sites, each item of the list having addresses for pages of the site and an amount of time for which information from the site is to be presented. This limitation is shown in column 13, lines 9 to 26 of Richardson et al..

Means of selecting a first item from the list is shown in column 4, line 35 of Richardson et al..

Art Unit: 2776

Means, responsive to the address of the selected item, for retrieving information content from the site indicated by the item is shown in column 6, lines 20-38 of Richardson et al..

Means for proving the retrieved information content is shown in column 7, lines 19-35 of Richardson et al..

Richardson et al. does not teach applicant's claimed means, responsive to the amount of time of the selected item for selecting a next item in the list after the retrieved information content has been presented for the amount of time.

Davis et al., however, as shown in column 13, lines 47-56 teaches the use of a software timer for monitoring the amount of time a user spends interacting with a portion of a Web page.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Richardson to include a means responsive to the amount of time spent on a selected item to determine a next item on the list to be retrieved, since Davis et al. teaches that the use of a monitoring system for tracking the amount of time a user spends on particular web sites provides for an improved means of customizing retrieval for Internet users.

Art Unit: 2776

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wallace whose telephone number is (703) 308-8996.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 308-9051 (for formal communications intended for entry)

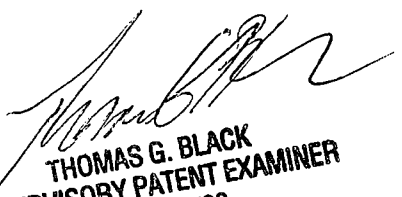
Or:

(703) 305-9731 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

M.W.

Michael Wallace
September 22, 1998


THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 2700

Notice of References Cited				Application No. 08/922,063		Applicant(s) Torres	
				Examiner Michael Wallace		Group Art Unit 2776	

U.S. PATENT DOCUMENTS						
		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A		5,809,250	9/98	Kisor	395	200.57
B		5,809,247	9/98	Richardson et al.	395	200.48
C		5,796,952	8/98	Davis et al.	395	200.54
D		5,778,181	7/98	Hidary et al.	395	200.48
E		5,754,939	5/98	Herz et al.	455	4.2
F		5,752,242	5/98	Havens	707	3
G		5,694,546	12/97	Reisman	395	200.9
H		5,740,549	4/98	Reilly et al.	705	14
I		5,572,643	11/96	Judson	395	793
J						
K						
L						
M						

FOREIGN PATENT DOCUMENTS							
		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N							
O							
P							
Q							
R							
S							
T							

NON-PATENT DOCUMENTS		
	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
U		
V		
W		
X		

6
ac
H

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

-----X

In re Application of

Damon Torres

Application No.: **08/922,063**

For: **AUTOMATED INTERNET CONTENT
SCHEDULER AND DISPLAYER**

Filed: **September 2, 1997**

-----X

POWER OF ATTORNEY

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

S I R:

I hereby revoke all prior powers of attorney and appoint the following attorneys
to prosecute this application and to transact all business in the United States Patent and Trademark
Office in connection therewith:

**ROBERT M. HAROUN, Reg. No. 34,345; JOSEPH SOFER, Reg. No. 34,438;
and THOMAS C. HUGHES, Reg. No. 42,674.**

FAX TRANSMISSION

FAX RECEIVED

SOFER & HAROUN, LLP
342 MADISON AVENUE, SUITE 1921
NEW YORK, NY 10173
(212) 697-2800
FAX: (212) 697-3004

MAR 30 1999

Official

Group 2700

To: Group 2700

Date: March 29, 1999

Fax #: (703) 308-9051/2

Pages: 8, including this cover sheet.

From: Thomas C. Hughes

Subject: 08/922,063

COMMENTS:

Confidentiality Statement

This transmission may contain information which is legally privileged or otherwise protected from disclosure. Its contents are confidential and intended for the addressee only, and must not be used, copied or disseminated by any person other than the addressee. The recipient is requested to notify the sender immediately of any error in transmission and to destroy any transmission not intended for the recipient.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/922,063	09/02/97	TORRES	D TWY-0800

LM61/1203

JOSEPH SOFER, ESQ.
SOFER & HAROUN, LLP
342 MADISON AVENUE
SUITE 1921
NEW YORK NY 10173

EXAMINER	
KULIK, P	
ART UNIT	PAPER NUMBER
2777	15

DATE MAILED: 12/03/99

Below is a communication from the EXAMINER in charge of this application

COMMISSIONER OF PATENTS AND TRADEMARKS

ADVISORY ACTION

☒ THE PERIOD FOR RESPONSE:

- a) ☒ is extended to run 6 months or continues to run _____ from the date of the final rejection
- b) ☐ expires three months from the date of the final rejection or as of the mailing date of this Advisory Action, whichever is later. In no event however, will the statutory period for the response expire later than six months from the date of the final rejection.

Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a), the proposed response and the appropriate fee. The date on which the response, the petition, and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee. Any extension fee pursuant to 37 CFR 1.17 will be calculated from the date of the originally set shortened statutory period for response or as set forth in b) above.

☒ Appellant's Brief is due in accordance with 37 CFR 1.192(a).

☒ Appellant's response to the final rejection, filed 11/12/99 has been considered with the following effect, but it is not deemed to place the application in condition for allowance:

1. ☒ The proposed amendments to the claim and/or specification will not be entered and the final rejection stands because:

- a) ☒ There is no convincing showing under 37 CFR 1.116(b) why the proposed amendment is necessary and was not earlier presented.
- b) ☒ They raise new issues that would require further consideration and/or search. (See Note).
- c) ☐ They raise the issue of new matter. (See Note).
- d) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal.
- e) ☒ They present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE: New claims 2-20 require further consideration and searching, especially those directed to a "publishing system."

2. ☐ Newly proposed or amended claims _____ would be allowed if submitted in a separately filed amendment cancelling the non-allowable claims.

3. ☒ Upon the filing an appeal, the proposed amendment ☐ will be entered ☒ will not be entered and the status of the claims will be as follows:

Claims allowed: _____
Claims objected to: _____
Claims rejected: 1

However;

☐ Applicant's response has overcome the following rejection(s): _____

4. ☐ The affidavit, exhibit or request for reconsideration has been considered but does not overcome the rejection because _____

5. ☒ The affidavit or exhibit will not be considered because applicant has not shown good and sufficient reasons why it was not earlier presented.

☐ The proposed drawing correction ☐ has ☐ has not been approved by the examiner.

☐ Other

PAUL V. KULIK

PATENT

Official

Docket No. 735-002i

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

FAX RECEIVED

MAR 30 1999

Applicant(s) : Damon Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER

Group Art Unit: 2776
Examiner: M. Wallace

Group 2700

FEE VALUE	
ACCOUNTABILITY	
DEPOSIT ACCOUNT NO.	
19	2825
FEE CODE	VALUE
217	435
301	380

CERTIFICATE OF FACSIMILE TRANSMISSION (37 C.F.R. 1.8a)

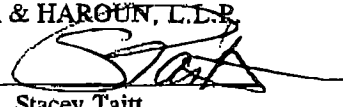
HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Sir:

I hereby certify that the attached CPA Request transmittal. Fee Transmittal. Petition for Three Month Extension of Time and Power of Attorney along with any paper(s) referred to as being attached or enclosed and this Certificate of Facsimile Transmission are being sent via facsimile to the U.S. Patent and Trademark Office on the below date.

Respectfully submitted,

SOFER & HAROUN, L.L.P.

By: 

Stacey Taitt

Date: 3/29/99

Mailing Address:

SOFER & HAROUN, L.L.P.
342 Madison Avenue, Suite 1921
New York, New York 10173
Tel:(212) 697-2800
Fax:(212) 697-3004

PATENT

Official

Docket No. 735-002i

#8
SR

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Damon Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER
Group Art Unit: 2776
Examiner: M. Wallace

PETITION AND FEE FOR EXTENSION OF TIME (37 C.F.R. §1.136(a))

HON. COMMISSIONER OF PATENTS AND TRADEMARKS

Washington, D.C. 20231

Sir:

FAX RECEIVED

MAR 30 1999

Group 2700

1. This is a petition for an extension of time for responding to an Office Action.
2. The communication in connection with the matter for which this extension is requested
☒ is filed herewith.
☐ has been filed on _____.
3. ☒ Applicant is a small-entity -- verified statement is attached ☐, or has already been filed. ☒.

- | 4. | | <u>Total Months
Requested</u> | <u>Fee for Other
than Small Entity</u> | <u>Fee for
Small Entity</u> |
|----|-------------------------------------|---|--|---------------------------------|
| a. | ☐ | one month | \$110.00 | \$55.00 |
| b. | ☐ | two months | \$380.00 | \$190.00 |
| c. | ☒ | three months | \$870.00 | \$435.00 |
| d. | ☐ | four months | \$1360.00 | \$680.00 |
| e. | ☐ | five months | \$1850.00 | \$925.00 |
| f. | ☐ | An extension for _____ months has already been secured for filing the above-identified communication and the fee paid therefor of \$ _____ is deducted from the total fee due for the total months of extension now requested. The fee for this extension (\$ _____), minus the fee previously paid (\$ _____) equals \$ _____ (total fee due). | | |

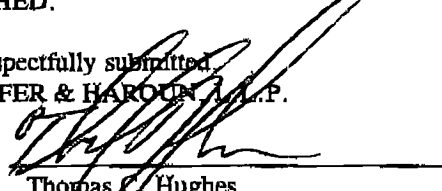
5. ☐ A check in the amount of \$ 00 to cover the extension fee is attached.
6. ☒ Charge fee to Deposit Account No. 19-2825. Order No. 735-002i. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

04/27/1999 SRUFFNER 00000002 192825 08922063
7. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or credit any overpayment to Deposit Account No. 19-2825. Order No. 735-002i. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

01 FC:217 435.00 CH
02 FC:231 380.00 CH

Dated: March 29, 1999

Respectfully submitted,
SOFER & HAROUN, L.L.P.

By: 
Thomas C. Hughes
Registration No. 42,674

Mailing Address:
342 Madison Avenue
New York, New York 10173
(212) 697-2800; Fax (212) 697-3004

Please type a plus sign (+) inside this box → ☐

#9
Sh
+

Approved for use through 09/30/2000, OMB 0651-0032
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.

CONTINUED PROSECUTION APPLICATION (CPA) REQUEST TRANSMITTAL

Submit an original, and a duplicate for fee processing.
(Only for Continuation or Divisional applications under 37 C.F.R. § 1.53(d))

CHECK BOX, if applicable:

☐ DUPLICATE

Address to:

Assistant Commissioner for Patents
Box CPA
Washington, DC 20231

Attorney Docket No.

735-0021

First Named Inventor

Damon Torres

Examiner Name

M. Wallace

Group / Art Unit

2776

Express Mail Label No.

—

This is a request for a ☒ continuation or ☐ divisional application under 37 C.F.R. § 1.53(d),
(continued prosecution application (CPA)) of prior application number 08,922,063
filed on 9/2/97, entitled Automated Internet Content Scheduler and Display

NOTES

FILING QUALIFICATIONS: The prior application identified above must be a nonprovisional application that is either: (1) complete as defined by 37 C.F.R. § 1.51(b); or (2) the national stage of an international application in compliance with 35 U.S.C. 371. A Notice will be placed on a patent issuing from a CPA, except for issues and designs, to the effect that the patent issued on a CPA and is subject to the twenty-year patent term provisions of 35 U.S.C. § 154(d)(2). Therefore, the prior application of a CPA may have been filed before, on or after June 8, 1995.

CEP NOT PERMITTED: A continuation-in-part application cannot be filed as a CPA under 37 C.F.R. § 1.53(d), but must be filed under 37 C.F.R. § 1.53(b).

EXPRESS ABANDONMENT OF PRIOR APPLICATION: The filing of this CPA is a request to expressly abandon the prior application as of the filing date of the request for a CPA. 37 C.F.R. § 1.53(b) must be used to file a continuation, divisional, or continuation-in-part of an application that is not to be abandoned.

ACCESS TO PRIOR APPLICATION: The filing of this CPA will be construed to include a waiver of confidentiality by the applicant under 35 U.S.C. 422 to the extent that any member of the public who is entitled under the provisions of 37 C.F.R. § 1.16 to access to copies of, or information concerning, the prior application may be given similar access to copies of, or similar information concerning, the other application or applications in the file jacket.

35 U.S.C. 120 STATEMENT: In a CPA, no reference to the prior application is needed in the first sentence of the specification and none should be submitted. If a sentence referencing the prior application is submitted, it will not be entered. A request for a CPA is the specific reference required by 35 U.S.C. 120 and to every application assigned the application number identified in such request. 37 C.F.R. § 1.78(a).

1. ☐ Enter the unentered amendment previously filed on _____
under 37 C.F.R. § 1.116 in the prior nonprovisional application.
2. ☐ A preliminary amendment is enclosed.
3. This application is filed by fewer than all the inventors named in the prior application, 37 C.F.R. § 1.53 (d)(4).
 - a. ☐ DELETE the following inventor(s) named in the prior nonprovisional application:
.....
 - b. ☐ The inventor(s) to be deleted are set forth on a separate sheet attached hereto.
4. ☒ A new power of attorney or authorization of agent (PTO/SB/81) is enclosed.
5. Information Disclosure Statement (IDS) is enclosed:
 - a. ☐ PTO-1449
 - b. ☐ Copies of IDS Citations

(Page 1 of 2)

Burden Hour Statement: This form is estimated to take 0.4 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box CPA, Washington, DC 20231.

Google/YouTube Exhibit 1027/1127

Page 0054

Please type a plus sign (+) inside this box → ☐

PTO/SB/29 (2/98)

Approved for use through 09/30/2000. OMB 0551-0032
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.

CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
TOTAL CLAIMS (37 C.F.R. § 1.15(c) or (d))		1 -20* =	0	x \$ _____ =	\$ 0
INDEPENDENT CLAIMS (37 C.F.R. § 1.15(c) or (d))		1 -3** =	0	x \$ _____ =	0
MULTIPLE DEPENDENT CLAIMS (If applicable) (37 C.F.R. § 1.15(d))				+ \$ _____ =	0
				BASIC FEE (37 C.F.R. § 1.16)	760
				Total of above Calculations =	760
				Reduction by 50% for filing by small entity (Note 37 C.F.R. §§ 1.9, 1.27 & 1.28).	380
				TOTAL =	380

* Release claims in excess of 20 and over original patent.
** Release independent claims over original patent.

6. Small entity status:

- a. ☐ A small entity statement is enclosed, if (b) and (c) do not apply.
b. ☒ A small entity statement was filed in the prior nonprovisional application and such status is still proper and desired.
c. ☐ Is no longer claimed.

7. The Commissioner is hereby authorized to credit overpayments or charge the following fees to Deposit Account No. 19 - 2825:

- a. ☒ Fees required under 37 C.F.R. § 1.16.
b. ☐ Fees required under 37 C.F.R. § 1.17.
c. ☐ Fees required under 37 C.F.R. § 1.18.

8. ☐ A check in the amount of \$ _____ is enclosed.

9. ☐ Other: _____

NOTE: The prior application's correspondence address will carry over to this CPA UNLESS a new correspondence address is provided below.

10. NEW CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label

or ☒ New correspondence address below

(Insert Customer No. or Attach bar code label here)

Name	Joseph Sofer				
	SOFER & HAROUN, LLP				
Address	342 Madison Avenue				
	Suite 1921				
City	New York	State	NY	Zip Code	10173
Country	USA	Telephone	212 697 2800	Fax	212 697 3004

11. SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type)	THOMAS C. FLYNN
Signature	<i>[Signature]</i>
Registration No. (Attorney/Agent)	42,674
Date	3/29/09

UNITED STATES PATENT & TRADEMARK OFFICE
Washington, D.C. 20231

REQUEST FOR PATENT FEE REFUND				
1 Date of Request: <u>10-30-00</u>		2 Serial/Patent # <u>08/922,063</u>		
3 Please refund the following fee(s):		4 PAPER NUMBER	5 DATE FILED	6 AMOUNT
☐	Filing			\$
☐	Amendment			\$
☒	Extension of Time	<u>19</u>	<u>10-10-00</u>	<u>\$445.00</u>
☐	Notice of Appeal/Appeal			\$
☐	Petition			\$
☐	Issue			\$
☐	Cert of Correction/Terminal Disc.			\$
☐	Maintenance			\$
☐	Assignment			\$
☐	Other			\$
		7 TOTAL AMOUNT OF REFUND		<u>\$445.00</u>
		8 TO BE REFUNDED BY:		
10 REASON:		Treasury Check ☒ Credit Deposit A/C #: 19--2825		
☐	Overpayment			
☐	Duplicate Payment			
☒	No Fee Due (Explanation):			
<u>outside the response statutory period.</u>				
11 REFUND REQUESTED BY:				
TYPED/PRINTED NAME: <u>Wm Layman</u>		TITLE: <u>paralegal</u>		
SIGNATURE: <u>Wm Layman</u>		PHONE: _____		
OFFICE: _____				
***** THIS SPACE RESERVED FOR FINANCE USE ONLY: *****				
APPROVED: <u>Liana Chase</u>		DATE: <u>10/30/00</u>		

Instructions for completion of this form appear on the back. After completion, attach white and yellow copies to the official file and mail or hand-carry to:



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/922,063	09/02/97	TORRES	D IWY-080

JOSEPH SOFER, ESQ.
SOFER & HAROUN, LLP
342 MADISON AVENUE
SUITE 1921
NEW YORK NY 10173

LM91/0514

EXAMINER

KULIK, P

ART UNIT

PAPER NUMBER

2777

10

DATE MAILED: 05/14/99

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

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/922,063

Applicant(s)

Torres

Examiner

Kulik

Group Art Unit

2777

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

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 (THREE) MONTH(S) 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 response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on March 29, 1999
- ☒ This action is **FINAL**.
- ☐ 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

- ☒ Claim(s) 1 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 2777

DETAILED ACTION

1. This application has been examined. This application is a continued prosecution application under 37 C.F.R. § 1.53(d). Claim one remains pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson et al. (USP 5,809,247) in view of Davis et al. (USP 5,796,952).

Applicant has claimed an automated content displayer which is used to sequentially present information derived from selected site comprising the following limitations.

Means for storing a list of selected sites, each item of the list having addresses for pages of the site and an amount of time for which information from the site is to be presented. This limitation is shown in column 13, lines 9 to 26 of Richardson et al..

Art Unit: 2777

Means of selecting a first item from the list is shown in column 4, line 35 of Richardson et al..

Means, responsive to the address of the selected item, for retrieving information content from the site indicated by the item is shown in column 6, lines 20-38 of Richardson et al..

Means for proving the retrieved information content is shown in column 7, lines 19-35 of Richardson et al..

Richardson et al. does not teach applicant's claimed means, responsive to the amount of time of the selected item for selecting a next item in the list after the retrieved information content has been presented for the amount of time.

Davis et al., however, as shown in column 13, lines 47-56 teaches the use of a software timer for monitoring the amount of time a user spends interacting with a portion of a Web page.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Richardson to include a means responsive to the amount of time spent on a selected item to determine a next item on the list to be retrieved, since Davis et al. teaches that the use of a monitoring system for tracking the amount of time a user

Art Unit: 2777

spends on particular web sites provides for an improved means of customizing retrieval for Internet users.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Accordingly, applicant should consider these references before any response to this Office Action.

5. This is a continuation of applicant's earlier Application No. 08/922,063. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

6. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however,

Art Unit: 2777

event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kulik whose telephone number is (703) 305-3831.

Any response to this action should be mailed to:

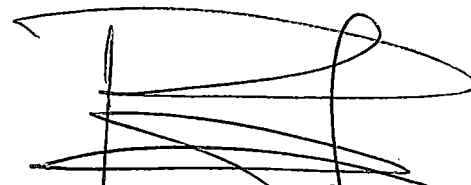
Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 308-5403 (for formal communications intended for entry)

Hand carried responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

PVK
May 10, 1999



PAUL V. KULIK
PRIMARY EXAMINER
A-U. 2777

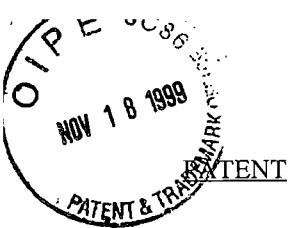
Notice of References Cited			Application No. 08/922,063		Applicant(s) Torres	
			Examiner Kulik		Group Art Unit 2777	
					Page 1 of 1	

U.S. PATENT DOCUMENTS					
*	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A	5,848,396	12/8/98	Gerace	705	10
B	5,806,043	9/8/98	Toader	705	14
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					

FOREIGN PATENT DOCUMENTS						
*	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N						
O						
P						
Q						
R						
S						
T						

NON-PATENT DOCUMENTS	
*	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)
U	
V	
W	
X	

* A copy of this reference is not being furnished with this Office action.
(See Manual of Patent Examining Procedure, Section 707.05(a).)



#11
W2any
11/27/99

Docket No. 735-002i

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Damon Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER

Group Art Unit: 2776
Examiner: M. Wallace

PETITION AND FEE FOR EXTENSION OF TIME (37 C.F.R. §1.136(a))

HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
Sir:

- 1. This is a petition for an extension of time for responding to an Office Action.
- 2. The communication in connection with the matter for which this extension is requested

☒ is filed herewith.

☐ has been filed on _____.
- 3. ☒ Applicant is a small-entity -- verified statement is attached ☐, or has already been filed. ☒.
- 4.

	<u>Total Months Requested</u>	<u>Fee for Other than Small Entity</u>	<u>Fee for Small Entity</u>
a. ☐	one month	\$110.00	\$55.00
b. ☐	two months	\$380.00	\$190.00
c. ☒	three months	\$870.00	\$435.00
d. ☐	four months	\$1360.00	\$680.00
e. ☐	five months	\$1850.00	\$925.00
f. ☐	An extension for _____ months has already been secured for filing the above-identified communication and the fee paid therefor of \$ _____ is deducted from the total fee due for the total months of extension now requested. The fee for this extension (\$ _____), minus the fee previously paid (\$ _____) equals \$ _____ (total fee due).		
- 5. ☐ A check in the amount of \$ 00 to cover the extension fee is attached.
- 6. ☒ Charge fee to Deposit Account No.19-2825. Order No. 735-002i. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.
- 7. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or credit any overpayment to Deposit Account No. 19-2825 . Order No. 735-002i. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Respectfully submitted,
SOFER & HAROUN, L.L.P.

Dated: November 12, 1999

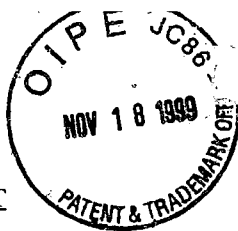
By:
Joseph Sofer
Registration No. 34,438

Mailing Address:
342 Madison Avenue
New York, New York 10173
(212) 697-2800; Fax (212) 697-3004

11/19/1999 SLUANG1 00000040 08922063

01 FD:217 435.00 QP

PATENT



Docket No. IWY-080

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER

Group Art Unit: 2776
Examiner: M. Wallace

AMENDMENT FEE TRANSMITTAL

HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. : 20231

Sir:

Transmitted herewith is an Amendment for the above-identified application.

☒ No additional fee is required.

☐ The additional fee has been calculated as shown below:

CLAIMS AS AMENDED

	Claims Remaining After Amendment		Highest No. Covered by Previous Payments	Present Extra	Rate	Additional Fee
Total Claims*	20	-	20	=0	x \$22.00	\$ <u>0</u>
Independent Claims	2	-	3	=0	x \$80.00	\$ <u>0</u>
Multiple Dependent Claim(s)	(If claims added by amendment include Multiple Dependent Claim(s) and there was no Multiple Dependent Claim(s) in application before amendment add \$260.00 to additional fee.)					\$ _____
	Total:					\$ 0

☒ Verified Statement of "Small Entity" Status Under 37 CFR § 1.27
filed _____. Reduced Fees Under 37 CFR § 1.9(f)
(50% of total) paid herewith.

☐ Charge fee to Deposit Account No. 19-2825 . Order No. _____
A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

* Includes all independent and single dependent claims and all claims referred to in multiple dependent claims. See 37 C.F.R. § 1.75(c).

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TECH CENTER 2700

[X] The Commissioner is hereby authorized to charge any additional fees which may be required for this amendment, or credit any overpayment to Deposit Account No.19-2825. Order No. 735-0021.
A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

[] Page(s) of substitute Sequence Listing

[] Computer disk(s) containing substitute Sequence Listing

[] Statement under 37 C.F.R. § 1.825(b) that the computer and paper copies of the substitute Sequence Listing are the same.

[] A check in the amount of \$ to cover the filing fee is attached.

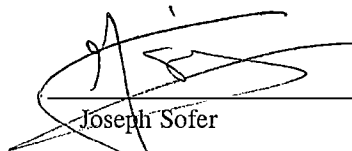
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NOV 23 1999
TECH CENTER 2700

Respectfully submitted,

SOFER & HAROUN L.L.P.

Dated: November 12, 1999

By:

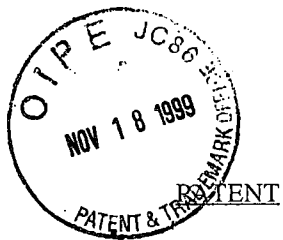


Joseph Sofer

Registration No. 34,438

Mailing Address:

SOFER & HAROUN L.L.P.
342 Madison Avenue
New York, New York 10173
(212) 697-2800
Fax: (212) 697-3004



Docket No. 735-002i

GP2776

AP
\$

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Damon Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER

Group Art Unit: 2776
Examiner: M. Wallace

CERTIFICATE OF MAILING (37 C.F.R. 1.8a)

RECEIVED
NOV 23 1999
TECH CENTER 2700

HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Sir:

I hereby certify that the attached Amendment, Amendment Transmittal, Petition for Three Month Extension of Time, Check for \$435, Check for \$150, Declaration, Notice of Appeal and Return Postcard along with any paper(s) referred to as being attached or enclosed and this Certificate of Mailing are being deposited with the United States Postal Service on the date shown below with sufficient postage as first-class mail in an envelope addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Respectfully submitted,

SOFER & HAROUN, L.L.P.

By: Stacey Gordon
Stacey Gordon

Date: 11/12/99

Mailing Address:

SOFER & HAROUN, L.L.P.
342 Madison Avenue, Suite 1921
New York, New York 10173
Tel:(212)697-2800
Fax:(212)697-3004

Patents

Doc. IWY-080

#12/Advised
W. Lawson
11/2/99

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant(s): Torres

Group Art Unit: 2776

Serial No.: 08/922,063

Examiner: M. Wallace

Filed: September 2, 1997

For: **AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER**

Commissioner Of Patents and
Trademarks
Washington, D.C. 20231

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NOV 23 1999
TECH CENTER 2700

Amendment

Dear Sir:

In response to an Office Action dated May 14, 1999, please amend the above-identified application as follows. A request for a three month extension and corresponding fee are enclosed:

In The Specification

Please insert after title:

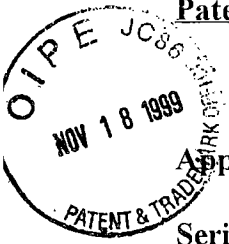
--This application claims the benefit of U.S. provisional application serial number 60/025,360,

filed September 3, 1996.--

In The Claims

Please amend claim 1 and add claims 2-20 as follows:

1. (Amended) An automated content displayer which is used to sequentially present information to remote users, derived from selected sites, comprising:



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11/21/00
- PM

means for storing a list of selected sites, each item of the list having addresses for pages of the site and an amount of time for which information from the site is to be presented for viewing by at least one of said remote users;

means of receiving from at least one of said remote users a selection of an item [selecting the first item] from the list;

means responsive to the address of the selected item, for retrieving information content from the site indicated by the item;

means, for providing the retrieved information content to at least one of said remote users; and

a timer [means], responsive to the amount of time of the selected item for selecting a next item in the list after the retrieved information content has been presented for the amount of time.

Please add the following claims:

-- 2. An automated content displayer in accordance with claim 1 further comprising means to determine whether one of said remote users requesting information is capable of receiving dynamic content.

3. An automated content displayer in accordance with claim 2, wherein said means to determine further comprises a cookie transmitted to said user.

4. An automated content displayer in accordance with claim 2 further comprising means for determining a profile of said remote user, when said user is capable of receiving

dynamic content.

5. An automated content displayer in accordance with claim 4 further comprising means for transmitting the type of dynamic content sent to said remote user based on said profile of said user.

#3
entire
SUB B37 6. An automated content displayer in accordance with claim 1 further comprising means for transmitting advertising content to each one of said users.

7. An automated content displayer in accordance with claim 6 wherein said advertising content is based on preferences of each one of said users.

8. An automated content displayer in accordance with claim 1 further comprising means to monitor whether one of said users has selected a new site before expiration of said timer.

9. An automated content displayer in accordance with claim 8 further comprising means to determine whether said new site is within said stored list of selected sites.

10. An automated content displayer in accordance with claim 9 further comprising a database configured to store decisions made by said user while viewing contents of said sites corresponding to said stored list of selected sites.

SUB B4
11. An automated content displayer which is used to sequentially present information derived from selected sites, comprising:

means for receiving a list of selected sites, each item of the list having addresses for pages of the site and an amount of time for which information from the site is to be presented for viewing;

means of selecting an item from said list;

A3
means responsive to the address of the selected item, for retrieving information content from the site indicated by the item;

means, for presenting the retrieved information content; and

a timer, responsive to the amount of time of the selected item for selecting a next item in the list after the retrieved information content has been presented for the amount of time.

12. An automated content displayer in accordance with claim 11 wherein said list of selected sites is transmitted by a remote web server.

13. An automated content displayer in accordance with claim 11, wherein said list of selected sites is transmitted in response to a search requested by a user of said automated content displayer.

14. An automated content displayer in accordance with claim 12, wherein said list of selected sites is generated by a remote web server based on user profiles.

15. An automated content displayer in accordance with claim 11 further comprising

means to monitor whether a new site has been selected before expiration of said timer.

16. An automated content displayer in accordance with claim 15 further comprising means to determine whether said new site is within said received list of selected sites.

17. An automated content displayer in accordance with claim 11 further comprising means to modify said received list of selected sites in accordance with user preferences.

18. An automated content displayer in accordance with claim 11 further comprising means to schedule time of display of contents corresponding to said list of selected sites.

19. A publishing system for an automated content displayer for generating a list of selected sites so as to sequentially present information derived from said selected sites, comprising:

means for generating a list of selected sites, each item of the list having addresses for pages of the sites and an amount of time for which information from the site is to be presented for viewing; and

means for modifying the contents of said list of selected sites.

20. A publishing system in accordance with claim 19 wherein said modifying means further comprises means for adding to and cutting from items in said list of selected items.

REMARKS

Applicant submits this Amendment in response to an outstanding Office Action dated May 14, 1999, along with a Notice of Appeal, Petition for Extension of Time and Amendment Transmittal form. Claim 1 has been amended. Claims 2-20 have been added. No new matter has been added to the application.

In the Office Action, the Examiner has rejected claim 1 under 35 U.S.C. §103(a) as being obvious over Richardson et al., in view of Davis et al. According to the Examiner it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Richardson to include a means responsive to the amount of time spent on a selected item to determine a next item on the list to be retrieved, since Davis teaches that the use of monitoring system for tracking the amount of time a user spends on particular web sites provides for an improved means for customizing retrieval for Internet users. Applicant respectfully disagrees and requests that the § 103 rejection be withdrawn.

None of the references cited by the Examiner teaches or discloses the present invention as claimed. In any event, Applicant herewith submits a Declaration pursuant to 37 CFR Section 131 to overcome Richardson reference and has amended claim 1 to further define the invention. Claims 2-20 have also been added to point out various features of the invention. In addition, a notice of appeal has been filed, together with this amendment.

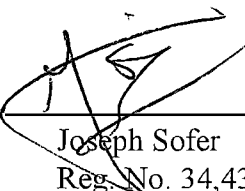
In view of the aforementioned remarks, it is respectfully submitted that all claims currently pending in the above identified application are now in condition for allowance, the

earliest possible notification of which is earnestly solicited. If in the Examiner's opinion the prosecution of the present application would be advanced by a telephone interview, he is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

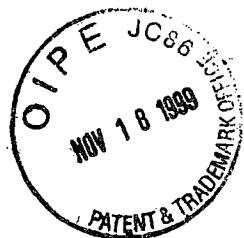
SOFER & HAROUN, L.L.P.

By



Joseph Sofer
Reg. No. 34,438
342 Madison Avenue
Suite 1921
New York, New York
(212) 697-2800

Dated: 11/12/99



#13
W. Lawler
11.27/99

DECLARATION UNDER 37 CFR § 1.131

Applicant(s): Damon Torres

Group Art Unit: 2776

Serial No.: 08/922,063

Examiner: M. Wallace

Filed: September 2, 1997

For: AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER

I, DAMON C. TORRES, declare and say:

That I am the inventor for the above-identified patent application;

That I conceived in the United States the invention claimed in the above-identified patent application prior to July 22, 1996, the filing date of the cited US Patent No. 5,809,247 to Richardson et al.

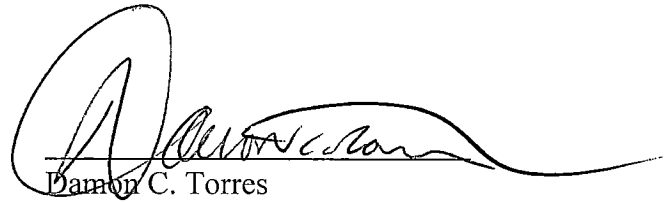
Attached Exhibit A, is a copy of a letter that was faxed to a software consultant, Jon Hertzig, prior to the July 22, 1996 date. The date on the letter has been redacted. The letter illustrates the conception of this invention. Briefly, the letter was written and sent by myself, Damon C. Torres, to Jon Hertzig, a tech writer, describing the invention as claimed in the above-identified patent application. With reference to the third and fourth paragraph of the letter, I describe my invention for users who are surfing sites to have a way to see more than one web page per click. The letter suggests means that are provided to "cue up many pages and have them automatically 'play' in your browser." Furthermore, such an automated software scheduler and player could "automate search results," "print dozens of pages on its own," and enable users to "pick from pages that were made especially as a sequence, like a story."

That pursuant to this conception, I exercised due diligence from prior to said date, July 22, 1996, the filing date of the cited Richardson et al. patent, to a subsequent constructive reduction to practice, namely the filing of a provisional application on September 3, 1996. Further evidence of such due diligence includes the establishment of a software project team to implement the invention from before July 22, 1996 through August and the contacting of the law firm of Ratner and Prestia in August to file the above-mentioned provisional application. Thereafter, this application was filed on September 2, 1997 based on the priority date of the provisional application.

That the undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further

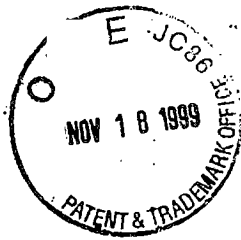
that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Date: 11/11/99



Damon C. Torres

Confidential.



Jon Hertzig
Via fax

Dear Jon,

I am writing to request your assistance on a new project that I have been working on. As a tech writer, you probably have a good perspective on the following software product idea. I must ask that you keep the information that I am putting forth in the strictest non-disclosure since I want to keep this product idea a secret until I can make it a reality. I am also investigating the patenting process, which is not only another reason to keep it secret, but another reason that I could benefit from your skills in describing software usage.

Since we have previously discussed the confidential nature of the info that I describe here, I am ready to offer the following description of this "invention:"

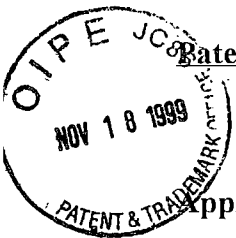
It would be of great value to me as a Web developer and to others who are just surfing sites to have a way to see more than one web page per click. To be able to cue up many pages and then have them automatically "Play" in your browser would be a whole new experience. It would look kind of like an interactive slideshow of the Web. You could pick any pages or pick from pages that were made especially as a sequence, like a story.

It could automate search results, and even print dozens of pages on its own, while you're at lunch. What do you think? Please let me know. Lets discuss it and I'll tell you more thoughts on it. Perhaps then you could give me some feedback.

Thanks for your offer to help.

Sincerely,

Damon C. Torres



Patents

Doc. IWY-080

#14
W. Lawson
11/27/99

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant(s): Torres

Group Art Unit: 2776

Serial No.: 08/922,063

Examiner: M. Wallace

Filed: September 2, 1997

For: AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER

TECH CENTER 2700

NOV 23 1999

RECEIVED

Commissioner Of Patents and Trademarks
Washington, D.C. 20231

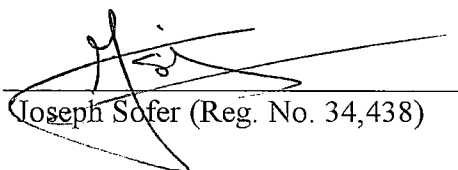
**NOTICE OF APPEAL FROM THE EXAMINER TO THE BOARD OF
PATENT APPEALS AND INTERFERENCES**

Applicant hereby appeals to the Board of Patent Appeals and Interferences from the decision of the Examiner dated May 14, 1999, rejecting claim 1 of the above-referenced patent application. Applicant is a small entity under 37 CFR 1.9 and 1.27. A statement of small entity status has already been filed in this application. Therefore, the fee for this Notice of Appeal is \$150.00. A check in the amount of the fee is hereby enclosed. Any additional fees or charges required at this time in connection with this application may be charged to Patent and Trademarks Office Deposit Account No. 19-2825.

Respectfully Submitted,
SOFER & HAROUN, L.L.P.

Dated: 11/12/99

By:


Joseph Sofer (Reg. No. 34,438)

SOFER & HAROUN, LLP
342 Madison Avenue
Suite #1921
New York, New York 10173
Phone: (212)697-2800; Fax: (212)697-3004

11/19/1999 SLUANG1 00000040 08922063

02 FC:219

150.00 OF



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
--------------------	-------------	-----------------------	---------------------

09/922063 09/02/97 TORRES

THY, RON
EXAMINER

RATNER AND PRESTIA
SUITE 301
ONE WESTLAKES BERWYN
P O BOX 980
VALLEY FORGE PA 19482

ART UNIT	PAPER NUMBER
WALLACE, MICHAEL J	7

DATE MAILED: 2777

04/06/99

This is in response to the Power of Attorney filed _____

- ☒ 1. The Power of Attorney to you in this application has been ~~revoked~~ **revoked** by the applicant. Future correspondence will be mailed to the new address of record. 37 CFR 1.33.
- ☐ 2. The Power of Attorney to you in this application **has been revoked** by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record. (37 CFR 1.33).
- ☐ 3. The withdrawal as attorney in this application **has been accepted**. Future correspondence will be mailed to the new address of record. 37 CFR 1.33.

Paul Chumley
This is a communication from the
Patent and Trademark Office

- ☒ 4. The Power of Attorney in this application **is accepted**. Correspondence in this application will be mailed to the below-noted address as provided by 37 CFR 1.33.
- ☐ 5. The Power of Attorney in this application **is not accepted** for the reason(s) checked below:
- ☐ a. The Power of Attorney is from an assignee and the Certificate required by 37 CFR 3.73 (b) has not been received.
- ☐ b. The person signing for the assignee has omitted their empowerment to sign on behalf of the assignee.
- ☐ c. The inventor(s) is without authority to appoint attorneys since the assignee has intervened as provided by 37 CFR 3.71.
- ☐ d. The signature of _____, a co-inventor in this application, has been omitted. The Power of Attorney will be entered upon receipt of confirmation signed by said co-inventor.
- ☐ e. The person(s) appointed in the Power of Attorney is not registered to practice before the U. S. Patent & Trademark Office.
- ☐ f. The revocation is not signed by the applicant, the assignee of the entire interest, or **one** particular principal attorney having the authority to revoke.

JOSEPH SOFER, ESQ.
SOFER & HAROUN, LLP
100 WALL STREET AVENUE
SUITE 1200
NEW YORK, NY 10038

Paul Chumley
This is a communication from the
Patent and Trademark Office

RETAIN THIS COPY IN THE APPLICATION FILE COPY A

TRADEMARK



Docket No. 735-002i

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Damon Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAY

RECEIVED
JAN 19 2000
TC 2700 MAIL ROOM

CERTIFICATE OF MAILING (37 C.F.R. 1.8a)

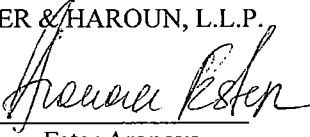
HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Sir:

I hereby certify that the attached CPA Request Transmittal, Fee Transmittal, Check for \$345.00 and Return Postcard along with any paper(s) referred to as being attached or enclosed and this Certificate of Mailing are being deposited with the United States Postal Service on the date shown below with sufficient postage as first-class mail in an envelope addressed to the: Assistant Commissioner for Trademarks, 2900 Crystal Drive, Arlington, VA 22202-3513.

Respectfully submitted,

SOFER & HAROUN, L.L.P.

By: 

Ester Aronova

Date: 01/03/00

Mailing Address:
SOFER & HAROUN, LLP
342 Madison Avenue, Suite 1921
New York, New York 10173
Tel:(212)697-2800;fax (212)697-3004



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.

PTO/SB/17 (6/99)
Approved for use through 09/30/2000. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

FEE TRANSMITTAL for FY 1999

Patent fees are subject to annual revision.
Small Entity payments must be supported by a small entity statement
otherwise large entity fees must be paid. See Forms PTO/SB/09-12
See 37 C.F.R. §§ 1.27 and 1.28.

TOTAL AMOUNT OF PAYMENT (\$) **345**

Complete if Known

Application Number	08 / 922,063
Filing Date	9/2/97
First Named Inventor	Damon Torres
Examiner Name	P. Kulik
Group / Art Unit	2777
Attorney Docket No.	735-002i / FW8-080

METHOD OF PAYMENT (check one)

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit Account Number

Deposit Account Name

☐ Charge Any Additional Fee Required
Under 37 CFR §§ 1.16 and 1.17

2. ☒ Payment Enclosed:

☒ Check ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
101 760	201 380	Utility filing fee	345
106 310	206 155	Design filing fee	
107 480	207 240	Plant filing fee	
108 760	208 380	Reissue filing fee	
114 150	214 75	Provisional filing fee	

SUBTOTAL (1) (\$) **345**

2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
20	20** = 0	X	0
Independent Claims	2 - 3** = 0	X	0
Multiple Dependent			0

**or number previously paid, if greater; For Reissues, see below

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
103 18	203 9	Claims in excess of 20
102 78	202 39	Independent claims in excess of 3
104 260	204 130	Multiple dependent claim, if not paid
109 78	209 39	** Reissue independent claims over original patent
110 18	210 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) **0**

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
105 130	205 65	Surcharge - late filing fee or oath	
127 50	227 25	Surcharge - late provisional filing fee or cover sheet.	
139 130	139 130	Non-English specification	
147 2,520	147 2,520	For filing a request for reexamination	
112 920*	112 920*	Requesting publication of SIR prior to Examiner action	
113 1,840*	113 1,840*	Requesting publication of SIR after Examiner action	
115 110	215 55	Extension for reply within first month	
116 380	216 190	Extension for reply within second month	
117 870	217 435	Extension for reply within third month	
118 1,360	218 680	Extension for reply within fourth month	
128 1,850	228 925	Extension for reply within fifth month	
119 300	219 150	Notice of Appeal	
120 300	220 150	Filing a brief in support of an appeal	
121 260	221 130	Request for oral hearing	
138 1,510	138 1,510	Petition to institute a public use proceeding	
140 110	240 55	Petition to revive - unavoidable	
141 1,210	241 605	Petition to revive - unintentional	
142 1,210	242 605	Utility issue fee (or reissue)	
143 430	243 215	Design issue fee	
144 580	244 290	Plant issue fee	
122 130	122 130	Petitions to the Commissioner	
123 50	123 50	Petitions related to provisional applications	
126 240	126 240	Submission of Information Disclosure Stmt	
581 40	581 40	Recording each patent assignment per property (times number of properties)	
146 760	246 380	Filing a submission after final rejection (37 CFR § 1.129(a))	
149 760	249 380	For each additional invention to be examined (37 CFR § 1.129(b))	

Other fee (specify)

Other fee (specify)

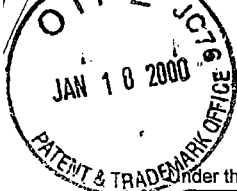
* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) **0**

SUBMITTED BY

Name (Print/Type)	Joseph Sofer	Registration No (Attorney/Agent)	34,438	Telephone	212-697-2800
Signature				Date	

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



GAU-2777 \$ #6
+ 1/2/00 AW

PTO/SB/29 (8/98)
Approved for use through 09/30/2000. OMB 0651-0032
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.

**CONTINUED PROSECUTION APPLICATION (CPA)
REQUEST TRANSMITTAL**

Submit an original, and a duplicate for fee processing.
(Only for Continuation or Divisional applications under 37 C.F.R. § 1.53(d))

CHECK BOX, if applicable:
☐ DUPLICATE

Address to: Assistant Commissioner for Patents Box CPA Washington, DC 20231	Attorney Docket No. of Prior Application	735-0022 / IWR-080
	First Named Inventor	Damon Torres
	Examiner Name	P. K. K. K.
	Group / Art Unit	2777
	Express Mail Label No.	

This is a request for a ☒ continuation or ☐ divisional application under 37 C.F.R. § 1.53(d),
(continued prosecution application (CPA)) of prior application number 08, 922, 063
filed on 9/2/97, entitled Automated Internet Content Scheduler & Displayer.

NOTES

FILING QUALIFICATIONS: The prior application identified above must be a nonprovisional application that is either: (1) complete as defined by 37 C.F.R. § 1.51(b); or (2) the national stage of an international application in compliance with 35 U.S.C. 371. A Notice will be placed on a patent issuing from a CPA, except for reissues and designs, to the effect that the patent issued on a CPA and is subject to the twenty-year patent term provisions of 35 U.S.C. § 154(a)(2). Therefore, the prior application of a CPA may have been filed before, on or after June 8, 1995.

C-I-P NOT PERMITTED: A continuation-in-part application cannot be filed as a CPA under 37 C.F.R. § 1.53(d), but must be filed under 37 C.F.R. § 1.53(b).

EXPRESS ABANDONMENT OF PRIOR APPLICATION: The filing of this CPA is a request to expressly abandon the prior application as of the filing date of the request for a CPA. 37 C.F.R. § 1.53(b) must be used to file a continuation, divisional, or continuation-in-part of an application that is not to be abandoned.

ACCESS TO PRIOR APPLICATION: The filing of this CPA will be construed to include a waiver of confidentiality by the applicant under 35 U.S.C. 122 to the extent that any member of the public who is entitled under the provisions of 37 C.F.R. § 1.14 to access to, copies of, or information concerning, the prior application may be given similar access to, copies of, or similar information concerning, the other application or applications in the file jacket.

35 U.S.C. 120 STATEMENT: In a CPA, no reference to the prior application is needed in the first sentence of the specification and none should be submitted. If a sentence referencing the prior application is submitted, it will not be entered. A request for a CPA is the specific reference required by 35 U.S.C. 120 and to every application assigned the application number identified in such request, 37 C.F.R. § 1.78(a).

- ☒ Enter the unentered amendment previously filed on 11/12/99
under 37 C.F.R. § 1.116 in the prior nonprovisional application.
- ☐ A preliminary amendment is enclosed.
- This application is filed by fewer than all the inventors named in the prior application, 37 C.F.R. § 1.53 (d)(4).
 - ☐ **DELETE** the following inventor(s) named in the prior nonprovisional application:
.....
 - ☐ The inventor(s) to be deleted are set forth on a separate sheet attached hereto.
- ☐ A new power of attorney or authorization of agent (PTO/SB/81) is enclosed.
- Information Disclosure Statement (IDS) is enclosed: **01/19/2000 DUONG 00000117 08922063**
 - ☐ PTO-1449 **01 FC:231 345.00 OP**
 - ☐ Copies of IDS Citations

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 0.4 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box CPA, Washington, DC 20231.

CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
TOTAL CLAIMS (37 C.F.R. § 1.16(e) or (j))		20 -20* =	0	x \$ _____ =	\$ 0
INDEPENDENT CLAIMS (37 C.F.R. § 1.16(b) or (i))		2 -3** =	0	x \$ _____ =	0
MULTIPLE DEPENDENT CLAIMS (if applicable) (37 C.F.R. § 1.16(d))				+ \$ _____ =	0
				BASIC FEE (37 C.F.R. § 1.16)	690
				Total of above Calculations =	690
Reduction by 50% for filing by small entity (Note 37 C.F.R. §§ 1.9, 1.27 & 1.28).					345
* Reissue claims in excess of 20 and over original patent. ** Reissue independent claims over original patent.				TOTAL =	345

6. Small entity status:

- a. ☐ A small entity statement is enclosed, if (b) and (c) do not apply.
 b. ☒ A small entity statement was filed in the prior nonprovisional application and such status is still proper and desired.
 c. ☐ Is no longer claimed.

7. The Commissioner is hereby authorized to credit overpayments or charge the following fees to Deposit Account No. 19 - 2825:

- a. ☒ Fees required under 37 C.F.R. § 1.16.
 b. ☒ Fees required under 37 C.F.R. § 1.17.
 c. ☐ Fees required under 37 C.F.R. § 1.18.

8. ☒ A check in the amount of \$ 345 is enclosed.

9. ☒ New Attorney Docket Number, if desired 735-0021

[Prior application Attorney Docket Number will carryover to this CPA unless a new Attorney Docket Number has been provided herein.]

- 10 a. ☐ Receipt For Facsimile Transmitted CPA (PTO/SB/29A)
 b. ☒ Return Receipt Postcard (Should be specifically itemized, See MPEP 503)

11. ☐ Other: _____

NOTE:

The prior application's correspondence address will carry over to this CPA UNLESS a new correspondence address is provided below.

12. NEW CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label

or ☐ New correspondence address below

(Insert Customer No. or Attach bar code label here)

Name

Address

City

State

Zip Code

Country

Telephone

Fax

13. SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print /Type)

Joseph Sofer

Signature

Registration No. (Attorney/Agent)

34,438

Date

PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 1997

Application or Docket Number

08/922063

CLAIMS AS FILED - PART I

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE		
TOTAL CLAIMS	minus 20 = *	20
INDEPENDENT CLAIMS	minus 3 = *	3
MULTIPLE DEPENDENT CLAIM PRESENT		

SMALL ENTITY
TYPE ☐

OR

OTHER THAN
SMALL ENTITY

RATE	FEE
X =	
X =	
+	
TOTAL	

OR

OR

OR

OR

OR

RATE	FEE
X\$ =	
X\$ =	
+	
TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

SMALL ENTITY

OR

OTHER THAN
SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ =	
X =	
+	
TOTAL	

OR

OR

OR

OR

RATE	ADDITIONAL FEE
X\$ =	
X =	
+	
TOTAL	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

RATE	ADDITIONAL FEE
X\$ =	
X =	
+	
TOTAL	

OR

OR

OR

OR

RATE	ADDITIONAL FEE
X\$ =	
X =	
+	
TOTAL	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

RATE	ADDITIONAL FEE
X\$ =	
X =	
+	
TOTAL	

OR

OR

OR

OR

RATE	ADDITIONAL FEE
X\$ =	
X =	
+	
TOTAL	

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 3.

TOTAL
ADDIT. FEE

TOTAL
ADDIT. FEE

TRADEMARK



Docket No. 735-002i

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Damon Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAY

CERTIFICATE OF MAILING (37 C.F.R. 1.8a)

HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Sir:

I hereby certify that the attached Supplemental Information Disclosure Statement, Form PTO-1449, two
References and Return Postcard along with any paper(s) referred to as being attached or enclosed and this
Certificate of Mailing are being deposited with the United States Postal Service on the date shown below with
sufficient postage as first-class mail in an envelope addressed to the: Assistant Commissioner for Trademarks, 2900
Crystal Drive, Arlington, VA 22202-3513.

Respectfully submitted,

SOFER & HAROUN, L.L.P.

By: Ester Aronova
Ester Aronova

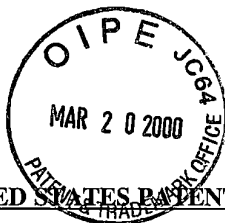
Date: 3/14/00

Mailing Address:
SOFER & HAROUN, LLP
342 Madison Avenue, Suite 1921
New York, New York 10173
Tel:(212)697-2800;fax (212)697-3004

Gp 2777
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IP 5
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RECEIVED
MAR 21 2000
TC 2700 MAIL ROOM

PATENT



Docket No. 735-002i

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Damon Torres
Serial No. : 08/922,063 Group Art Unit: 2777
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAY

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

RECEIVED
MAR 21 2000
TC 2700 MAIL ROOM

Sir:

This Information Disclosure Statement is filed in accordance with 37 C.F.R. §§1.56, 1.97 and 1.98. The items listed on Form PTO-1449, a copy of which is enclosed, may be deemed to be pertinent to the above-identified application and are made of record to assist the Patent and Trademark Office in its examination of this application. The Examiner is respectfully requested to fully consider the items and to independently ascertain their teaching.

1. ☐ For each of the following items listed on the enclosed copy of Form PTO-1449 that is not in the English language, an English language translation of that item or a portion thereof or a concise explanation of the relevance of that item is enclosed:

A:

B:

2. ☐ For each of the following items listed on the enclosed copy of Form PTO-1449 that is not in the English language, a concise explanation of the relevance of that item is incorporated in the specification of the above-identified application.

3. ☐ Any copy of the items listed on the enclosed copy of Form PTO-1449 that is not enclosed with this Information Disclosure Statement was previously cited by or submitted to the Patent and Trademark Office in the prior ☐ Continuation, ☐ Divisional or ☐ Continuation-In-Part application under 37 C.F.R. §1.60, U.S. Serial No. ____, filed _____.

4. ☐ No fee is due under 37 C.F.R. §1.17(p) for this Information Disclosure Statement since it is being filed in compliance with:

☐ 37 C.F.R. §1.97(b)(1), within three months of the filing date of the above-identified application.

☐ 37 C.F.R. §1.97(b)(2), within three months of the date of entry into the national stage as set forth in §1.491 in an international application.

11. [X] The Commissioner is hereby authorized to charge any additional fees which may be required for this Information Disclosure Statement, or credit any overpayment to Deposit Account No. 19-2825, Order No. 735-002i.

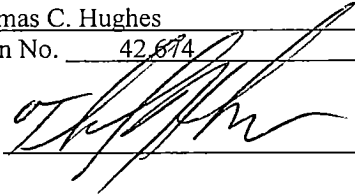
A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Respectfully submitted,

SOFER & HAROUN, L.L.P.

By: Thomas C. Hughes

Registration No. 42,674

Signature. 

Dated: March 14, 2000

Mailing Address:

Thomas C. Hughes, Esq.
SOFER & HAROUN, LLP
342 Madison Avenue, Suite 1921
New York, New York 10173



Sheet 1 of 2

FORM PTO-1449 U.S. DEPARTMENT OF
COMMERCE
(Rev.2-3) PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
735-002iSERIAL NO.
08/922,063INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

APPLICANT
Damon TorresFILING DATE
September 2, 1997GROUP
2777

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

PL		CCI Slide Show version 1.0, September 22, 1994 by Alan Braverman.
PL		Supporting Hierarchical Guided Tours in the World Wide Web by Franz J. Hauck

EXAMINER

DATE CONSIDERED

3/25/00

EXAMINER: Initial if citation 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.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

cu

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/922,063 09/02/97 TORRES

D IWY-080

EXAMINER

LM01/0327

JOSEPH SOFER, ESQ.
SOFER & HAROUN, LLP
342 MADISON AVENUE
SUITE 1921
NEW YORK NY 10173

KULIK, P

ART UNIT

PAPER NUMBER

2777

DATE MAILED:

03/27/00

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

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/922,063

Applicant(s)

Torres

Examiner

Kulik

Group Art Unit

2777

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

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 (THREE) MONTH(S) 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 response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 1/18/2000 and 3/20/2000
- ☐ This action is **FINAL**.
- ☐ 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

- ☒ Claim(s) 1-20 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-20 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 17
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 2777

1. This application has been examined responsive to communications filed January 18, 2000 and March 20, 2000. This application is a continuation application under 37 C.F.R. § 1.53(d). The amendment filed November 12, 1999 has been entered as a result of the rule 1.53(d) filing.
2. The amendment added claims 2-20 for consideration and included an attached Declaration by the inventor under 37 C.F.R. § 1.131. Claims 1-20 are pending.
3. The drawings were objected to by a PTO draftsman for reason noted on form PTO-948, attached to paper no. 5. Please direct any inquiries concerning drawing review to the Drawing Review Branch at (703) 305-8404.
4. The Information Disclosure Statement filed March 20, 2000 has been received and considered. See attached form PTO-1449.
5. The declaration under 37 C.F.R. § 1.131 states that the declarant conceived of the invention in the United States prior to July 22, 1996, the filing date of the cited U.S. Patent No. 5,809,247 issued to Richardson et al. (The Richardson reference is no longer relied upon by the examiner.) As proof of this contention declarant attached "Exhibit A", which is "a copy of a letter that was faxed to a software consultant." The letter's date is redacted.

Art Unit: 2777

6. Declarant references the third and fourth paragraphs of the letter as describing the invention “for users who are surfing sites to have a way to see more than one web page per click.” According to declarant the letter “suggests” means “that are provided to ‘cue up many pages and have them automatically “play” in your browser’ and to ‘automate search results’.

7. The examiner finds the letter to refer to a software –implemented “idea” for web browsing that doesn’t include any specifics. For instance the letter does not refer to any of the limitations now claimed regarding time durations, profiles, cookies, etc. At best the declaration shows some evidence of conception of a web-based “interactive slideshow.”

8. The declaration states that declarant “exercised due diligence from prior to said date, July 22, 1996 ... to a subsequent constructive reduction to practice, namely the filing of a provisional application on September 3, 1996. Further evidence of such due diligence includes the establishment of a software project team to implement the invention from before July 22, 1996 through August and the contacting” of a law firm to file the provisional application.

9. The declaration provides no documentary evidence regarding diligence after the conception date and before the filing of the provisional application. In any event, as noted above, the Richardson reference is no longer relied upon by the examiner.

Art Unit: 2777

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, 11, 12 and 18-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Franz J. Hauck, "Supporting Hierarchical Guided Tours in the World Wide Web," Fifth International World Wide Web Conference, pp. 1-13, May 1996 (hereafter Hauck), and Alan Braverman, "CCI Slide Show," September 22, 1994, 3 pages (hereafter Braverman).

12. Regarding all claims 1, 11, 12 and 18-20, the basis of this rejection is that Hauck described each of the claim features with respect to the list of selected sites, selection of sites and display to a remote user of the sites but did not specifically mention the use of a timer or duration information in sequencing the resources to be displayed to users.

13. From the Braverman CCI Slide Show it is evident that a "slideshow" of URLs and

Art Unit: 2777

corresponding delay times was known as a way to sequence the presentation of information to a user of the internet. It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized this teaching of delayed display of URLs for the sequencing in Hauck because it is clear from Hauck that the teachings therein are directed to display of resources from the internet, as is Braverman.

14. Claims 1, 11, 12 and 18-20 have been rejected.

15. Claims 2-10 and 13-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hauck and Braverman as applied above and further in view of U.S. Patent No. 5,848,396 issued to Gerace.

16. Claims 2-10 and 13-17 limit the subject matter of base claims by reciting use of cookies to determine user capabilities, the determination and use of user profiles, and transmission of advertising content to users.

17. The Gerace patent teaches an internet based method for recording user activity, creating a profile of users and targeting advertising to the users based on the profile. See the abstract and elsewhere. It would have been obvious to one of ordinary skill in the art to have utilized the

Art Unit: 2777

teachings of Gerace in a method using the techniques of Hauck and Braverman since all are directed to providing content over the internet and Gerace suggests the desirableness of maintaining user profiles of internet users for transmission of advertising content.

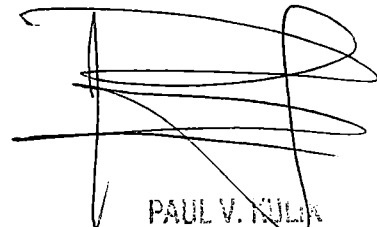
18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kulik whose telephone number is (703) 305-3831. The examiner can normally be reached from Monday through Thursday between 8:30am and 6:00pm.

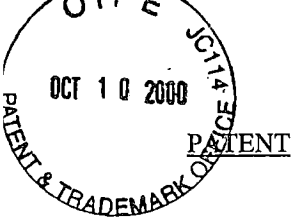
20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene, can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6606.

21. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

PVK/3-25-00



PAUL V. KULIK
PRIMARY EXAMINER
A-U-2777



719

Docket No. 735-002I

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Damon Torres
Serial No.: 08/922,063
Filed: September 2, 1997
Title: AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAY

PETITION AND FEE FOR EXTENSION OF TIME (37 C.F.R. §1.136(a))

HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
Sir:

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OCT 16 2000

1. This is a petition for an extension of time for filing a Response to Office Action.
2. The communication in connection with the matter for which this extension is requested

OFFICE OF PETITIONS
DEPUTY A/C PATENTS

☒ is filed herewith.

☐ has been filed on _____.

3. ☒ Applicant is a small-entity -- verified statement is attached ☐, or has already been filed. ☒.

- | 4. | | <u>Total Months
Requested</u> | <u>Fee for Other
than Small Entity</u> | <u>Fee for
Small Entity</u> |
|----|-------------------------------------|---|--|---------------------------------|
| a. | ☐ | one month | \$110.00 | \$55.00 |
| b. | ☐ | two months | \$390.00 | \$195.00 |
| c. | ☒ | three months | \$890.00 | \$445.00 |
| d. | ☐ | four months | \$1390.00 | \$695.00 |
| e. | ☐ | five months | \$1890.00 | \$945.00 |
| f. | ☐ | An extension for _____ months has already been secured for filing the above-identified communication and the fee paid therefor of \$ _____ is deducted from the total fee due for the total months of extension now requested. The fee for this extension (\$ _____), minus the fee previously paid (\$ _____) equals \$ _____ (total fee due). | | |

5. ☒ A check in the amount of \$445.00 to cover the extension fee is attached.
6. ☐ Charge \$0.00 to Deposit Account No. 19-2825 Order No. _____ DUPLICATE COPY OF THIS SHEET IS ATTACHED.
7. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or credit any overpayment to Deposit Account No. 19-2825. Order No. _____ A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Adjustment date: 10/30/2000 LGIBBS
10/16/2000 CV0111 00000006 08922063
02 FC:217 -445.00 DP
Repln. Ref: 10/30/2000 LGIBBS 0013100600
DAH:192825 Name/Number:08922063
FC: 704 \$445.00 CR

Dated: October 5, 2000

Respectfully submitted,
SOFER & HAROUN, L.L.P

By: Joseph Sofer
Registration No. 34,438

342 Madison Avenue
New York, New York 10173
(212) 697-2800;
Fax (212) 697-3004

08922063 00000006 192825

10/16/2000 CV0111

02 FC:217

445.00

PATENT



Docket No. 735-002i

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Damon Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAY

AMENDMENT FEE TRANSMITTAL

HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

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Sir:

OCT 16 2000

Transmitted herewith is an Amendment for the above-identified application.

OFFICE OF PETITIONS
DEPUTY A/C PATENTS

☐ No additional fee is required.

☐ The additional fee has been calculated as shown below:

CLAIMS AS AMENDED

	Claims Remaining After Amendment		Highest No. Covered by Previous Payments	Present Extra	Rate	Additional Fee
Total Claims*	24	-	20	=4	x \$18.00	\$ <u>72.00</u>
Independent Claims	4	-	3	=1	x \$80.00	\$ <u>80.00</u>
Multiple Dependent Claim(s)	(If claims added by amendment include Multiple Dependent Claim(s) and there was no Multiple Dependent Claim(s) in application before amendment add \$260.00 to additional fee.)					\$ _____
	Total:					\$ <u>0</u>

☐ Verified Statement of "Small Entity" Status Under 37 CFR § 1.27
filed . Reduced Fees Under 37 CFR § 1.9(f)
(50% of total) paid herewith. \$ 76.00

☒ Charge fee to Deposit Account No. 19-2825 . Order No. 735-002i

* Includes all independent and single dependent claims and all claims referred to
in multiple dependent claims. See 37 C.F.R. § 1.75(c).

A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required for this amendment, or credit any overpayment to Deposit Account No.19-2825. Order No. 735-002i.
A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

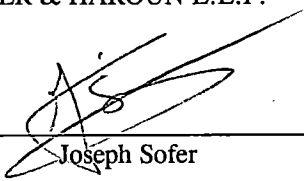
- ☐ ___ Page(s) of substitute Sequence Listing
- ☐ ___ Computer disk(s) containing substitute Sequence Listing
- ☐ Statement under 37 C.F.R. § 1.825(b) that the computer and paper copies of the substitute Sequence Listing are the same.
- ☐ A check in the amount of \$ to cover the filing fee is attached.

Respectfully submitted,

SOFER & HAROUN L.L.P.

Dated: October 5, 2000

By: _____


Joseph Sofer

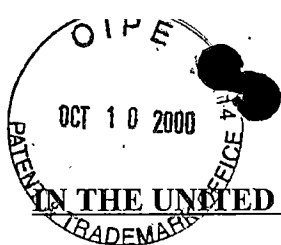
Registration No. 34,438

Mailing Address:

SOFER & HAROUN L.L.P.
342 Madison Avenue
New York, New York 10173
(212) 697-2800
Fax: (212) 697-3004

Patents

Doc. IWY-080



IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant(s): Torres

Group Art Unit: 2777

Serial No.: 08/922,063

Examiner: P. Kulik

Filed: September 2, 1997

For: AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAYER

Commissioner Of Patents and
Trademarks
Washington, D.C. 20231

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OCT 16 2000

OFFICE OF PETITIONS
DEPUTY A/C PATENTS

Amendment

Dear Sir:

In response to an Office Action dated March 27, 2000 please amend the above-identified application as follows:

In The Specification

Please insert after title:

--This application claims the benefit of U.S. provisional application serial number 60/025,360, filed September 3, 1996 and incorporated herein by reference.--

In The Claims

Please amend the claims as follows:

1. (Twice Amended) An automated content displayer which is used to sequentially present

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03 FC:202
04 FC:203

40.00 CH
36.00 CH

information to remote users, derived from selected sites, comprising:

means for storing a list of selected sites, each item of the list having addresses for pages of the site and an amount of time for which information from the site is to be presented for viewing by at least one of said remote users;

means of receiving from at least one of said remote users a selection of an item from the list;

means responsive to the address of the selected item, for retrieving information content from the site indicated by the item;

means, for providing the retrieved information content to at least one of said remote users; and

a timer, responsive to the amount of time of the selected item for selecting a next item in the list after the retrieved information content has been presented for the amount of time ,
wherein duration within which a corresponding information content is being displayed is interactively variable.

3. (Amended) An automated content displayer in accordance with claim 1 [2, wherein said means to determine further comprises a cookie transmitted to said user] further comprising means to dynamically modify said stored addresses based on sites skipped by said user before expiration of said timer .

6. (Amended) An automated content displayer in accordance with claim [1] 3 further comprising means for transmitting advertising content to each one of said users in response to said dynamic modification.

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11. (Amended) An automated content displayer which is used to sequentially present information derived from selected sites, comprising:

means for receiving a list of selected sites, each item of the list having addresses for pages of the site and an amount of time for which information from the site is to be presented for viewing;

means of selecting an item from said list;

means responsive to the address of the selected item, for retrieving information content from the site indicated by the item;

means, for presenting the retrieved information content; and

a timer, responsive to the amount of time of the selected item for selecting a next item in the list after the retrieved information content has been presented for the amount of time wherein duration within which a corresponding information content is being displayed is interactively variable.

19 (Amended) A publishing system for an automated content displayer for generating a list of selected sites so as to sequentially present information derived from said selected sites, comprising:

means for identifying at least one site from [generating] a list of [selected] accessible sites, each item of the list having addresses for pages of the sites [and an amount of time for which information from the site is to be presented for viewing] wherein each item of the list is associated with a corresponding icon on a display; and

means for [modifying] generating a set of addresses by dragging and dropping said icons to a specified portion of said display such that information from corresponding sites in said set are presented sequentially for viewing [the contents of said list of selected sites] .

20 (Amended)

A publishing system in accordance with claim 19 wherein said [modifying] generating means further comprises means for interactively varying duration of each site being presented for viewing [adding to and cutting from items in said list of selected items].

Please add the following claim:

– 21. An automated content displayer according to claim 1 further comprising a plurality of said lists, wherein each of said lists correspond to a selectable category.

22. A method for transmitting in a sequential arrangement to a user's computer, content derived via a communications network from a plurality of resources the method comprising the steps of:

creating and storing a list of sites, in response to a search requested by a user, each item of the list having addresses for pages of the site;

accessing each of said sites identified in said list;

retrieving a content corresponding to each of said accessed sites; and

delivering said content to said user for display on said user's computer in accordance with said list.

23. The method in accordance with claim 22, wherein said step of storing further comprises the step of providing an interactively variable duration information, representing the duration within which a corresponding content to said resource is being displayed.

24. The method in accordance with claim 23 further comprising the step of transmitting to said user a dynamic content.--

REMARKS

Applicant submits this Amendment in response to an outstanding Office Action dated March 27, 2000 along with a Petition for Extension of Time and Amendment Transmittal form. Claim 1, 3, 11, 19-20 have been amended. Claims 21-24 have been added. No new matter has been added to the application.

In the Office Action, the Examiner has rejected claims, 1, 2, 11, 19-20 under 35 USC § 103 as being obvious in view of Hauck and Braverman references. According to the Examiner, Hauck describes all the features recited in claims 1, 11, 12, and 18-20, with respect to the list of selected sites, selection of sites and display to a remote user of the sites. The Examiner states that Hauck does not mention the use of a timer or duration information in sequencing the resources to be displayed to the users. The Examiner further contends that Braverman discloses a slide show of URL's and corresponding delay times as a way to sequence the presentation of information to a user. Thus, according to the Examiner, it would have been obvious to one skilled in the art to utilize the teaching for delayed display of URLs for the sequencing described in Hauck. The Examiner further states that it is clear from Hauck that its teachings are directed to display of resources from the internet, as is Braverman. Applicant respectfully disagrees and requests that the Examiner's rejection be withdrawn.

Hauck discloses an arrangement for authoring of hypertext documents. According to Hauck, as stated in introduction, paragraph 3, a guided tour is a sequence of nodes with "schema links" which allow readers to follow the sequence of these nodes back and forth. These schema links are links that are provided by the author to guide the user back and forth

along the sequence of nodes. The entire purpose of Hauck's paper is to elaborate on a server-side mechanism that creates the schema links automatically for each node within the sequence.

The server-side mechanism of Hauck is employed mainly to retrieve an original document corresponding to a node, and add some decorations to it – referred to as the schema links. The decorated page with the appropriate schema links is then sent to the client. Some examples of these decorations include clickable arrow images as illustrated in Fig. 2.3 which refer to for example, “previous,” “up,” “down,” and “next.”

Meanwhile, the Braverman reference discloses a simple slide show wherein a list of URLs are read and presented in succession as in a slide show. A special script file is employed that contains the list of the URLs and corresponding delay times. The script file that the slide show reads “is a simple ASCII text file, consisting of one command per line.”

Braverman, p.2, line 1.

None of the references cited by the Examiner teach or suggest the present invention as claimed. For example, claim 1 of the present application relates to a system for displaying content corresponding to various sites, wherein the delay time between the display of two consecutive addresses can be varied in an interactive arrangement. Rather than viewing content based on a predetermined duration, the present invention allows modification of this duration by either the user or the server.

Furthermore, with respect to claim 3, the system accumulates information about the user, such as the contents that are skipped by the user as their being sequentially displayed. In response, the system is able to dynamically modify the resources that are accessed and the corresponding contents that are displayed.

As such, Hauck nor Braverman either alone or in combination do not teach or disclose an arrangement wherein access to various sites can be modified based on user

preferences and profile. Furthermore, there is no teaching or suggestion in Hauck or Braverman to provide a system wherein the rate of transfer from one site to the other can be varied and controlled by the user.

With respect to claim 11, a system for creating a list of sites is disclosed, wherein accessible addresses are identified along with a corresponding icon. The list of addresses to be displayed is created by dragging and dropping the icons on a dedicated portion of the display. Again, there is no teaching or suggestion in the cited references for an arrangement wherein a list of icons can be moved to a dedicated portion of a display screen.

With respect to claim 21, the system allows for a variety of programming based on a desired category. Thus, a separate sets of lists can be stored with sites that correspond to a specific category, such as news, or other content associated with a user profile, such as teens, sports, etc. Again, there is no teaching or suggestion in references cited by the Examiner to store a list of playable addresses based on categories.

With respect to claim 22, a method for creating a list of sites is disclosed, wherein a user submits a search query in response to which a portion or the entire results of the search form the list. Again, there is no teaching or suggestion in the cited references for a method to create a list of sites based on the results of a search.

The remaining claims depend from independent claims and therefore, are deemed allowable in view of the above discussions.

In view of the foregoing, Applicant respectfully submits that the claims in this application are in condition for allowance, and such action is respectfully solicited. The

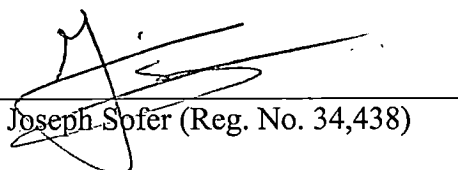
Examiner is invited to contact the undersigned with any additional questions or comments.

Respectfully Submitted,

SOFER & HAROUN, L.L.P.

Dated: October 4, 2000

By:


Joseph Sofer (Reg. No. 34,438)

SOFER & HAROUN, LLP
342 Madison Avenue, Suite 1921
New York, New York 10173
(212)697-2800; Fax(212)697-3004

F/ 21

Attorney Docket No.: 735-002I

Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re Application of
Damon Torres

Serial No.: 08/922,063

Filed: September 2, 1997

Title: AUTOMATED INTERNET CONTENT
SCHEDULER AND DISPLAY

PETITION TO REVIVE UNINTENTIONALLY ABANDONED APPLICATION
UNDER 37 CFR 1.137(b)

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

RECEIVED

OCT 16 2000

S I R:

OFFICE OF PETITIONS
DEPUTY A/C PATENTS

A response to an Office Action dated March 27, 2000 was due to be filed, with an appropriate extension of time, no later than September 27, 2000. Applicant unintentionally failed to submit a timely response to the office action, and as a result, the above-referenced patent application has been abandoned.

Applicant hereby petitions under 37 CFR 1.137(b) to revive the above-referenced patent application on the basis of unintentional abandonment. Applicant also submits the following so as to continue the prosecution of the application:

a) in accordance with 37 CFR 1.137(b)(1), Applicant submits herewith the

10/16/2000 CVO111 00000006 192825 08922063 620.00 OP

required response to the office action;

b) in accordance with 37 CFR 1.137(b)(1), Applicant submits herewith a Petition for Three-Month Extension of Time;

c) in accordance with 37 CFR 1.137(b)(1), Applicant submits herewith a check in the amount of \$445.00 in payment of the fee for the Petition for Three-Months Extension of Time, as set forth in §1.17(a)(3);

d) in accordance with 37 CFR 1.137(b)(2), Applicant submits herewith a check in the amount of \$620.00 in payment of the fee for this Petition to Revive Unintentionally Abandoned Application, as set forth in §1.17(m);

e) in accordance with 37 CFR 1.137(b)(3), Applicant hereby states that the entire delay in filing the required reply, from the due date for the reply until the filing of this petition pursuant to 37 CFR 1.137(b), was unintentional;

f) in accordance with 37 CFR 1.137(b)(4), this Petition to Revive is filed within one year of the date the application became abandoned (the application became abandoned on September 28, 2000);

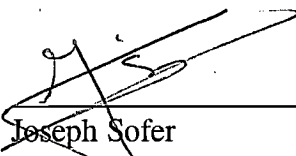
g) in accordance with 37 CFR 1.137(c), no terminal disclaimer is required because the application was filed after June 8, 1995 (the application was filed on September 2, 1997).

Any additional fees required in connection with this application may be charged

to Deposit Account No. 19-2825.

Respectfully submitted,
SOFER & HAROUN, LLP

By:

A handwritten signature in black ink, appearing to read 'J. Sofer', is written over a horizontal line.

Joseph Sofer
Reg. No. 34,438
342 Madison Avenue, Suite 1921
New York, New York 10173
(212) 697-2800

Dated: October 5, 2000



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

Paper No. 22

JOSEPH SOFER
SOFER & HAROUN
342 MADISON AVENUE
SUITE 1921
NEW YORK, NY 10173

COPY MAILED

OCT 30 2000

OFFICE OF PETITIONS
A/C PATENTS

In re Application of
Damon C. Torres
Application No. 08/922,063
Filed: September 2, 1997
Attorney Docket No. 735-0021

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:
:
:
:

ON PETITION

This is a decision on the petition under 37 CFR 1.137(b), filed October 10, 2000, to revive the above-identified application.

The petition is **GRANTED**.

The above-identified application became abandoned for failure to reply in a timely manner to the non-final Office action mailed March 27, 2000, which set a shortened statutory period for reply of three (3) months. No extensions of time under the provisions of 37 CFR 1.136(a) were obtained. Accordingly, the above-identified application became abandoned on June 28, 2000.

An extension of time under 37 CFR 1.136 must be filed prior to the expiration of the maximum extendable period for reply. See In re Application of S., 8 USPQ2d 1630, 1631 (Comm'r Pats. 1988). Accordingly, since the \$445.00 extension of time submitted with the petition on October 10, 2000 was subsequent to the maximum extendable period for reply, this fee is unnecessary and will be credited to petitioner's deposit account.

Telephone inquiries concerning this decision should be directed to Wan Laymon at (703) 305-9282.

Any inquiry concerning the examination process of this application should be directed to the examiner.

The application file is being forwarded to Technology Center 2700 for further processing.

A handwritten signature in black ink, appearing to read "Wan Laymon".

Wan Laymon
Petitions Examiner
Office of Petitions
Office of the Deputy Commissioner
for Patent Examination Policy

Office Action Summary

Application No.

08/922,063

Applicant(s)

Torres

Examiner

Kulik

Group Art Unit

2177

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

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 (THREE) MONTH(S) 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 response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on October 10, 2000
- ☐ This action is **FINAL**.
- ☐ 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

- ☒ Claim(s) 1 - 24 is/are pending in the application.
- ☐ Of the above claim(s) is/are withdrawn from consideration.
- ☐ Claim(s) is/are allowed.
- ☒ Claim(s) 1 - 24 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, DC 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/922,063 09/02/97 TORRES

D IWY-080

EXAMINER

TM21/0103

JOSEPH SOFER, ESQ.
SOFER & HAROUN, LLP
342 MADISON AVENUE
SUITE 1921
NEW YORK NY 10173

ART UNIT, F PAPER NUMBER

23

DATE MAILED

01/03/01

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

Commissioner of Patents and Trademarks

Art Unit: 2177

1. This application has been examined in response to the Amendment received October 10, 2000 and the decision on petition mailed October 30, 2000. The petition was granted and the application revived. Claims 1-24 are pending.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 11, 12 and 18-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Franz J. Hauck, "Supporting Hierarchical Guided Tours in the World Wide Web," Fifth Int'l World Wide Web Conference, pp. 1-13, May 1996 (hereafter Hauck), and Alan Braverman, "CCI Slide Show," September 22, 1994, 3 pages (hereafter Braverman).

4. The basis of this rejection as it applies to claims 1, 11, 12 and 18-20 was set forth in the last Office Action mailed March 27, 2000 (paper no. 18), and is not repeated here. The subject matter of claims 22-24 is similar in scope to that of claims 1, 11, 12 and 18-20 and is rejected for the same reasons.

5. Claims 2-10 and 13-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hauck and Braverman, and further in view of U.S. Patent No. 5,848,396 issued to Gerace.

Art Unit: 2177

6. The basis of this rejection was set forth in the last Office Action mailed March 27, 2000 (paper no. 18), and is not repeated here.

7. Applicant argues over the rejections that Hauck and Braverman do not teach or suggest displaying content corresponding to various sites, wherein the display time between the display of two consecutive addresses can be varied in an interactive arrangement. However, Braverman would have suggested this feature to one of ordinary skill in the art at the time of the invention because Braverman allowed for the selective delaying of displayed URLs. Applicant also argues that there is no teaching or suggestion in the references to accumulate information about users and dynamically modify resources that are accessed. However, this was the teaching of Gerace, which is not addressed in applicant's response. With respect to the formation of lists in claims 11, 21 and 22, applicant argues that the use of icons, searching and storing of list is not taught by the references. However, these features of an interactive system were well known at the time of the invention and it would have been obvious to one of ordinary skill in the art to have utilized well known features of browsers, etc., in a system utilizing the teachings of Hauck, Braverman and Gerace. Accordingly, applicant's arguments are not deemed persuasive.

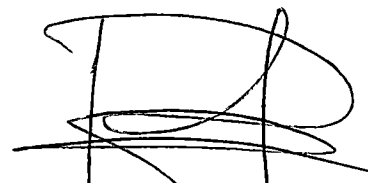
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kulik whose telephone number is (703) 305-3831. The examiner can normally be reached from Monday through Thursday between 8:30am and 6:00pm (EST).

Art Unit: 2177

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene, can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6606.

10. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9700.

PVK/1-3-01



PAUL V. KULIK
PRIMARY EXAMINER
AU 2177



Docket No. 735-002I

#24
5-14-01
B. Hilliard**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s) : Damon Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAY

PETITION AND FEE FOR EXTENSION OF TIME (37 C.F.R. §1.136(a))

HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
Sir:

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Technology Center 2100

1. This is a petition for an extension of time for filing a Response to Office Action.
2. The communication in connection with the matter for which this extension is requested
☒ is filed herewith.
☐ has been filed on _____.
3. ☒ Applicant is a small-entity -- verified statement is attached ☐, or has already been filed. ☒.

- | | <u>Total Months Requested</u> | <u>Fee for Other than Small Entity</u> | <u>Fee for Small Entity</u> |
|--|---|--|-----------------------------|
| a. ☒ | one month | \$110.00 | \$55.00 |
| b. ☐ | two months | \$390.00 | \$195.00 |
| c. ☐ | three months | \$890.00 | \$445.00 |
| d. ☐ | four months | \$1390.00 | \$695.00 |
| e. ☐ | five months | \$1890.00 | \$945.00 |
| f. ☐ | An extension for _____ months has already been secured for filing the above-identified communication and the fee paid therefor of \$ _____ is deducted from the total fee due for the total months of extension now requested. The fee for this extension (\$ _____), minus the fee previously paid (\$ _____) equals \$ _____ (total fee due). | | |
5. ☐ A check in the amount of \$.00 to cover the extension fee is attached.
 6. ☒ Charge \$55.00 to Deposit Account No. 19-2825 Order No. 735-002i DUPLICATE COPY OF THIS SHEET IS ATTACHED.
 7. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or credit any overpayment to Deposit Account No. 19-2825. Order No. 735-002i A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

05/10/2001 TBESHAH1 00000060 192825 08922063

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Respectfully submitted,
SOFER & HAROUN, L.L.P.

Dated: May 3, 2001

By: Joseph Sofer
Registration No. 34,438

342 Madison Avenue
New York, New York 10173
(212) 697-2800;
Fax (212) 697-3004



Docket No. 735-002i

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Damon Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAY

AMENDMENT FEE TRANSMITTAL

HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Sir:

Transmitted herewith is an Amendment for the above-identified application.

☒ No additional fee is required.

☐ The additional fee has been calculated as shown below:

CLAIMS AS AMENDED

	Claims Remaining After Amendment		Highest No. Covered by Previous Payments	Present Extra	Rate	Additional Fee
Total Claims*	24	-	24	=0	x \$18.00	\$ <u>0.00</u>
Independent Claims	4	-	4	=0	x \$80.00	\$ <u>0.00</u>
Multiple Dependent Claim(s)	(If claims added by amendment include Multiple Dependent Claim(s) and there was no Multiple Dependent Claim(s) in application before amendment add \$260.00 to additional fee.)					\$ <u> </u>
	Total:					\$ <u>0</u>
☐	Verified Statement of "Small Entity" Status Under 37 CFR § 1.27 filed <u> </u> . Reduced Fees Under 37 CFR § 1.9(f) (50% of total) paid herewith.					\$ <u>76.00</u>

☐ Charge fee to Deposit Account No. 19-2825 . Order No. 735-002i

* Includes all independent and single dependent claims and all claims referred to in multiple dependent claims. See 37 C.F.R. § 1.75(c).

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SOFER & HAROUN L.L.P.

By:

~~Joseph Sofer~~

Registration No. 34,438

SOFER & HAROUN L.L.P.
342 Madison Avenue
New York, New York 10173
(212) 697-2800
Fax: (212) 697-3004



Docket No. 735-002i

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Damon Torres
Serial No. : 08/922,063
Filed : September 2, 1997
For : AUTOMATED INTERNET CONTENT SCHEDULER AND DISPLAY

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CERTIFICATE OF MAILING (37 C.F.R. 1.8a)

HON. COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Sir:

I hereby certify that the attached Amendment, Amendment Transmittal, Replacement Pages, Petition for One Month Extension of Time, Return Postcard along with any paper(s) referred to as being attached or enclosed and this Certificate of Mailing are being deposited with the United States Postal Service on the date shown below with sufficient postage as first-class mail in an envelope addressed to the: Assistant Commissioner for Trademarks, 2900 Crystal Drive, Arlington, VA 22202-3513.

Respectfully submitted,

SOFER & HAROUN, L.L.P.

By: *Ester Aronova*

Ester Aronova

Date: *5/3/01*

Mailing Address:
SOFER & HAROUN, LLP
342 Madison Avenue, Suite 1921
New York, New York 10173
Tel: (212) 697-2800; fax (212) 697-3004



Doc. 735-002i

Handwritten: 5-14-01, B. H. Ward

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

-----X
Applicant(s): Torres

Group Art Unit: 2777

Serial No.: 08/922,063

Examiner: P. Kulik

Filed: September 2, 1997

**For: AUTOMATED CONTENT
SCHEDULER AND DISPLAYER**

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Technology Center 2100

-----X

Commissioner Of Patents and
Trademarks
Washington, D.C. 20231

Response to Office Action

Dear Sir:

Applicant submits this Response to Office Action in response to the Office Action dated January 3, 2001, along with an Amendment Transmittal form, a Petition for One-Month Extension of Time and the appropriate fee. In the above-identified application, please enter the following amendments and remarks.

In The Claims

Please cancel claims 1-24 without prejudice.

Please add the following new claims:

25. An automated content displayer which is used to sequentially present, to a remote user, information content derived from selected websites, comprising:
means for storing at least one list of websites, each website of said at least one list having

a corresponding address and an amount of time for which information content from said website is to be displayed to said remote user;

means for receiving from said remote user a selection of said list;

means, responsive to said selection of said list, for retrieving information content from the websites in said list;

means, for providing the retrieved information content to said remote user; and

a timer for controlling the duration that said information content is displayed to said user in accordance with the stored amount of time and for determining a time for retrieving information content corresponding to a next item in the list, wherein said duration that said information content is displayed is also interactively variable so as to enable a user to vary said duration.

C¹
26. An automated content displayer in accordance with claim 25, further comprising means to determine whether one of said remote users requesting information is capable of receiving dynamic content.

27. An automated content displayer in accordance with claim 25, further comprising means to dynamically modify said stored addresses based on sites skipped by said user before expiration of said timer .

28. An automated content displayer in accordance with claim 26, further comprising means for determining a profile of said remote user, when said user is capable of receiving dynamic content.

29. An automated content displayer in accordance with claim 28, further comprising means for transmitting the type of dynamic content sent to said remote user based on said profile of said user.

30. An automated content displayer in accordance with claim 27, further comprising means for transmitting advertising content to each one of said users in response to said dynamic modification.

31. An automated content displayer in accordance with claim 30, wherein said advertising content is based on preferences of each one of said users.

C¹
32. An automated content displayer in accordance with claim 25, further comprising means to monitor whether one of said users has selected a new site before expiration of said timer.

33. An automated content displayer in accordance with claim 32, further comprising means to determine whether said new site is within said stored list of selected sites.

34. An automated content displayer in accordance with claim 33, further comprising a database configured to store decisions made by said user while viewing contents of said sites corresponding to said stored list of selected sites.

35. An automated content displayer which is used to sequentially present, to a remote user, information content derived from selected websites, comprising:

means for receiving a list of selected websites, each website of said at least one list having a corresponding address and an amount of time for which information content from the website is to be displayed;

means for selecting an item from said list;

means, responsive to said selection of said list, for retrieving information content from the websites in said list;

means for presenting the retrieved information content to said remote user; and

a timer for controlling the duration that said information content is displayed to said user in accordance with the stored amount of time and for determining a time for retrieving information content corresponding to a next item in the list, wherein said duration that said information content is displayed is also interactively variable so as to enable a user to vary said duration.

C 36. An automated content displayer in accordance with claim 35, wherein said list of selected sites is transmitted by a remote web server.

37. An automated content displayer in accordance with claim 35, wherein said list of selected sites is transmitted in response to a search requested by a user of said automated content displayer.

38. An automated content displayer in accordance with claim 35, wherein said list of selected sites is generated by a remote web server based on user profiles.

39. An automated content displayer in accordance with claim 35, further comprising

means to monitor whether a new site has been selected before expiration of said timer.

40. An automated content displayer in accordance with claim 39, further comprising means to determine whether said new site is within said received list of selected sites.

41. An automated content displayer in accordance with claim 35, further comprising means to modify said received list of selected sites in accordance with user preferences.

42. An automated content displayer in accordance with claim 35, further comprising means to schedule time of display of contents corresponding to said list of selected sites.

C¹
43. A publishing system for an automated content displayer for generating a list of selected websites so as to sequentially present information derived from said selected websites on a user's terminal, comprising:

means for identifying at least one website from a list of accessible sites, each website of the list having a corresponding address, wherein each website in the list is associated with a corresponding icon displayed on a first section of said user's terminal; and

means for generating a set of addresses by dragging and dropping said icons to a second section of said user's terminal such that information from corresponding websites in said set are presented sequentially for viewing.

44. A publishing system in accordance with claim 43, wherein said generating means further comprises means for interactively varying duration of each site being presented for viewing.

C¹ 45. An automated content displayer according to claim 25 further comprising a plurality of said lists, wherein each of said lists correspond to a selectable category.~

REMARKS

I. Introduction

Claims 1-24 are pending in this application.

Claims 1-24 are rejected.

Claims 1-24 are hereby canceled without prejudice.

New claims 25-45 are added. No new matter has been added.

Claims 25-45 are presented herein for review and reconsideration by the Examiner.

II. Response to 35 U.S.C. §103 Rejections

Summary of the Office Action

In the Office Action, the Examiner has rejected claims 1, 11, 12 and 18-24 under 35 U.S.C. §103(a) as being unpatentable over Hauck and Braverman. Furthermore, the Examiner has rejected claims 2-10 and 13-17 under 35 U.S.C. §103(a) as being unpatentable over Hauck and Braverman, and further in view of U.S. Patent No. 5,848,396 to Gerace (hereinafter "Gerace"). According to the Examiner, the Examiner finds that Braverman would have suggested the feature of varying the display time between two consecutive addresses in an interactive arrangement to one of ordinary skill in the art.

In addition, the Examiner states that Gerace teaches the accumulation of information about users and dynamically modifying resources that are accessed, and that it was well known at the time of the invention and would have been obvious to one having ordinary skill in the art

to have utilized features like the use of icons and the searching and storing of lists as recited in claims 11, 21 and 22. Applicant respectfully disagrees with the Examiner and maintains that, in light of new claims 25-45, the §103 rejections are not applicable.

Brief Description of the Cited References

As previously described in Applicant's previous response, Hauck discloses an arrangement for authoring of hypertext documents. According to Hauck, as stated in introduction, paragraph 3, a guided tour is a sequence of nodes with "schema links" which allow readers to follow the sequence of these nodes back and forth. These schema links are links that are provided by the author to guide the user back and forth along the sequence of nodes. The entire purpose of Hauck's paper is to elaborate on a server-side mechanism that creates the schema links automatically for each node within the sequence.

The server-side mechanism of Hauck is employed mainly to retrieve an original document corresponding to a website, and add some decorations to it – referred to as the schema links. The decorated page with the appropriate schema links is then sent to the client. Some examples of these decorations include clickable arrow images as illustrated in Fig. 2.3 which refer to for example, "previous," "up," "down," and "next."

Meanwhile, the Braverman reference discloses a simple slide show wherein a list of URLs are read and presented in succession as in a slide show. A special script file is employed that contains the list of the URLs and corresponding delay times. The script file that the slide show reads "is a simple ASCII text file, consisting of one command per line." Braverman, p.2, line 1.

being displayed.

Therefore, Applicant respectfully maintains that the Examiner's rejection of claim 1 is not applicable to new claim 25, and requests that claim 25, and claims 26-34 that depend on claim 25, be allowed by the Examiner.

Claim 35

Independent claim 35 of the present invention relates to an automated content displayer which is used to sequentially present, to a remote user, information content derived from selected websites. The displayer comprises means for receiving a list of selected websites, wherein each website of the list has a corresponding address and an amount of time for which information content from the website is to be displayed to the remote user. The displayer also comprises a means for receiving from the remote user a selection of the list, and a means, responsive to the selection of the list, for retrieving information content from the websites in the list. Another means presents the retrieved information content to the remote user. A timer controls the duration that the information content is displayed to the user in accordance with the stored amount of time and for determining a time for retrieving information content corresponding to a next item in the list. The duration that the information content is displayed is also interactively variable so as to enable a user to vary the duration.

None of the references cited by the Examiner teach or suggest the present invention as recited in claim 35. For instance, and as stated above, neither of the references teach or suggest an interactively variable duration for displaying information content, so as to enable a user to

vary the duration that a resource is displayed to the user. While the present invention provides a system wherein the rate of transfer from one website in the list to another website in the list can be interactively varied and controlled by the user, thereby enabling a user to speed up or slow down the rate at which the consecutive websites are being displayed, there is no such teaching or suggestion in Braverman.

Therefore, Applicant respectfully maintains that the Examiner's rejection of claim 11 is not applicable to new claim 35, and requests that claim 35, and claims 36-42 that depend on claim 35, be allowed by the Examiner.

Claim 43

Independent claim 43 of the present invention relates to an publishing system for an automated content displayer for generating a list of selected sites so as to sequentially present information derived from the selected sites on a user's terminal. The system comprises a means for identifying at least one site from a list of accessible sites, each item of the list having addresses for pages of the sites. Each item of the list is associated with a corresponding icon displayed on a first section of the user's terminal. The system further comprises a means for generating a set of addresses by dragging and dropping the icons to a second section of the user's terminal such that information from corresponding sites in the set are presented sequentially for viewing.

None of the references cited by the Examiner teach or suggest the present invention as recited in claim 43. For instance, neither of the references teach or suggest a system whereby a

user drops and drags an icon corresponding to a website from a first section of a user's terminal to a second section of the user's terminal in order to sequentially present the websites for viewing. Specifically, the present invention, in accordance with this embodiment, provides a system wherein a first section of a user's terminal comprises icons corresponding to various websites. The user may then create a list of websites to be sequentially presented by selectively dragging and dropping these icons to a second section of the user's terminal. Once the list is created on the second section of the user's terminal, the websites corresponding to the selected icons are retrieved and displayed to the user.

By contrast, there is no teaching or suggestion in Hauck or Braverman to provide a system wherein a list of websites to be sequentially presented is created by a user dropping and dragging an icon corresponding to a website from a first section of a user's terminal to a second section of the user's terminal. Irrespective of whether the use of icons, or the method of dropping and dragging icons, was previously known in the art, Applicant maintains that neither reference teaches or suggests the creation of a list of sequentially-presented websites whereby a user drops and drags an icon corresponding to a website from a first section of a user's terminal to a second section of the user's terminal.

This arrangement provides a convenient way to create a list of websites to be sequentially presented from a plurality of available websites, without the need to write a particular program code such as those cited in the prior art. The additional advantage of this arrangement is its flexibility. The user can now pick and choose, modify, add and remove various websites conveniently and without having any knowledge in programming. Therefore, Applicant respectfully maintains that the Examiner's rejection of claim 19 is not applicable to new claim

43, and requests that claim 43, and claims 44-45 that depend on claim 43, be allowed by the Examiner.

Fees

Any additional fees or charges required at this time in connection with this application may be charged to Patent and Trademarks Office Deposit Account No. 19-2825, Ref. No. 735-002i.

Conclusion

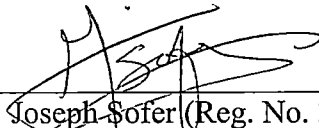
In view of the aforementioned amendment and remarks, it is respectfully submitted that all claims currently pending in the above identified application are now in condition for allowance, the earliest possible notice of which is earnestly solicited. If in the Examiner's opinion the prosecution of the present application would be advanced by a telephone interview, he is invited to contact the undersigned at the telephone number listed below.

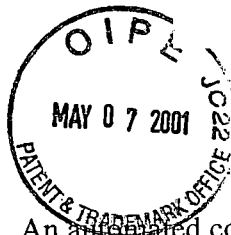
Respectfully Submitted,

SOFER & HAROUN, L.L.P.

Dated: May 3, 2001

By: _____


Joseph Sofer (Reg. No. 34,438)
SOFER & HAROUN, LLP
342 Madison Avenue, Suite 1921
New York, New York 10173
(212)697-2800; Fax(212)697-3004



We Claim:

25. An automated content displayer which is used to sequentially present, to a remote user, information content derived from selected websites, comprising:

means for storing at least one list of websites, each website of said at least one list having a corresponding address and an amount of time for which information content from said website is to be displayed to said remote user;

means for receiving from said remote user a selection of said list;

means, responsive to said selection of said list, for retrieving information content from the websites in said list;

means, for providing the retrieved information content to said remote user; and

a timer for controlling the duration that said information content is displayed to said user in accordance with the stored amount of time and for determining a time for retrieving information content corresponding to a next item in the list, wherein said duration that said information content is displayed is also interactively variable so as to enable a user to vary said duration.

26. An automated content displayer in accordance with claim 25, further comprising means to determine whether one of said remote users requesting information is capable of receiving dynamic content.

27. An automated content displayer in accordance with claim 25, further comprising means to dynamically modify said stored addresses based on sites skipped by said user before expiration of said timer .

28. An automated content displayer in accordance with claim 26, further comprising means for determining a profile of said remote user, when said user is capable of receiving dynamic content.

29. An automated content displayer in accordance with claim 28, further comprising means for transmitting the type of dynamic content sent to said remote user based on said profile of said user.

30. An automated content displayer in accordance with claim 27, further comprising means for transmitting advertising content to each one of said users in response to said dynamic modification.

31. An automated content displayer in accordance with claim 30, wherein said advertising content is based on preferences of each one of said users.

32. An automated content displayer in accordance with claim 25, further comprising means to monitor whether one of said users has selected a new site before expiration of said timer.

33. An automated content displayer in accordance with claim 32, further comprising means to determine whether said new site is within said stored list of selected sites.

34. An automated content displayer in accordance with claim 33, further comprising a

database configured to store decisions made by said user while viewing contents of said sites corresponding to said stored list of selected sites.

35. An automated content displayer which is used to sequentially present, to a remote user, information content derived from selected websites, comprising:

means for receiving a list of selected websites, each website of said at least one list having a corresponding address and an amount of time for which information content from the website is to be displayed;

means for selecting an item from said list;

means, responsive to said selection of said list, for retrieving information content from the websites in said list;

means for presenting the retrieved information content to said remote user; and

a timer for controlling the duration that said information content is displayed to said user in accordance with the stored amount of time and for determining a time for retrieving information content corresponding to a next item in the list, wherein said duration that said information content is displayed is also interactively variable so as to enable a user to vary said duration.

36. An automated content displayer in accordance with claim 35, wherein said list of selected sites is transmitted by a remote web server.

37. An automated content displayer in accordance with claim 35, wherein said list of selected sites is transmitted in response to a search requested by a user of said automated content

displayer.

38. An automated content displayer in accordance with claim 35, wherein said list of selected sites is generated by a remote web server based on user profiles.

39. An automated content displayer in accordance with claim 35, further comprising means to monitor whether a new site has been selected before expiration of said timer.

40. An automated content displayer in accordance with claim 39, further comprising means to determine whether said new site is within said received list of selected sites.

41. An automated content displayer in accordance with claim 35, further comprising means to modify said received list of selected sites in accordance with user preferences.

42. An automated content displayer in accordance with claim 35, further comprising means to schedule time of display of contents corresponding to said list of selected sites.

43. A publishing system for an automated content displayer for generating a list of selected websites so as to sequentially present information derived from said selected websites on a user's terminal, comprising:

means for identifying at least one website from a list of accessible sites, each website of the list having a corresponding address, wherein each website in the list is associated with a corresponding icon displayed on a first section of said user's terminal; and

means for generating a set of addresses by dragging and dropping said icons to a second section of said user's terminal such that information from corresponding websites in said set are presented sequentially for viewing.

44. A publishing system in accordance with claim 43, wherein said generating means further comprises means for interactively varying duration of each site being presented for viewing.

45. An automated content displayer according to claim 25 further comprising a plurality of said lists, wherein each of said lists correspond to a selectable category.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/922,063 09/02/97 TORRES

D IWY-080

EXAMINER

TM01/0625

WASSUM, L

ART UNIT

PAPER NUMBER

2177

DATE MAILED:

06/25/01

JOSEPH SOFER, ESQ.
SOFER & HAROUN, LLP
342 MADISON AVENUE
SUITE 1921
NEW YORK NY 10173

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

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/922,063

Applicant(s)

TORRES, DAMON C.

Examiner

Luke S. Wassum

Art Unit

2177

-- 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) 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 the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- 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 03 May 2001.
- 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) 25-45 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) 25-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ 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 objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ 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.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

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DETAILED ACTION

Response to Amendment

1. Receipt is acknowledged of Applicant's Amendment filed 3 May 2001.
2. As a result of the Amendment, claims 1-24 have been cancelled, and new claims 25-45 have been added. Claims 25-45 are now presented for examination.

Priority

3. The instant application claims domestic priority based on U.S. Provisional application 60/025,360 filed 3 September 1996.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claim 43 is rejected under 35 U.S.C. 102(e) as being anticipated by **Sherman et al.** (U.S. Patent 6,233,591).

6. Regarding claim 43, **Sherman et al.** teaches a publishing system for an automated content displayer for generating a list of selected websites so as to sequentially present information derived from said selected websites on a user's terminal, comprising:

- a) means for identifying at least one website from a list of accessible sites, each website of the list having a corresponding address, wherein each website in the list is associated with a corresponding icon displayed on a first section of said user's terminal (see steps 200, 202, 204, 206, 208 and 210 in Figure 2; see also col. 3, lines 30-57); and
- b) means for generating a set of addresses by dragging and dropping said icons to a second section of said user's terminal such that information from corresponding websites in said set are presented sequentially for viewing (see steps 200, 202, 204, 206, 208 and 210 in Figure 2; see also col. 3, lines 30-57).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 25, 26, 28, 29, 32-42 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Blonder et al.** (U.S. Patent 5,760,771) in view of **Buchanan et al.** (U.S. Patent 5,515,490).

9. Regarding claim 25, **Blonder et al.** teaches an automated content displayer which is used to sequentially present, to a remote user, information content derived from selected websites substantially as claimed, comprising:

- a) means for storing at least one list of websites, each website of said at least one list having a corresponding address (see col. 5, lines 40-42; see also itinerary page in Figure 8a; see also Figure 12, illustrating a list of N web pages belonging to a particular tour);
- b) means for receiving from said remote user a selection of said list (see Figures 4, 5 and 7, illustrating choices of different tours; see also discussion of a user's choice of tours, col. 5, line 63 through col. 6, line 45);
- c) means, responsive to said selection of said list, for retrieving information content from websites in said list (see discussion of the display of web pages, col. 7, lines 1-29); and
- d) means for providing retrieved content to said remote user (see discussion of the display of web pages, col. 7, lines 1-29).

Blonder et al. does not teach an automated content displayer comprising

- a) means for storing an amount of time for which information content from said website is to be displayed to said remote user; nor
- b) a timer for controlling the duration that said information content is displayed to said user in accordance with the stored amount of time and for determining a time for retrieving information content corresponding to the next item on the list; wherein said duration that said information content is displayed is also interactively variable so as to enable a user to vary said duration.

Buchanan et al., however, teaches an automated content displayer comprising

- a) means for storing an amount of time for which information content from said website is to be displayed to said remote user (see col. 19, lines 35-65); nor
- b) a timer for controlling the duration that said information content is displayed to said user in accordance with the stored amount of time and for determining a time for retrieving information content corresponding to the next item on the list (see col. 5, lines 38-50), wherein said duration that said information content is displayed is also interactively variable so as to enable a user to vary said duration (see col. 30, lines 1-7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate temporal functionality, since scheduling the presentation of different information to occur at specific times would serve to convey information more effectively (see col. 1, lines 34-39).

10. Regarding claims 26, 28 and 29, **Buchanan et al.** additionally teaches a means to determine whether one of said remote users requesting information is capable of receiving dynamic content through the use of a profile (see use of environmental specification in making such a determination, col. 2, line 64 through col. 3, line 1).

11. Regarding claims 32-34, 39 and 40 **Blonder et al.** additionally teaches a means to monitor whether one of said users has selected a new site before expiration of the timer, determining whether said new site is within said stored list of selected sites, and a database to store decisions made by a user while viewing contents of said sites corresponding to said stored list of selected sites (see col. 9, lines 40-43).

12. Regarding claim 45, **Blonder et al.** teaches the displayer further comprising a plurality of said lists, wherein each of said lists correspond to a selectable category (see Figures 4, 5 and 7, illustrating choices of different tours, each different tour corresponding to a different category; see also discussion of a user's choice of tours, col. 5, line 63 through col. 6, line 45);

13. Regarding claim 35, **Blonder et al.** teaches an automated content displayer which is used to sequentially present, to a remote user, information content derived from selected websites substantially as claimed, comprising:

- a) means for receiving a list of websites, each website of said at least one list having a corresponding address (see col. 5, lines 40-42; see also itinerary page in Figure 8a; see also Figure 12, illustrating a list of N web pages belonging to a particular tour);
- b) means for selecting an item from said list (see Figures 4, 5 and 7, illustrating choices of different tours; see also discussion of a user's choice of tours, col. 5, line 63 through col. 6, line 45);
- c) means, responsive to said selection of said list, for retrieving information content from websites in said list (see discussion of the display of web pages, col. 7, lines 1-29); and
- d) means for presenting the retrieved content to said remote user (see discussion of the display of web pages, col. 7, lines 1-29).

Blonder et al. does not teach an automated content displayer comprising

- a) means for storing an amount of time for which information content from said website is to be displayed to said remote user; nor

- b) a timer for controlling the duration that said information content is displayed to said user in accordance with the stored amount of time and for determining a time for retrieving information content corresponding to the next item on the list; wherein said duration that said information content is displayed is also interactively variable so as to enable a user to vary said duration.

Buchanan et al., however, teaches an automated content displayer comprising

- a) means for storing an amount of time for which information content from said website is to be displayed to said remote user (see col. 19, lines 35-65); nor
- b) a timer for controlling the duration that said information content is displayed to said user in accordance with the stored amount of time and for determining a time for retrieving information content corresponding to the next item on the list (see col. 5, lines 38-50), wherein said duration that said information content is displayed is also interactively variable so as to enable a user to vary said duration (see col. 30, lines 1-7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate temporal functionality, since scheduling the presentation of different information to occur at specific times would serve to convey information more effectively (see col. 1, lines 34-39).

14. Regarding claims 36 and 37, **Blonder et al.** additionally teaches the displayer wherein said list of selected sites is transmitted by a remote web server in response to a requested search by a user of said automated content displayer (see Figures 4, 5 and 7, illustrating choices of different tours; see also discussion of a user's choice of tours, col. 5, line 63 through col. 6, line 45).

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15. Regarding claims 38 and 41, **Blonder et al.** additionally teaches the displayer wherein said list of selected sites is generated by a remote web server based on user profiles, and further comprising means to modify said received list of selected sites in accordance with user preferences (see col. 6, lines 31-35).

16. Regarding claim 42, **Buchanan et al.** teaches the displayer further comprising means to schedule time of display of contents corresponding to said list of selected sites (see col. 5, lines 38-50; see also col. 19, lines 35-65).

17. Claims 27, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Blonder et al.** (U.S. Patent 5,760,771) in view of **Buchanan et al.** (U.S. Patent 5,515,490) as applied to claims 25, 26, 28, 29, 32-42 and 45 above, and further in view of **Gerace** (U.S. Patent 5,848,396).

18. Regarding claim 27, **Blonder et al.** and **Buchanan et al.** teach an automated content displayer substantially as claimed.

Neither **Blonder et al.** nor **Buchanan et al.** teach the displayer further comprising means to dynamically modify said stored addresses based on sites skipped by said user before expiration of said timer.

Gerace, however, teaches the displayer further comprising means to dynamically modify said stored addresses based on sites skipped by said user before expiration of said timer (see discussion

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of a system for displaying a customized home page to a user based on said user's profile of information viewed and time spent viewing, col. 4, lines 1-29).

It would have been obvious to one of ordinary skill in the art at the time of the invention to customize content of the automated content displayer based on the viewing habits of the user, since this allows the displayer to present information that is more likely to appeal or interest the user (see col. 2, lines 1-23).

19. Regarding claims 30 and 31, **Gerace** additionally teaches a means for transmitting advertising content to each of the users, said content based on the user profile (see col. 2, lines 30-60; see also col. 4, lines 29-47).

20. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sherman et al.** (U.S. Patent 6,233,591) as applied to claim 43 above, and further in view of **Buchanan et al.** (U.S. Patent 5,515,490).

21. Regarding claim 44, **Buchanan et al.** teaches the publishing system further comprising means for interactively varying duration of each site being presented for viewing (see col. 30, lines 1-7).

Response to Arguments

22. Applicant's arguments with respect to claims cancelled claims 1-24 (and analogous new claims 25-45) have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Leak et al. (U.S. Patent 6,182,072) teaches a method of displaying World Wide Web pages in a sequence to form a visual tour.

Qureshi et al. (U.S. Patent 6,084,582) teaches a method of controlling the timing of display of a slide show so as to coordinate the visual display of slides with an audio segment.

Wecher (U.S. Patent 5,806,077) teaches a hypertext display system which employs active markers, or footprints, to track those nodes which the user has already visited.

Hekmatpour (U.S. Patent 5,799,292) teaches a method of presenting hypermedia objects wherein the frequency with which the objects are used is tracked and the objects ordered such that the most frequently used hypermedia objects are made most accessible.

Malec et al. (U.S. Patent 5,287,266) teaches a system for displaying advertising information on a shopping cart, specific advertisements triggered by proximity to unique transmitted signals mounted in unique locations.

Hauck ("Supporting Hierarchical Guided Tours in the World Wide Web") teaches a system for creating and conducting guided tours using existing web pages.

Marshall et al. ("Guided Tours and On-Line Presentations: How Authors Make Existing Hypertext Intelligible for Readers") teaches how the implementation of Guided Tours has been used to organize hypertext networks for presentation.

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24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke S. Wassum whose telephone number is 703-305-5706. The examiner can normally be reached on Monday-Friday 8:30-5:30, alternate Fridays off.

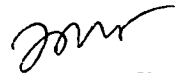
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 703-305-9790. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-6606 for regular communications and 703-308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Luke S. Wassum
Art Unit 2177

lsw
June 15, 2001



JEAN R. HOMERE
PRIMARY EXAMINER

Notice of References Cited	Application/Control No. 08/922,063	Applicant(s)/Patent Under Reexamination TORRES, DAMON C.	
	Examiner Luke S. Wassum	Art Unit 2177	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
	A	US-6,233,591-B1	05-2001	Sherman et al.	707	501
	B	US-6,182,072-B1	01-2001	Leak et al.	707	10
	C	US-6,084,582-A	07-2000	Qureshi et al.	345	302
*	D	US-5,848,396-A	12-1998	Gerace	705	10
	E	US-5,806,077-A	09-1998	Wecker	707	501
	F	US-5,799,292-A	08-1998	Hekmatpour	706	11
	G	US-5,760,771-A	06-1998	Blonder et al.	345	336
	H	US-5,515,490-A	05-1996	Buchanan et al.	345	302
	I	US-5,287,266-A	02-1994	Malec et al.	364	401
	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	Hauck, Franz J. "Supporting Hierarchical Guided Tours in the World Wide Web", Fifth International World Wide Web Conference, 6-10 May 1996, at http://www5conf.inria.fr/fich_html/papers/P30/Overview.html , accessed 14 June 2001.					
	V	Marshall, Catherine C, and Irish, Peggy M. "Guided Tours and On-Line Presentations: How Authors Make Existing Hypertext Intelligible for Readers", ACM Hypertext '89 Proceedings, November 1989, pp. 15-16.					
	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.

Interview Summary	Application No.		Applicant(s)	
	08/922,063		TORRES, DAMON C.	
	Examiner		Art Unit	
	Luke S. Wassum		2177	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Luke S. Wassum. (3) _____
 (2) Attorney Joseph Sofer (212) 697-2800. (4) _____

Date of Interview: 25 January 2002.

Type: a) ☒ Telephonic b) ☐ Video Conference
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
 If Yes, brief description: _____.

Claim(s) discussed: None.

Identification of prior art discussed: None.

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

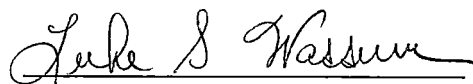
Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

i) ☒ It is not necessary for applicant to provide a separate record of the substance of the interview (if box is checked).

Unless the paragraph above has been checked, THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


 Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case unless both applicant and examiner agree that the examiner will record same. Where the examiner agrees to record the substance of the interview, or when it is adequately recorded on the Form or in an attachment to the Form, the examiner should check the appropriate box at the bottom of the Form which informs the applicant that the submission of a separate record of the substance of the interview as a supplement to the Form is not required.

It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Google/YouTube Exhibit 1027/1127

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments:

The examiner contacted the attorney to verify that the application was being intentionally abandoned.

The attorney confirmed that the application was being intentionally abandoned..


JEAN R. HOMERE
PRIMARY EXAMINER



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/922,063	09/02/1997	DAMON C. TORRES	IWY-080	1162

7590 01/28/2002
JOSEPH SOFER, ESQ.
SOFER & HAROUN, LLP
342 MADISON AVENUE
SUITE 1921
NEW YORK, NY 10173

EXAMINER

WASSUM, LUKE S

ART UNIT PAPER NUMBER

2177

DATE MAILED: 01/28/2002

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

Notice of Abandonment

Application No.

08/922,063

Examiner

Luke S. Wassum

Applicant(s)

TORRES, DAMON C.

Art Unit

2177

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

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 25 June 2001.
 - (a) ☐ A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
 - (b) ☐ A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
 - (c) ☐ A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
 - (d) ☒ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
 - (a) ☐ The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
 - (b) ☐ The submitted fee of \$_____ is insufficient. A balance of \$_____ is due.
The issue fee required by 37 CFR 1.18 is \$_____. The publication fee, if required by 37 CFR 1.18(d), is \$_____.
 - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
 - (a) ☐ Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
 - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☐ The reason(s) below:


JEAN R. HOMERE
PRIMARY EXAMINER



Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

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REQUEST FOR ACCESS TO AN ABANDONED APPLICATION UNDER 37 CFR 1.14

Bring completed form to:

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2900 Crystal Drive
Arlington, VA 22202-4314

Telephone: (703) 308-2733

In re Application of

TORRES

Application Number

08/922063

Filed

9/2/97

Paper No. #29

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I hereby request access under 37 CFR 1.14(a)(1)(iv) to the application file record of the above-identified ABANDONED application, which is not within the file jacket of a pending Continued Prosecution Application (CPA) (37 CFR 1.53(d)) and which is identified in, or to which a benefit is claimed, in the following document (as shown in the attachment):

United States Patent Application Publication No. _____, page, _____ line _____,

United States Patent Number 7155451, column _____, line, _____ or _____

WIPO Pub. No. _____, page _____, line _____.

Related Information About Access to Applications Maintained in the Image File Wrapper System (IFW) and Access to Pending Applications in General

A member of the public, acting without a power to inspect, cannot order applications maintained in the IFW system through the FIU. If the member of the public is entitled to a copy of the application file, then the file is made available through the Public Patent Application Information Retrieval system (Public PAIR) on the USPTO internet web site (www.uspto.gov). Terminals that allow access to Public PAIR are available in the Public Search Room. The member of the public may also be entitled to obtain a copy of all or part of the application file upon payment of the appropriate fee. Such copies must be purchased through the **Office of Public Records** upon payment of the appropriate fee (37 CFR 1.19(b)).

For published applications that are still pending, a member of the public may obtain a copy of:

the file contents; the pending application as originally filed; or any document in the file of the pending application.

For unpublished applications that are still pending:

- (1) If the benefit of the pending application is claimed under 35 U.S.C. 119(e), 120, 121, or 365 in another application that has: (a) issued as a U.S. patent, or (b) published as a statutory invention registration, a U.S. patent application publication, or an international patent application publication in accordance with PCT Article 21(2), a member of the public may obtain a copy of: the file contents; the pending application as originally filed; or any document in the file of the pending application.
- (2) If the application is incorporated by reference or otherwise identified in a U.S. patent, a statutory invention registration, a U.S. patent application publication, or an international patent application publication in accordance with PCT Article 21(2), a member of the public may obtain a copy of the pending application as originally filed.

Signature

Tim Brown

Typed or printed name

Registration Number, if applicable

2/468-1525

Telephone Number

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JAN 31 2007
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Unit: FIU

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US 20060218479A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2006/0218479 A1**
Torres (43) **Pub. Date: Sep. 28, 2006**(54) **AUTOMATED CONTENT SCHEDULER AND
DISPLAYER**(52) **U.S. Cl. 715/500**(76) **Inventor: Damon Torres, Staten Island, NY (US)**(57) **ABSTRACT**

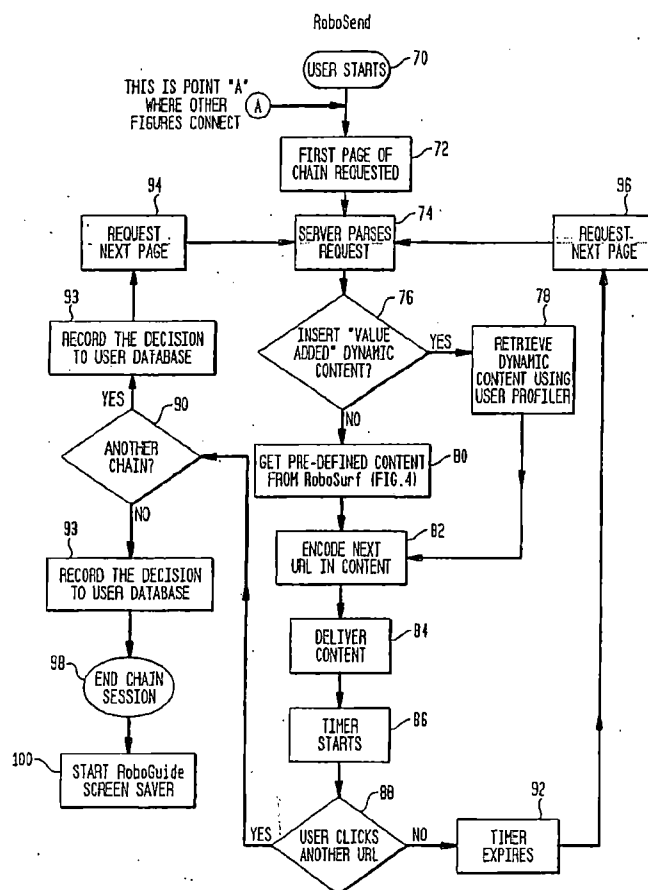
Correspondence Address:
SOFER & HAROUN, L.L.P.
Suite 910
317 Madison Avenue
New York, NY 10017 (US)

(21) **Appl. No.: 11/316,209**(22) **Filed: Dec. 21, 2005****Related U.S. Application Data**

(63) Continuation-in-part of application No. 09/144,906, filed on Sep. 1, 1998, which is a continuation-in-part of application No. 08/922,063, filed on Sep. 2, 1997, now abandoned.

Publication Classification(51) **Int. Cl. G06F 17/00 (2006.01)**

A method of sequencing and scheduling web resources, via a software application that collects URLs and feeds them to a Web browser, so that the amount of clicks and decisions are reduced when browsing the Internet. The method begins after a computer user with Net-access encounters a URL that leads to a collection of other URLs that the software application has arranged to be presented in a continuous, show manner. This collection of resources then plays automatically, going from one resource to the next without the user being required to make a decision or click. The decision-making process is not inhibited, it is made optional. A method of inserting full-screen advertising, public service announcements, news, etc. has been developed. The server software application module described herein allows a publisher to stream URLs to a user who does not have the client-side software. The publishing module allows a user to format resources to a particularly desirable size and characteristic that promotes readability during a show viewing session. This same module can publish collections of nodes for others to view as a whole sequence, accessible via e-mail, screen saver or as a web resource.



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Arlington, VA 22206

Telephone: (703) 756-1800

In re Application of

File Information Unit

Application Number

08/922 063

Filed

9-2-97

Paper No. #80

I hereby request access under 37 CFR 1.14(a)(1)(iv) to the application file record of the above-identified ABANDONED application, which is not within the file jacket of a pending Continued Prosecution Application (CPA) (37 CFR 1.53(d)) and which is identified in, or to which a benefit is claimed, in the following document (as shown in the attachment):

United States Patent Application Publication No. 2006/0218479, page, line

United States Patent Number, column, line,

WIPO Pub. No., page, line.

Related Information About Access to Applications Maintained in the Image File Wrapper System (IFW) and Access to Pending Applications in General

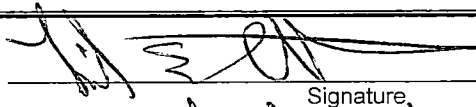
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For unpublished applications that are still pending:

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Signature

Ingrid Achuckle

Typed of printed name

Registration Number, if applicable

Telephone Number

2-2-11

Date

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FEB 02 2011

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Paper No.

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United States Patent Application Publication No. 7153451, page, _____ line _____

United States Patent Number _____, column _____ line _____

WIPO Pub. No. _____, page _____, line _____

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Signature

Date

Typed or printed name

Registration Number, if applicable

Telephone Number

Approved by:

Unit:

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JUN 14 2012

(initials)

BY:

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Google/YouTube Exhibit 1027/1127

Page 00159

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Arlington, VA 22206

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In re Application of

Torres

Application Number

081922,063

Filed

9, 2, 97

Paper No.

432

I hereby request access under 37 CFR 1.14(a)(1)(iv) to the application file record of the above-identified ABANDONED application, which is not within the file jacket of a pending Continued Prosecution Application (CPA) (37 CFR 1.53(d)) and which is identified in, or to which a benefit is claimed, in the following document (as shown in the attachment):

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United States Patent Number 7155451, column _____, line, _____

WIPO Pub. No. _____, page _____, line _____

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Kevin Rodriguez

Signature

1-9-17

Date

Kevin Rodriguez

Typed or printed name

Registration Number, if applicable

(703) 519-2018

Telephone Number

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(initials)

Unit:

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Telephone: (703) 756-1800

In re Application of _____

Application Number

08/922,063

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9/2/97

Paper No.

33

I hereby request access under 37 CFR 1.14(a)(1)(iv) to the application file record of the above-identified ABANDONED application, which is not within the file jacket of a pending Continued Prosecution Application (CPA) (37 CFR 1.53(d)) and which is identified in, or to which a benefit is claimed, in the following document (as shown in the attachment):

United States Patent Application Publication No. _____, page, _____ line _____

United States Patent Number 8965932, column _____, line, _____

WIPO Pub. No. _____, page _____, line _____

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Page 00161



US008965932B2

33

(12) **United States Patent**
Torres(10) **Patent No.:** **US 8,965,932 B2**
(45) **Date of Patent:** ***Feb. 24, 2015**(54) **AUTOMATED CONTENT SCHEDULER AND
DISPLAYER**(56) **References Cited**

U.S. PATENT DOCUMENTS

(75) **Inventor:** **Damon Torres**, Staten Island, NY (US)

3,577,189 A 5/1971 Cocke et al.

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(73) **Assignee:** **Robocast, Inc.**, New York, NY (US)

(Continued)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1195 days.

FOREIGN PATENT DOCUMENTS

JP 04-04205171 7/1992

OTHER PUBLICATIONS

Hauck, F.J. "Supporting Hierarchical Guided Tours in the World Wide Web", Proceedings of the 5th International World Wide Web Conference on Computer Networks and ISDN Systems, pp. 1233-1242, 1996.*

(Continued)

(21) **Appl. No.:** **11/316,209**(22) **Filed:** **Dec. 21, 2005**(65) **Prior Publication Data**

US 2006/0218479 A1 Sep. 28, 2006

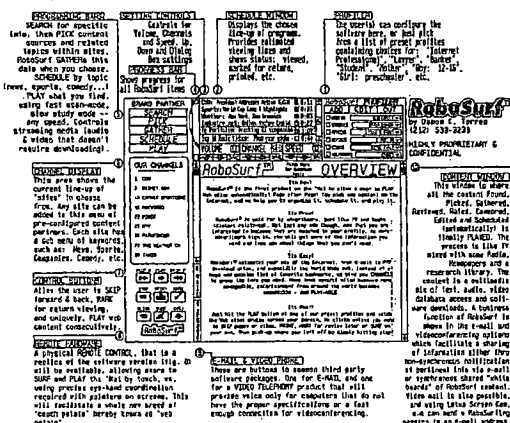
Related U.S. Application Data

(63) Continuation of application No. 09/144,906, filed on Sep. 1, 1998, now Pat. No. 7,155,451, which is a continuation-in-part of application No. 08/922,063, filed on Sep. 2, 1997, now abandoned.

(60) Provisional application No. 60/025,360, filed on Sep. 3, 1996.

(51) **Int. Cl.**
G06F 7/00 (2006.01)
G06F 17/30 (2006.01)
G06F 3/00 (2006.01)(52) **U.S. Cl.**
USPC **707/795; 707/805; 707/913; 715/704**(58) **Field of Classification Search**
USPC **707/687**
See application file for complete search history.(57) **ABSTRACT**

A method of sequencing and scheduling web resources, via a software application that collects URLs and feeds them to a Web browser, so that the amount of clicks and decisions are reduced when browsing the Internet. The method begins after a computer user with Net-access encounters a URL that leads to a collection of other URLs that the software application has arranged to be presented in a continuous, show manner. This collection of resources then plays automatically, going from one resource to the next without the user being required to make a decision or click. The decision-making process is not inhibited, it is made optional. A method of inserting full-screen advertising, public service announcements, news, etc. has been developed. The server software application module described herein allows a publisher to stream URLs to a user who does not have the client-side software. The publishing module allows a user to format resources to a particularly desirable size and characteristic that promotes readability during a show viewing session. This same module can publish collections of nodes for others to view as a whole sequence, accessed via e-mail, screen saver or as a web resource.

67 Claims, 9 Drawing Sheets

head and tail

These schema links expand to links to the head or tail node of the current sequence.

index

This schema link connects to an automatically generated index of the current sequence.

origin

This is the schema link referring to the original node as configured within the tour structure.

user defined schema links

As explained in [Section 2.3](#), authors may define meta nodes with corresponding schema links.

The rendering of each schema link is configured independently. It may be done in two different styles:

if-present

The decoration shows the configured rendering only if the node's position needs the schema link or if the link is available. Otherwise, the schema link is simply not rendered. In this mode head and tail nodes do not show a *previous* or *next* link, respectively.

indicating

In this mode a schema link is always shown but rendered in different styles indicating whether the schema link is available for this document or not. If a schema link is not available, e.g. the *previous* link in the head node, the author may configure its rendering as a grey shaded arrow instead of a blue one.

Additionally, the user may use commands to render the description text of the current node and/or the current sequence in the configuration string. As an example, the configured decoration string used in [Fig. 2.4](#) and [2.5](#) is:

```
'%prev% %up% %down% %next% %origin% %index% %help% %head% %tail% <I>%seqdesc%</I>:
%desc%'
```

Special commands are bracketed by % characters. The *up* and *down* links in the examples are rendered using 'if-present' style, all other links use 'indicating' style. This is configured outside of the decoration string.

3.4 Frames

In the tradition of inventing its own HTML tags, Netscape Comm. Corp. added some new functionality to the newest Netscape browser software: Frames [[Net96](#)]. Frames allow several HTML windows at once in a browser's canvas, each showing a different HTML document. Clicking links in one of the frames may display a new document in another frame. The big advantage is that you can display tables of contents or other information in one frame and the main document in another frame, and each frame is independently scrollable.

Framed documents would not show our decoration. That is why we adopt to the concept of Frames. In the current implementation of the Tour DFS, there are two ways to cope with Framed documents:

- If the original document uses Frames, we put the decoration in a static, extra Frame at the top of the document. All other documents are decorated as described so far (at the top and/or bottom of the document).
- We always turn the original document into a Framed document and display the decoration in a

static, extra Frame.

Putting the tour decoration in an extra Frame has the big advantage that it is always visible even when the main Frame was scrolled.

In every case, browsers not capable of the Frame concept will get the same result as they would get with the original document but with an added decoration. The Tour DFS is thus compatible with old browser software.

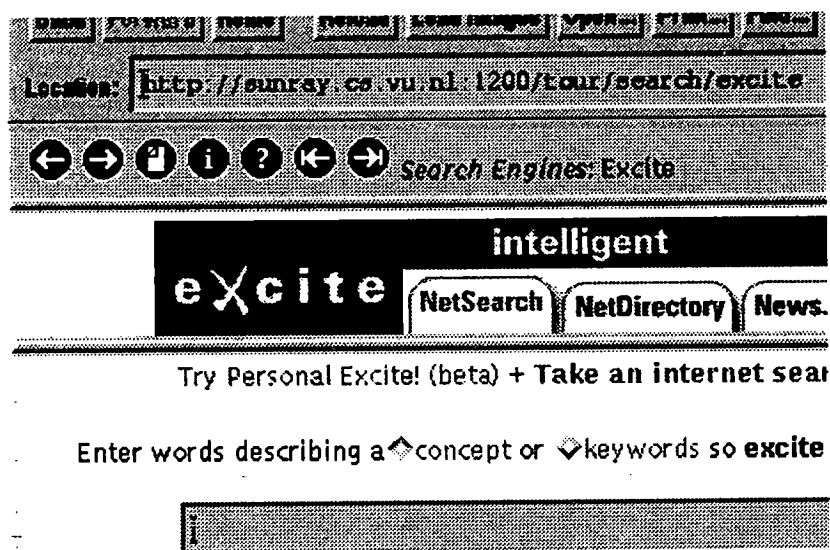


Figure 3.4: Tour decoration using Netscape's Frames.

Fig. 3.4 shows a tour stop with an original node using Frames. The tour decoration is added as an extra Frame on top of the original Frames of the document.

3.5 Recursive Tours

Tour structures may be recursive. That means that the URL of a tour structure node is mapped itself to a URL of a node within another tour structure. This case needs special handling. Otherwise, the decoration of schema links may appear twice or more in the top and/or bottom of the document each with different links.

First, the Tour DFS signals the server of the original document that it expects it not to decorate the document as part of a tour. This is done using an additional HTTP header as shown in Fig. 3.5.

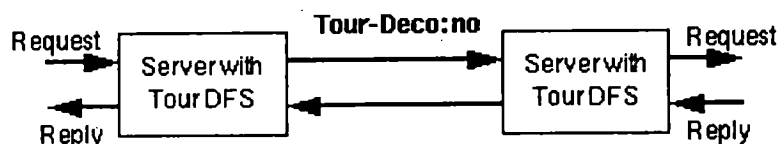


Figure 3.5: Additional HTTP header used in requests between two Tour servers.

A Tour DFS receiving this header will not decorate the original document, but send it unchanged to the first server which finally decorates it. Thus, we can pick up one node of another tour and insert it in a new tour as if it were the original node.

Second, we allow inheritance of subsequences if the author maps a tour node to another tour node. This has to be explicitly enabled on a per node basis to distinguish this situation from the first case. Imagine that the node **p** in the tour structure of Fig. 3.6a is mapped to node **post** in the structure of Fig. 2.2. If inheritance is enabled for node **p**, the resulting structure would be as seen in Fig. 3.6b.

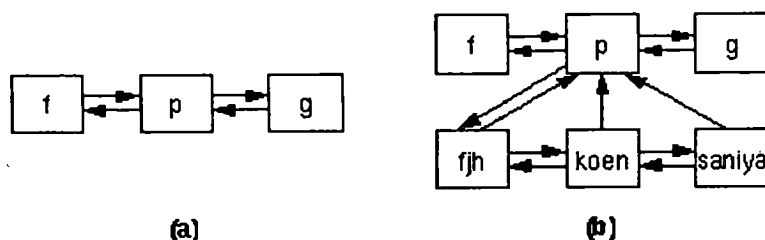


Figure 3.6: Tour structure using inheritance of subsequences.

For node **p** the first server sends a modified HTTP header to signal that inheritance is allowed:

```
Tour-Deco: no;allowdown
```

If the second server knows about a subsequence he returns the name of the first node in that sequence in a response header to the first server:

```
Tour-Deco: down="fjh"
```

Thus, the first server can add a *down* link to its decoration and can generate an own URL for the first node of the inherited subsequence.

All nodes of inherited subsequences are recognized because there is no information about them in the first server. Imagine that the URL prefix for the structure of Fig. 3.6 is <http://gig.cs.vu.nl/tour/new/>. If the first server gets the URL <http://gig.cs.vu.nl/tour/new/p/fjh>, it knows that this node is inherited via node **p**. It forwards the request to the second server and adds an additional HTTP header:

```
Tour-Deco: root="http://gig.cs.vu.nl/tour/new/p"; ref="fjh"
```

The second server can retrieve the document and decorate it. For all schema links it uses the URL prefix provided by the first server so that all schema links can be processed by this server first. The second server acknowledges that it decorated the node by an additional response header:

```
Tour-Deco: done
```

Thus, the *next* link in the decoration will have the URL <http://gig.cs.vu.nl/tour/new/p/koen> which causes similar processing in the first server again. All URLs, including meta node URLs, prefixed with <http://gig.cs.vu.nl/tour/new/p> are forwarded to the second server. So, all meta nodes of the second server are reachable as well.

This handling allows nodes of tour structures to be mapped to other nodes of tour structures. The decoration is done by the first tour structure in the chain. Subsequences may be inherited by the mapped structure and will be decorated by it. The usage of the HTTP headers also ensures that non-local servers using the same or a compatible tour structure mechanism can work together.

4 Related Work

Brooks et. al. describe in [BMMM95] the usage of proxies as application-specific transducers. In fact, a Tour DFS is such a transducer in their senses specialized for building tour structures. Brooks et. al. implemented a toolkit for building transducers which allows much more processing than is needed for tour structures. Their approach can even carry state from one request to the other while requests for tour nodes are processed without any extra state. However, a Tour DFS is a transducer on a finer level of granularity because it can transduce original documents within one server without using HTTP at all. Thus, if the nodes of tour structure are locally available, the Tour DFS does not need to call another server.

The *Boomerang* tool [DySI95] allows the reconfiguration of original Web pages using a powerful editing language. Indeed, Boomerang could be configured to do almost the same work as our tour structure mechanism. Nevertheless, Boomerang has some serious disadvantages. Boomerang is not able to fetch non-local pages. Of course, it would be possible to enhance the CGI based Boomerang tool to fetch non-local pages but the fetch engine must be completely integrated into the CGI script so that almost the same code may appear several times in the server software. All needed parameters for Boomerang have to be passed by query strings or hidden variables in form postings. This makes the URLs used for derived pages somewhat messy, and finally, it sometimes disallows original nodes from being CGI scripts.

HSDL [Kesse95] goes one step further than our tour structure mechanism and allows authors to generate a skeleton of HTML pages with all the necessary schema links out of a sophisticated graphical hypertext design tool. Thus, there is more expressivity and some guaranteed consistency for schema links in HSDL. On the other hand, HSDL does not allow the integration of non-local Web pages and it is not known how to incorporate existing local documents into the system. Finally, reconfiguring the HSDL definitions of a large hypertext document requires regeneration of the HTML pages, while with our tour structure mechanism the final pages are generated on the fly.

5 Conclusion

We introduced a mechanism for the automatic generation of schema links for hierarchical tour structures. Mostly, these structure are used to build guided tours. The nodes collected for a guided tour can be arbitrary even non-local Web pages and need not be aware of their usage in a tour structure.

The tour structure concept is a mechanism not a policy. Authors of complex hypertext documents may use our mechanism to design good or bad documents. Nevertheless, we believe that the introduced concept will help in the design of better hypertext documents.

The implementation was done using the experimental Perplex server software and especially using its stackable Document File Systems (DFS). A demo of the tour structure mechanism is available on the Perplex home page: <http://www4.informatik.uni-erlangen.de/Perplex/>.

6 Acknowledgments

I like to thank Saniya Ben Hassen, Raoul Bhoedjang, Greg Sharp, Maarten van Steen, Andy Tanenbaum, and the anonymous reviewers for their valuable comments on earlier drafts of this paper. This work was partially supported by the *Deutsche Forschungsgemeinschaft* in grant SFB 182 and by an EC/HCM program.

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	Type	Hits	Search Text	DBs	Time Stamp
19	BRS	8	(US "5101197" A US "5287266" A US "5515490" A US "5526011" A US "5548702" A US "5574798" A US "5642430" A US "5644686" A US "5696885" A US "5720007" A US "5721827" A US "5732216" A US "5740389" A US "5760771" A US "5790084" A US "5799292" A US "5806056" A US "5822745" A US "5831616" A US "5838317" A US "5848396" A US "5870768" A US "5966126" A US "6043817" A US "6072479" A US "6072480" A US "6084582" A US "6128629" A US "6141010" A US "6155840" A US "6199076" B1 US "6199104" B1	USPAT	2001/06/15 11:47
20	BRS	220	(list near2 (website\$3 or URL\$3))	USPAT	2001/06/15 11:47
21	BRS	7	(list near2 (website\$3 or URL\$3)) and (icon\$3 same drag)	USPAT	2001/06/15 12:00

08/922063

	Type	Hits	Search Text	DBs	Time Stamp
1	BRS	11	"slide show" and ((variable or vary) near2 (time or duration or delay))	USPAT	2001/06/12 16:24
2	BRS	102	"slide show" and (display\$3 near4 (time or duration or delay))	USPAT	2001/06/12 16:26
3	BRS	23	"slide show" same (display\$3 near4 (time or duration or delay))	USPAT	2001/06/12 17:04
4	BRS	8	hauck near franz	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/06/13 10:28
5	BRS	33	"slide show" and node	USPAT	2001/06/13 11:52
6	BRS	17	345/\$.ccls. and ((icon\$5 with (set\$4 or configur\$4)) same (drag adj drop))	USPAT	2001/06/13 12:59
7	BRS	713	705/\$.ccls. and (internet or "world wide web") and (advertisement\$1 or ad\$1)	USPAT	2001/06/13 13:01
8	BRS	1	705/\$.ccls. and (internet or "world wide web") and (advertisement\$1 or ad\$1) and "slide show"	USPAT	2001/06/13 13:03
9	BRS	251	705/\$.ccls. and (internet or "world wide web") and advertisement\$1	USPAT	2001/06/13 13:03
10	BRS	0	705/\$.ccls. and (internet or "world wide web") and advertisement\$1 and "slide show"	USPAT	2001/06/13 13:04
11	BRS	2	705/\$.ccls. and "slide show" and advertisement\$1	USPAT	2001/06/13 13:18
12	BRS	19	705/\$.ccls. and (target\$3 with advertisement\$1) same (attribut\$3 or profil\$4)	USPAT	2001/06/13 13:56
13	BRS	0	"slide show" and ((cach\$4 with queue\$4) with slide)	USPAT	2001/06/13 13:58
14	BRS	1	"slide show" and (cach\$4 with queue\$4)	USPAT	2001/06/13 14:03
15	BRS	1	"slide show" and (queue\$4 with slide)	USPAT	2001/06/13 14:00
16	BRS	66	cach\$4 with queue\$4 and 345/\$.ccls.	USPAT	2001/06/13 15:20
17	BRS	3	("5515490" "5760771" "5848396").pn.	USPAT	2001/06/15 11:33
18	BRS	1	("5799292").pn.	USPAT	2001/06/15 11:33

L2 45 S MONITOR? (P) TIM#### (P) SITE# AND INTERNET
L3 10 S L2 AND BROWSER#
L4 20 S (MONITOR? OR TRACK?) (5A) TIM#### (P) SITE# AND INTERNET

> d his

```
(FILE 'USPAT' ENTERED AT 10:07:52 ON 04 MAY 1999)
L1      732 S WALK(W)THROUGH#
L2      67 S GUIDED(W)TOUR#
L3      0 S L1 AND L2
L4      67 S L2
L5      6 S L4 AND WEB
L6      61 S L4 NOT L5
L7      1 S L6 AND INTERNET
L8      60 S L6 NOT L7
```

=> d his

(FILE 'USPAT' ENTERED AT 10:07:52 ON 04 MAY 1999)

L1	732 S WALK(W)THROUGH#
L2	67 S GUIDED(W)TOUR#
L3	0 S L1 AND L2
L4	67 S L2
L5	6 S L4 AND WEB
L6	61 S L4 NOT L5
L7	1 S L6 AND INTERNET
L8	60 S L6 NOT L7
L9	29 S L1 AND WEB
L10	11 S L1 AND INTERNET
L11	4 S L10 NOT L9



Refine Query:

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DOC TYPE	VIEW FULL PAGE	VIEW CITATION
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CNF		<u>Multi-function Internet appliances</u> <i>Soohee, K.</i> Wescon/97. Conference Proceedings Published: 1997 , Page(s): 14 -18
CNF		<u>Case study: visualizing Internet resources</u> <i>Gershon, N.; LeVasseur, J.; Winstead, J.; Croall, J.; Pernicks, A.; Ruh, W.</i> Information Visualization, 1995. Proceedings. Published: 1995 , Page(s): 122 -128, 151



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CNF		<u>A distributed object architecture for QoS-sensitive networking</u> <i>Weinstein, S.; Suzuki, M.; Redlich, J.P.; Rao, S.</i> Open Architectures and Network Programming, 1998 IEEE Published: 1998 , Page(s): 3 -13
CNF		<u>COPEN: a CORBA-based intelligent push-engine</u> <i>Bum Ryeol Yoon; Jae Jeong You; Soo Dong Kim</i> Software Engineering Conference, 1998. Proceedings. 1998 Asia Pacific Published: 1998 , Page(s): 330 -337
CNF		<u>Basic call state model and IN switching state model for an integrated IN/B-ISDN architecture</u> <i>Carmagnola, V.; Ferretti, M.; Ferrabone, P.</i> Intelligent Network Workshop, 1997. IN '97., IEEE Published: 1997 Volume: vol.2 , Page(s): 17 pp. vol.2

[Prev] 1 2

HPS Trailer Page
for

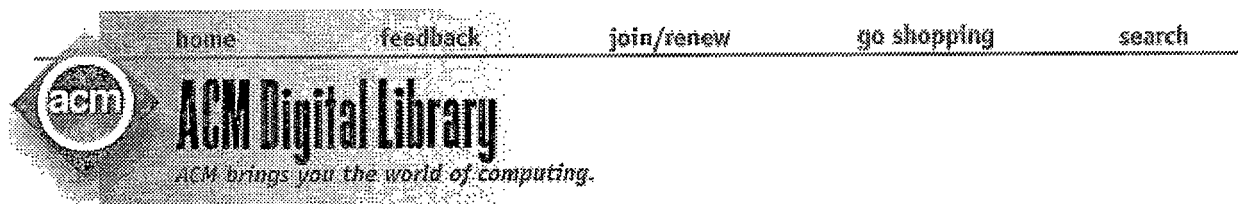
EAST

UserID: LWassum_Job_1_of_1

Printer: cpk2_4c32_gbfsptr

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Document	Pages	Printed	Missed
US005515490	46	46	0
Total (1)	46	46	0



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L8 2208 S (TIME# OR TIMING OR TIMER#) (P) SITE# AND (INTERNET# OR
 WEB
 L9 742 S L8 AND LINK?
 L10 55 S L9 AND URL
 L11 24 S L10 AND LIST### (P) SITE#
 L12 26 S (TIME# OR TIMING OR TIMER#) (P) SITE# (P) LIST? AND (ADD
 RES
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 L14 31 S COOKIE (P) (INTERNET OR WEB OR WWW)
 L15 652 S SITE# AND LIST# AND (ADDRESS? OR URL) AND (TIME# OR TIMI
 NG
 L16 330 S L15 AND SERVER#
 L17 12 S L16 AND LINK? (P) CHAIN?
 L18 21 S (INTERNET OR WWW OR WEB#### OR BROWSER) AND FILTER? AND
 SER
 L19 11 S 5649186/UREF
 L20 26 S WEB BROWS? AND WEB SITE# (P) LINK?
 L21 37 S WEB SITE# (P) LINK?
 L22 32 S L21 AND BROWS?



CCI Slide Show

version 1.0

September 22, 1994

Alan Braverman



CCI Slide Show is currently available via anonymous ftp from [ftp.ncsa.uiuc.edu](ftp://ftp.ncsa.uiuc.edu/Mosaic/CCI/Unix/sshow/) in [/Mosaic/CCI/Unix/sshow/](ftp://ftp.ncsa.uiuc.edu/Mosaic/CCI/Unix/sshow/)

CCI Slide Show is a program that reads a list of Uniform Resource Locators (URL) and presents each in succession using NCSA Mosaic for the X Window System (version 2.5 or greater), as in a slide show.

CCI Slide Show uses the Common Client Interface (CCI), a network protocol developed for use with NCSA Mosaic, to communicate with and control an active Mosaic session.

CCI Slide Show can be used with a special script file that lists URLs and delay times, or can be used to fetch one URL with command-line arguments. The valid command-line arguments follow.

-file

The -file command-line argument is followed by the name of the text file with the CCI Slide Show script commands. The format of the script file is given below. The -file command-line argument may be used by itself, or in conjunction with the -host and -port arguments.

-host

The -host command-line argument is followed by the hostname of the system running NCSA Mosaic. Mosaic must be already running and listening for CCI communication on a network port number, specified with the -port command-line argument.

-port

The -port command-line argument is followed by the port number on which a running session of NCSA Mosaic is listening for CCI communication. Port numbers below 1024 are generally reserved, but any number 1 - 65536 may be used.

-url

The -url command-line argument is followed by a single URL to be fetched and displayed by the NCSA Mosaic session running on the host specified by -host and listening for CCI communication on the port specified by -port. The -url command-line argument should be accompanied by -host and -port, but may not be used together with -file. The -url argument should always be the last, or rightmost command-line argument.

-quiet

The -quiet command-line argument prevents CCI Slide Show from displaying console messages while it is running.

The script file that CCI Slide Show reads is a simple ASCII text file, consisting of one command per line. Each command consists of a command name and an argument. Any line beginning with a # or ! character is considered a comment line. The valid commands follow:

url

The url command is followed by a URL. When CCI Slide Show encounters the url command, it causes the connected NCSA Mosaic session to fetch and display the URL.

sleep

The sleep command is followed by (an integer number of seconds). CCI Slide Show will wait for the specified number of seconds between all url commands until another sleep command changes the sleep time. A sleep time of 0 (zero) may be used to avoid any delay.

host

The host command is followed by the hostname of the machine running NCSA Mosaic, to be used in place of the -host command-line argument.

port

The port command should be used in conjunction with the host command, rather than using the -port command-line argument. Both the host and port commands may be used in the middle of a slide show script file to change the Mosaic session being controlled by CCI Slide Show.

quiet

The quiet command is followed by either "on" or "off" (without the quotes) to toggle the display of console messages while CCI Slide Show is running.

exec

The exec command is followed by any shell command, which will be executed as CCI Slide Show encounters it.

A sample slide show script file follows. It is a simple script file that displays a few URLs with delay time inbetween. Note that since no host or port are specified, they must be present on the command-line.

```
### This is a sample CCI Slide Show script file
### This is a comment
url http://www.ncsa.uiuc.edu/General/NCSAInfo.html
sleep 2
url http://www.ncsa.uiuc.edu/SDG/SDGIntro.html
sleep 1
url http://www.ncsa.uiuc.edu/SDG/SDGFlier/SDG.html
sleep 4
### end of script file
```

This script file could be used with the following command:

```
sshshow -file script.1 -host pez.ncsa.uiuc.edu -port 8822
```

Here is a more complicated script file:

```
### This is another sample script file
host pez.ncsa.uiuc.edu
port 8822
quiet on
exec clear
```

```
exec echo "Welcome to My Slide Show"
url http://www.ncsa.uiuc.edu/General/NCSAInfo.html
sleep 3
url http://www.ncsa.uiuc.edu/SDG/SDGIntro.html
url http://www.ncsa.uiuc.edu/SDG/SDGFlier/SDG.html
### end of script file
```

[Back to: the CCI Homepage]



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Supporting Hierarchical Guided Tours in the World Wide Web

Franz J. Hauck

Dept. of Math. and Computer Science, Vrije Universiteit
Amsterdam, The Netherlands

Email: fjh@cs.vu.nl

Abstract: Guided tours are well known from hypertext systems as a means to collect hypertext documents in a sequence with a certain meaning. This can be followed by readers using *next* and *previous* links. As there is almost no support for guided tours in the World Wide Web so far, these structures have to be built up manually, which not only causes a lot of work on updates but is also almost impossible in the case of non-local documents. This paper presents a simple server-side concept for building guided tours using any existing Web pages. The pages used within a tour need not be aware of being used, and thus, need no special preparation at all. Pages may occur multiple times within several tours or even within one tour. We present a server-based implementation demonstrating the concept.

Keywords: Guided Tours, Authoring Environments, WWW Server

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1 Introduction

The authoring of hypertext documents requires some thought about how to split information into different documents, usually called nodes, and how to interconnect the nodes using hyperlinks, which allow readers to navigate through the entire system. Usually, hypertext systems, and also new hypermedia design methods such as RMM [ISB95], allow authors to give hypertext links a special meaning. For example, a node representing a painting may have a link to the node representing its painter. In this case, the meaning of the links is 'painted by'. In [GMP95] these links are called *schema links*, in contrast to *generic links*, because they result from a schematic design process of the presented information. It is up to the hypertext system in companion with the author to render schema links in such a way that the reader immediately understands their meaning.

One often used pattern is a guided tour [Trigg88]. This is a sequence of nodes. There are schema links which allow readers to follow the sequence back and forth. As nodes may be part of several guided tours these nodes may have several schema links for each tour. Since it is confusing to show readers all these links, only the one which is necessary to follow the current tour will be displayed.

In contrast, the World Wide Web provides only one type of hypertext link and it is completely up to the author to decorate these links in a consistent way, such that readers are aware of the meaning of the link. As the HTTP protocol [HTTP96] for the transportation of Web pages is stateless, Web pages are almost static and all their possible dynamic behaviour can hardly depend on the history of the reader's actions. This does not allow the usage of a single Web page in multiple guided tours without showing all the schema links of other guided tours the page is involved in.

While modern hypertext systems support authors by building up schema links, there are almost no such means for Web pages. The organization of a guided tour requires the author to insert the schema links manually in each page. Imagine a department of a university which wants to serve the WWW documents of its staff members. Each staff member has his or her own Web page. These pages are linked together, so that a reader can follow hypertext links to the next or previous staff member in alphabetical order: a guided tour. Whenever a new member is employed, or another leaves the department, hypertext links in several documents have to be updated. Thus, manually maintaining the schema links has a serious drawback. As Web pages may be distributed over the entire world, this update may be impossible because it is often not possible to change non-local documents for inserting the schema links. This happens, for example, when an author wants to show his readers a sequence of selected search engines used in the WWW.

This paper elaborates a server-side mechanism to create the schema links automatically for lists, sequences, and even hierarchical guided tours, according to some meta-information stored in a separate configuration file. These structures can enumerate arbitrary WWW documents on arbitrary servers while the configuration remains on the local server, and thus with the administrator or creator of the structure.

The paper is organized as follows. Section 2 explains the structures which need to be supported and what this support looks like. Section 3 presents our implementation which is based on an experimental WWW

server called *Perplex*. Section 4 compares our mechanism to related work. Finally, Section 5 gives some conclusions.

2 Structuring Web Documents

The mechanism we want to provide allows authors to configure hypertext structures in terms of predefined hypertext links (schema links), like *next* and *previous*, connecting ordinary WWW documents. In the following we call these structures *tour structures*. The documents used in a tour structure need not be aware of being used. As HTTP does not carry the information about the history of the client, we have to give the original document an additional URL which names it inside a tour structure. A document may be used several times in one or in different structures which adds one more URL for each occurrence. Retrieving the document using the new URL automatically adds the schema links to the contents of the original document, according to its position inside the tour structure.

Thus, the server side mechanism is mainly to retrieve the original document, add some decoration to it--the schema links--, and send it on to the client.

2.1 Tour Structures

Guided tours and lists have a quite simple sequential structure, as shown in Fig. 2.1. The boxes represent hypertext nodes or WWW pages respectively, as used inside the structure. Each node is related to an *original node* which may be located on some server. The arrows show hypertext links. These links allow readers to navigate through the entire structure, e.g., a guided tour.

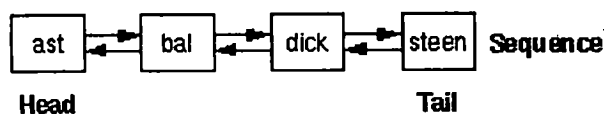


Figure 2.1: A simple sequential hypertext structure.

For example, this list may represent the staff members of a university. The nodes are named from the user's login names and ordered alphabetically. A sequence has two designated elements: the *head* and the *tail* node which do not have a predecessor or successor, respectively. The links between the nodes have the meaning *next* and *previous* and allow readers to follow the sequence from the head to the tail and vice versa. Thus, node *ast* has a *next* link to node *bal*, node *bal* a *next* link to *dick* and a *previous* link to *ast*, etc. Additionally, sequences may be cyclic which adds a *next* link from the tail to the head and a *previous* link in the opposite direction.

Each node of the tour structure of Fig. 2.1 needs an additional URL which is composed of a URL prefix assigned to the structure and the node's name in the structure. In our case the structure may have the URL prefix <http://sunray.cs.vu.nl/tour/staff/>. The tour structure is located on the WWW server of host sunray.cs.vu.nl. This server identifies the local URL */tour/staff* as the starting point of a tour structure and acts appropriately. In the example in Fig. 2.1, the first node would have the URL <http://sunray.cs.vu.nl/tour/staff/ast>.

For the configuration of this tour structure on server sunray.cs.vu.nl we need to provide the URL prefix of the entire structure (here: */tour/staff/*), the structure itself in terms of names and node order (here: *ast, bal, dick, steen*), and finally, a mapping of each node to its original URL (here e.g.: *ast -> http://www.cs.vu.nl/%7East/* etc.). This information is sufficient for our system to retrieve the original

document and determine the structural *next* and *previous* links for it. It is obvious that changing the order of the nodes in the tour structure simply requires some changes in this configuration and none in the original documents.

In fact, our system allows more complex tour structures than sequential ones. To that end, we introduce some hierarchy. Fig. 2.2 shows a hierarchical structure of hypertext nodes.

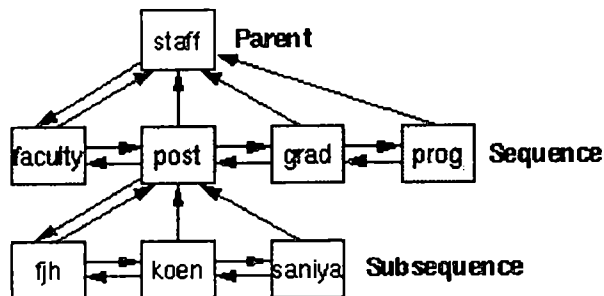


Figure 2.2: Hierarchical tour structure.

The hierarchical tour structure consists of sequences which are linked together using *next* and *previous* links. A sequence may have a parent node. All members of a sequence have an *up* link to the parent node. The parent has an additional *down* link to the head node of its subsequence. This scheme applies recursively. Thus, each member of a sequence can itself be a parent of a subsequence and so on. The simple list shown in Fig. 2.1 is only a special case of this general structure. The single parent node **staff** shown in Fig. 2.2 is itself a sequence with only one element.

Hierarchical tour structures can be used to implement guided tours with different levels of detail. In our example, the **staff** node provides a subsequence of different groups of staff members: faculty members, postdocs, graduate students, and programmers. Here, the postdoc node **post** has a subsequence providing all the postdocs in alphabetical order. The reader may stop following the subsequence and returning to the subsequence's parent node using the *up* link.

The URL of each node is composed of the URL of the sequence's parent node and an additional syllable denoting the node in a sequence, similar to the composition of UNIX pathnames using nested directories. Given the URL prefix <http://sunray.cs.vu.nl/tour>, the URL for node **fjh** in Fig. 2.2 would be <http://sunray.cs.vu.nl/tour/staff/post/fjh>. Thus, nodes have to have unique names in a sequence but not necessarily a unique name in the entire tour structure.

2.2 Decoration

The tour structure mechanism has to decorate the original document automatically with the schema links of the structure. One place to do this is the top of the document. This part is even visible if the document is longer than the browser's canvas. An alternative would be the bottom part of the document which may not be visible without scrolling on long documents. It may also be appropriate to decorate both sides of the document. Another alternative is the use of Netscape's Frames [Net96] which will be described in Section 3.4.

The decoration should be configurable by the author of the structure. It has to contain at least the *next*, *previous*, *up*, and *down* schema links. Authors may want to add short descriptive texts that name sequences and individual nodes. Additional links are introduced in Section 2.3. Fig. 2.3 shows the rendered decoration of node **post** of Fig. 2.2 containing schema links and descriptions. Here, the links are

represented by clickable arrow images, but the author can configure arbitrary icons or text strings to represent schema links.

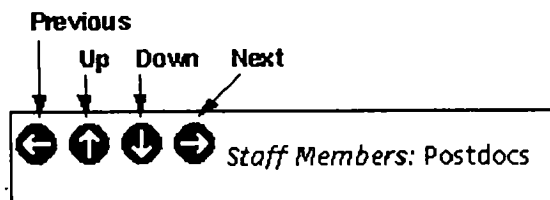


Figure 2.3: Decoration of a document's head as part of a tour structure.

The *next* link leads to the graduate students' node, the *previous* link to the faculty members' node. The *down* link leads to the head of a sequence of postdocs, here to the node **fjh**. The *up* link points to the staff members' parent node **staff**.

2.3 Meta Nodes

Sometimes authors may want to add additional schema links to every node in a tour structure. Examples are links to a detailed description of the node or to a help document explaining tour navigation. We call these linked nodes *meta nodes*.

An author of a tour structure simply adds a schema link to the configured decoration giving it a general name like **description**. Additionally, the author has to provide a mapping for each node of the tour structure to a URL representing the original contents of the meta node.

Meta nodes are addressed using the URL of the node they refer to, suffixed by an additional syllable containing the name of the schema link and the letters **%7e** which represent the tilde character. We disallow ordinary nodes to have names ending with a tilde character such that URLs of meta nodes are distinguishable from URLs of ordinary nodes. Thus, the URL for the description meta node of the node **post** of [Fig. 2.2](#) is <http://sunray.cs.vu.nl/tour/staff/post/description%7e>.

Meta nodes are rendered with a special decoration containing an *up* link back to the node of the tour structure to which the meta node belongs.

A special meta node is the **index** node which is an automatically generated index of the current sequence. An index is a list of all nodes of the sequence listed in the order of appearance. Each entry in the list describes the node using the node's description text provided by the author. It is clickable and leads immediately to the corresponding node of the tour structure. This allows readers to skip certain nodes of the sequence or to immediately go back to a previously visited node.

Sometimes, it is useful to have a parent node present an index of its subsequence. To that end, parent nodes may be configured individually to be decorated with an additional index of all the nodes of the subsequence. The decoration is added immediately after the top decoration. Often, a parent node with index decoration does not need any further information, and thus may have an empty node as its original node.

There are more implicit meta nodes called **head**, **tail**, and **origin**. The head and tail meta nodes refer to the head and tail nodes of the current sequence. Thus, <http://sunray.cs.vu.nl/tour/staff/post/head%7e> redirects to the URL of node **faculty** in [Fig. 2.2](#). The meta node **origin** refers to the original node.

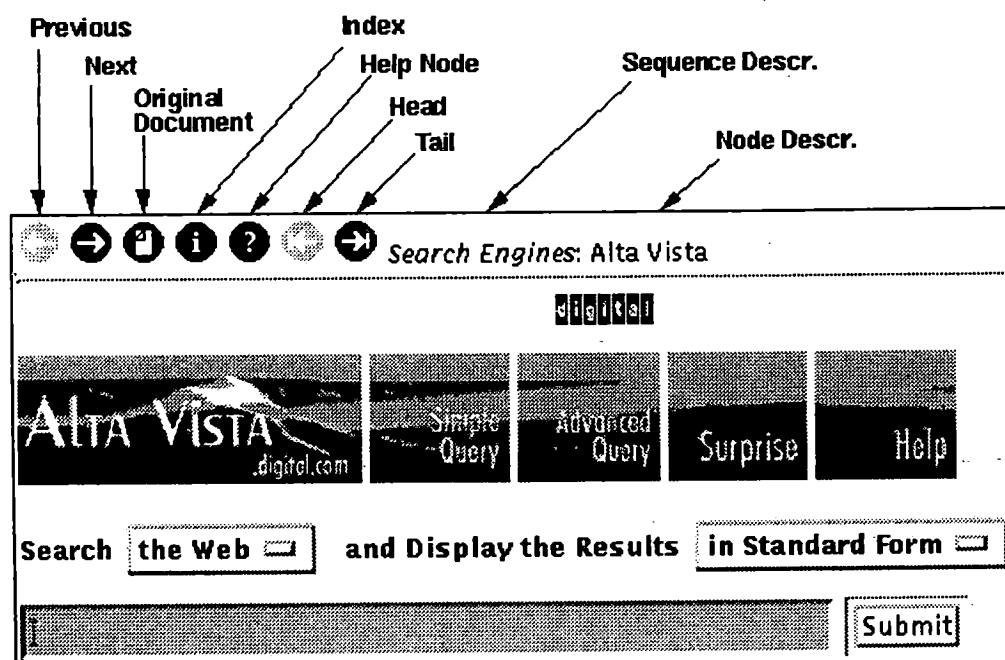


Figure 2.4: Exemplified decoration of a tour stop.

Fig. 2.4 shows the rendered first node of a sequence of the Web's search engines. Schema links are rendered in two different styles at the top of the document. When the link is not available or refers to the node itself it is rendered by a grey icon (disabled) otherwise by a blue icon (enabled).

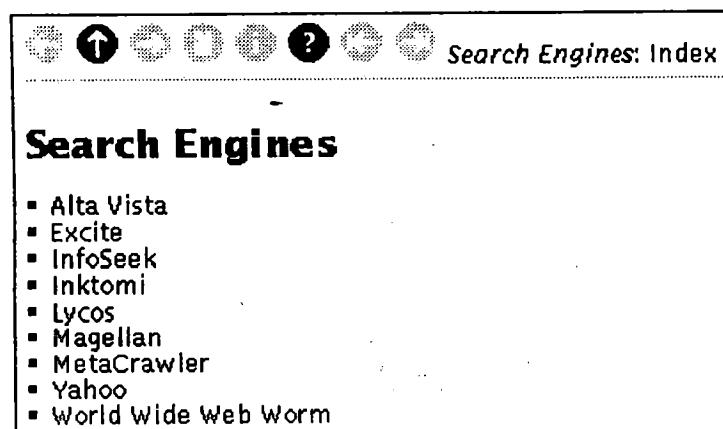


Figure 2.5: Exemplified decoration of an index meta node.

Fig. 2.5 shows the index node of the sequence which is shown when the reader clicks on the index icon of Fig. 2.4. The *up* link leads back to the node shown in Fig. 2.4.

3 Implementation

The implementation is based on the *Perplex* server software which is an experimental WWW server written by the author [Hau96]. The server is completely written in the *Perl 5* language [Perl96]. In principle, it would be possible to implement the ideas presented in Section 2 in any WWW server, but we will see that the special structure of *Perplex*'s stackable DFS modules simplified the implementation task.

3.1 The Perplex Server

The Perplex server contains a main module which waits for a request from a client. Furthermore, there are a configurable number of so-called *Document File System* (DFS) modules which serve parts of the server's URL space. The name DFS is related to file systems in operating systems. In fact, DFS modules act like file systems, not on files but on Web documents. DFS modules have a generic interface which represents the contents of HTTP request/reply messages [HTTP96] by a suitable data structure.

This structure allows DFS modules to be stacked, as was done with file systems in various operating systems, e.g., in the *Spring* system [KhNe93]. An example of this is the Perplex root DFS. The main module of Perplex forwards a request from a client to the root DFS through its request interface and waits for an answer from its reply interface, which is then returned to the client. In most configurations the root DFS reads its configuration file and forwards the request to one of several other DFS modules. These serve different purposes, such as mapping URLs to UNIX files, gatewaying to the *finger* daemon, serving *CGI* scripts, and many more. These DFS modules reply to the root DFS which returns the response to the main module. Fig. 3.1 shows a typical Perplex server configuration.

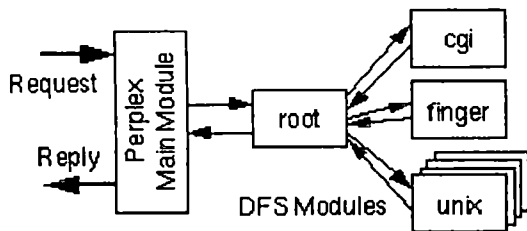


Figure 3.1: Perplex server configuration of DFS modules.

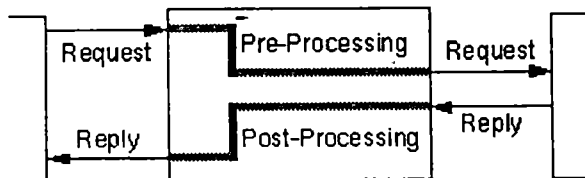


Figure 3.2: Pre- and post-processing in a stacked DFS module.

In general, stackable DFS modules can be used to pre-process a request before sending it on to another DFS, or post-process the response of an other DFS before sending the reply back to the caller, or both. For the implementation of the desired tour structure support, we will use both possibilities. Fig. 3.2 presents a stacked DFS module and shows the pre- and post-processing phases. For example, in the root DFS the pre-processing consists only of selecting the DFS to process the request according to the requested URL.

3.2 The Tour DFS

The DFS implementing our tour structure mechanism is named *Tour DFS*. When it gets a request it translates the URL of the request to their original nodes (pre-processing) according to the mapping of nodes in the tour structure. It forwards the translated request to another DFS module which retrieves the original document. The returned document is then decorated by the Tour DFS with the schema links such as *next* and *previous* (post-processing). Then, the changed document is returned to the calling DFS

module, and finally to the main module which sends it to the client.

If the original document resides on the same server, the request is forwarded back to the root DFS. In this case, a forward-trace logs all forwardings and thus detects endless recursion in bad configurations.

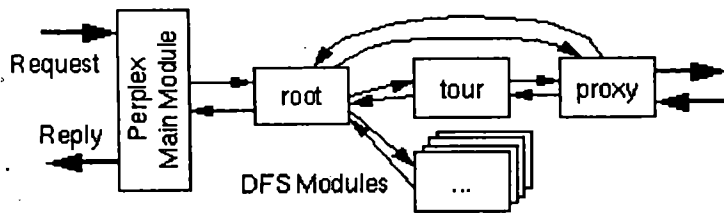


Figure 3.3: The Tour DFS configuration inside of a Perplex server.

Since we want to incorporate documents from all over the Web into a tour structure, we need to forward the request for these documents to a proxy DFS which can retrieve the documents from any server using the HTTP protocol [HTTP96]. In the current implementation the proxy DFS is also used to handle local documents because it automatically detects them and forwards requests for them back to the root DFS.

Fig. 3.3 shows the configuration for the tour DFS in relation to other DFS modules.

3.3 Decoration and Configuration

As a Web page may have hypertext links expressed as so-called relative URLs [Bern94] we cannot simply assign a new URL to an original document. In this case, a relative URL would not refer to the right resource because the browser would use the new tour URL to compose an absolute URL from a relative one. Fortunately, the Hypertext Markup Language HTML [BeCo95] knows the <BASE> tag for providing the base URL for building absolute URLs from relative ones. In our case, it has to name the URL of the original document. It is added as part of the decoration process. If there is already a base tag in the original document it must not be changed.

If the original node is not available because its server is down or not reachable, the tour DFS creates a dummy page containing an appropriate error message. Thus, a sequence cannot be broken and a reader may go on navigating through the entire tour structure because the schema links are provided in any case, or at least as long as the tour server itself is available.

The basic decoration of all nodes of a tour structure is configured using a single configuration. This minimizes configuration work and achieves consistency. The author specifies a single string which expands to the complete decoration placed on the top or the bottom of the document or at both sides. This string may contain arbitrary HTML tags. Thus, it is easy to include static links, for example, to the author's Web page.

On the other hand, the author may use several special commands inside of the decoration string which are expanded by the system individually on a per-node basis. To place one of the schema links, the author simply places a corresponding special command into the string.

The following schema links are available:

next, previous, up, and down

These correspond to the inter-node links of a tour structure as explained in [Section 2](#).

Guided Tours and On-Line Presentations: How Authors Make Existing Hypertext Intelligible for Readers

Catherine C. Marshall
Peggy M. Irish

Systems Sciences Laboratory
Xerox Palo Alto Research Center
3333 Coyote Hill Road
Palo Alto, California 94304

ABSTRACT

Hypertext systems like NoteCards provide facilities for authoring large networks. But they provide little support for the associated task of making these networks intelligible to future readers. Presentation conventions may be imported from other related media, but because the conventions have not yet been negotiated within a community of hypertext readers and writers, they provide only a partial solution to the problem of guiding a reader through an existing network of information. In this paper, we will discuss how a recent facility, Guided Tours, has been used to organize hypertext networks for presentation. The use of Guided Tours in NoteCards has exposed a set of authoring issues, and has provided us with examples of solutions to the problems associated with on-line presentations.

1. INTRODUCTION

Hypertext can be a valuable interactive medium for presenting semi-structured information on-line; it gives the reader the opportunity to traverse links according to interest, level of understanding, and other individually determined factors. But constructing a network of information is not the same task as authoring an intelligible on-line presentation of an existing network. Just as readers often find it difficult to interpret on-line hypermedia presentations [Char87], authors find it difficult to create them. System support for guided navigation does not ensure the future intelligibility of hypertext. Thus it is important to investigate methods for authoring audience-directed hypertext and to initiate a dialog between readers and writers in order to establish presentation conventions for this new medium.

Because hypertext borrows characteristics from a variety of other media, it inherits a confluence of authoring problems. The ultimate linearity resulting from link traversal brings with it a need to create coherence, manage transitions, and supply context as in traditional written forms. Problems associated with screen layout require the skills and conventions of graphic design. Techniques derived from computer-supported cooperative work for implementing remote gesture and reference are helpful in the construction of the narrative explicating a hypertext network. Hypertext's potential for interactivity also poses questions addressed in fields such as computer-aided instruction. Then too, hypertext traversal has certain dynamic qualities suggesting the characteristics and associated difficulties of film-making or animation.

Other authoring problems arise from the task of presenting existing hypermedia networks. Guiding a reader through a semi-structured maze of information has an inherent quality of "aboutness" that obliges the author to bring in large quantities of meta-information to explain what she is doing and why. Constraints imposed by the particular hypertext system may compound the authoring problem further by preventing the application of obvious strategies for presenting information on-line.

In short, authors of hypertext presentations are expected to solve problems derived from many different media, as well as others brought to the table by hypertext itself. Our experiences show that conventions and techniques for coping with these problems may be imported from related domains, or invented by authors on the fly. The hypertext authoring problem is complicated by the fact that conventions for this new communication medium are still to be negotiated within a community of readers and writers; authoring and navigational experiences have yet to be brought together and closely examined.

In this paper, we explore the problem of presenting an existing hypertext network through the use of a set of examples created using the NoteCards Guided Tour facility. But first we discuss the underlying hypertext technology and provide a brief history of on-line presentations in NoteCards.

2. BACKGROUND

NoteCards is a second generation hypertext system intended to be a tailorable vehicle for performing a variety of idea processing tasks [Hala88]. NoteCards users are provided with mechanisms for building networks of electronic *cards* connected by typed *links*. The contents of the cards are displayed in windows on the screen; we will therefore use the terms *cards* and *windows* interchangeably throughout this paper. Multiple cards may be displayed at any given time. Cards are brought to the screen by traversing links represented by *link icons*, usually boxed titles; users button the mouse on these link icons to retrieve the destination card. They may then read or edit the card. NoteCards maintains its database of cards in a *notefile*.

Several types of cards are of particular relevance to this discussion. *Text cards* and *sketch cards* are the usual vehicles for writing and illustration. *Fileboxes* allow a user to impose a hierarchical structure on the network. *Browsers* are computed, editable overviews of the network that display cards as graph nodes and links as edges drawn in different dashing styles. For more information on NoteCards, see [Hala87].

Our focus here is on NoteCards' presentational facilities, whose need has been clear from the earliest uses of NoteCards. Over the course of NoteCards' development, members of the user community have evolved techniques for presenting their notefiles to future readers, including various means of guiding traversal, annotating both substance and structure, presenting slide shows, addressing notes to the reader, and constructing hierarchies oriented toward reader traversal. They based their strategies on a set of assumptions regarding how readers approach and understand unfamiliar networks.

Experiences with these early on-line presentations fostered the development of the *Guided Tours* facility, which in turn provides computational support for communication between the author of a NoteCards network and its future readers. This graph-based interactive facility explicitly represents the presentational structure of a NoteCards network; the author and the reader interact with the tour through the same representation. Figure 1 shows an example of a guided tour. An author constructs a tour as a graph whose nodes are the stops on the tour and whose edges are *GuidedTour links* connecting the stops. The author uses a graph-based editor to lay out the stops and label the tour branches, although the layout can also be performed automatically by the system.

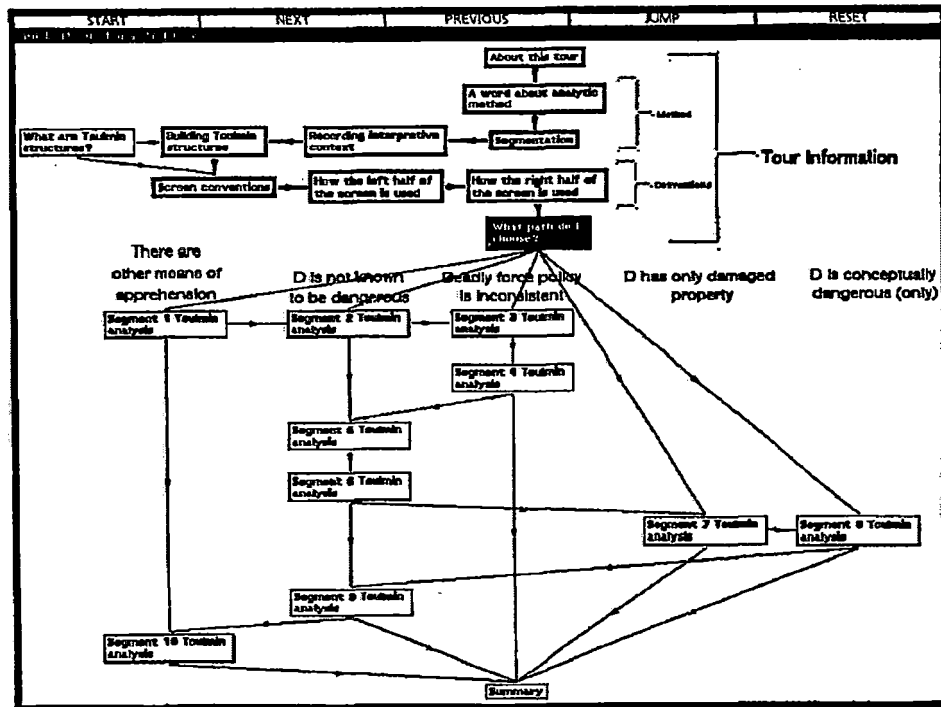


Figure 1. Guided tour of a transcript analysis.

The tour stops are *tabletops*, or screenfuls of cards whose layouts have been designated by the author; an example of a tabletop is shown in Figure 2. A tabletop captures various characteristics of the layout, including card window shapes, screen positions, scrolling locations, and order of window opening. As the reader moves from stop to stop, the current tabletop is automatically closed down and the next one brought up.

To run a guided tour, the reader makes use of the five buttons appearing at the top of the guided tour card (Figure 1). They allow her to start the tour at its beginning, move to the next stop, move to a previously visited stop, jump to any stop on the tour, and reset the tour. If there is more than one "next" stop, i.e. a branch point, the reader chooses one of the possible stops from a menu. The graph structure shown in the guided tour card provides indications of the reader's place in the tour and recent traversal history. The node in the graph whose tabletop is currently open is highlighted, while the nodes for tabletops already visited have dark borders. Also, the edges corresponding to the path followed using the NEXT command are displayed with darker lines. In the tour in Figure 1, a reader has used the NEXT button to follow the tour from the starting stop, *About this tour*, to the current stop, *What path do I choose?*

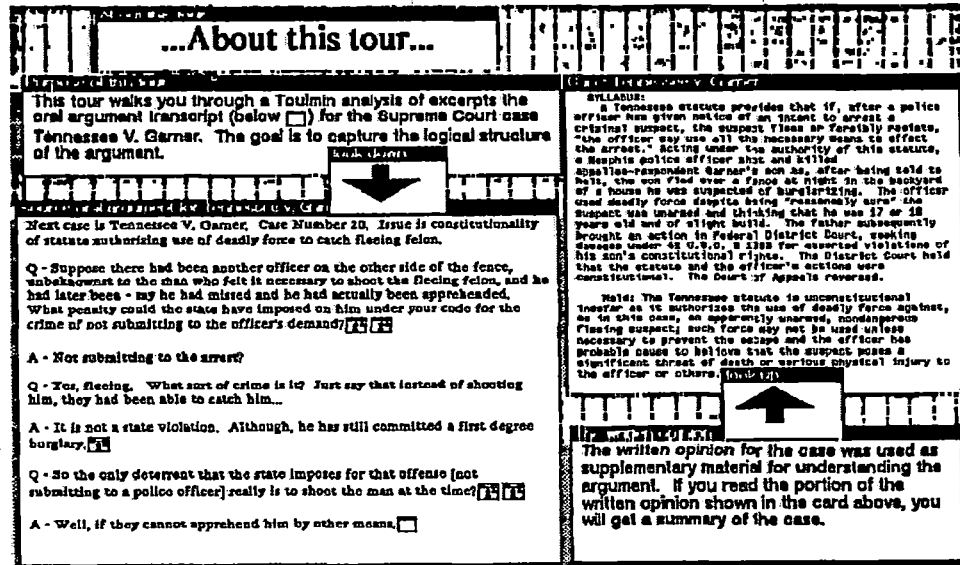


Figure 2. Introductory tabletop.

Since guided tours are themselves nodes in the hypertext network, they are part of the same database they are presenting. The tabletop cards which make up a tour may have other links connecting them to other parts of the network. Therefore, a guided tour is a subgraph of the subnetwork containing those cards. See [Trig88] for a full description and historical perspective of guided tours and tablespots.

Subsequent to [Trig88], the Guided Tours facility has been used by the authors and other members of the user community to create a number of tours; these attempts to author on-line hypermedia presentations have brought further issues to light. The tour we use as our primary example in this paper organizes a hypertext-based argument analysis of a Supreme Court oral transcript for presentation to two different audiences - readers interested in argument analysis and representation, and readers interested in the content of the argument. Details of the application are described in [Mars89].

3. ISSUES FOR ON-LINE PRESENTATION TOOLS

Experience has shown that authoring on-line hypertext presentations is a substantially more complex activity than Guided Tours, coupled with existing authoring conventions, alone supports. In our attempts at creating and reading guided tours, we have uncovered a set of issues that designers and users of on-line hypertext presentation tools should consider. They include the functions of metainformation in structuring on-line hypertext presentations, problems with narration and reference, and how coherence is maintained in a medium that promotes fragmentation. In discussing these issues, we provide examples of metainformation added to improve tour intelligibility, methods for providing absentee narration, and strategies for maintaining coherence and providing context. The examples are from a guided tour, illustrated in Figure 1, that explains a hypertext analysis of a courtroom transcript.

3.1 Information versus metainformation

Metainformation is the material added to an existing hypermedia network to make the information in the network intelligible and to help the reader avoid disorientation. We have found the following kinds of metainformation in guided tours:

- expository text referring to the original network
- instructions to the reader on how to interpret the screen layout
- descriptions of the structure of the tour
- textual and annotative devices that offset the effects of fragmentation.

Figure 2 shows an example of what we mean by metainformation. Two of the cards displayed, *Source oral argument for Tennessee v. Garner* and *Case: Tennessee v. Garner*, are part of the original network created during the course of the argument analysis. The remaining five cards, *About this tour*, *Purpose of this tour*, *The written opinion*, and the two cards containing arrows, comprise metainformation with respect to the original network.

The expository text necessary to explain the content of the original network forms a significant category of metainformation. The exposition added to the original network inherits many of the problems of traditional linear forms such as presentation order and tone. Expository text early in the tour discussing how and why the network was created can help readers anticipate the content of the tour and ascertain its relevance to their own interests. Figure 2 provides a limited example of an introductory tabletop containing expository text. It describes the goal in creating the original network and captions a sample of the material used in the analysis of the case. Often the expository text used to annotate the original network for the tour has a quality analogous to a figure caption in linear text. But, unlike linear text, there are no set spatial relationships to connect the caption with the figure; devices like drawn arrows and links are needed to call the reader's attention to the relationship between the caption and the piece of the original network.

Two other categories of metainformation arise from the need to discuss presentation conventions. Our experience with the NoteCards Guided Tours facility has shown that because hypermedia presentation conventions have yet to be negotiated in the user community, they need to be made explicit; conventions imported from other domains or invented for an individual tour must be explained. In time, such conventions will evolve and become internalized by readers and authors. But, for the time being, readers need to be given information about how to interpret the screen layout and the tour structure.

Relevant metainformation about screen layout conventions may include: significance of font size, conventions of gestural and pointing devices, divisions of screen space, and assumptions about the reader's on-line environment (such as screen size and system parameter settings). We have found that explaining these conventions allows the reader to focus on the content of the tour and avoid having to uncover and possibly misunderstand the author's conventions. In our example, the convention-explaining tabletops are labelled in the guided tour card, so that the reader can locate them in the beginning and refer back to them when necessary. A screen conventions tour stop is shown in Figure 3; it provides a schematic view of the typical "content" tabletop; two other stops, *How the left half of the screen is used* and *How the right half of the screen is used*, describe details of screen use conventions and show abstract version of cards in the original network that will appear in later tabletops. Without schematic views of the kinds of cards in the network and how they are organized on the screen, readers find it difficult to interpret the kinds of complex displays an author typically creates using the Guided Tours facility.

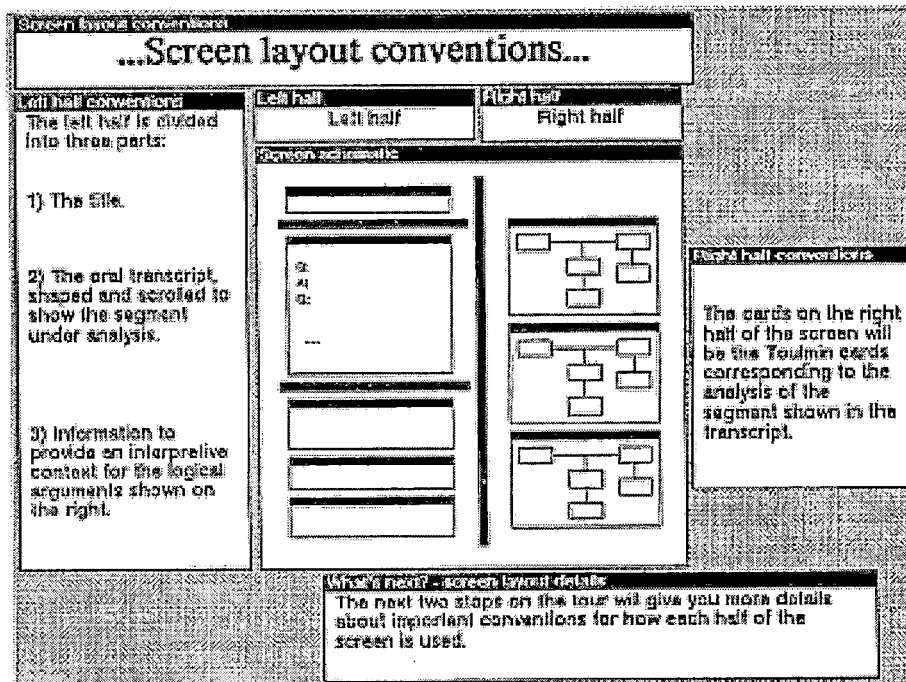


Figure 3. Abstract view showing tabletop conventions.

In addition to providing metainformation for interpreting the screen, the author is also faced with the task of discussing the tour's structure and how it relates to the interests of the intended audiences; readers must have a good idea of the author's intentions if they are going to make choices appropriate to their level of knowledge, experience and interest at branch points. Metainformation about tour structure has been provided in several ways in our example tour. The author has annotated the Guided Tour card shown in Figure 1 with metainformation concerning tour structure by labelling the tour with headings and subheadings such as *Tour Information*, *Method*, and *Conventions*. These labels, in conjunction with tour stop titles, tell the reader which stops describe the tour content, screen layout conventions, and path organizations. The reader is also given a labelled overview of the tour's topic structure showing the different lines of argument found in the analysis; these annotations function much like section headings in a paper.

Besides annotating the tour card, the author discusses the tour's structure within various stops as the tour progresses. For example, in Figure 4, the reader has been given an overview of the available paths. The author has drawn abstract maps of the paths, along with descriptions of the information presented along each path. In this case, she addresses both audiences, those interested in the analysis, and those interested in the argument's development.

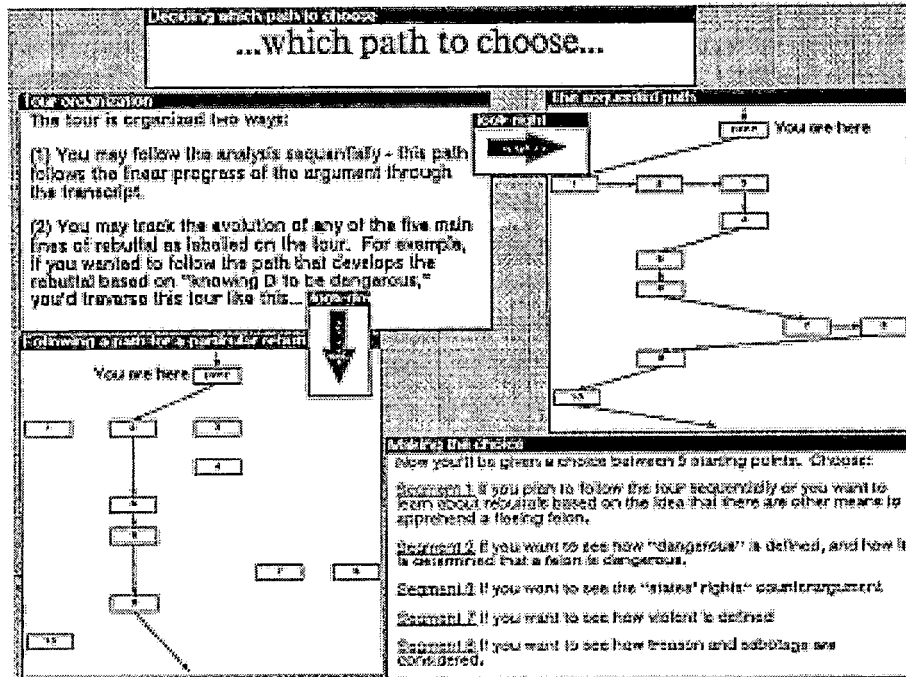


Figure 4. Tabletop showing map of tour structure.

Since hypertext displays are often complicated and non-linear, an author may also supply metainformation in the form of textual and annotative devices to cope with fragmentation and complexity. Some of the fragmentation an author introduces through the NoteCards Guided Tour facility is a consequence of creating multi-card displays. Thus metainformation to group cards on the screen helps simplify the reader's interpretive task. A second kind of fragmentation occurs between tour stops. Metainformation such as the "What's next?" card shown at the bottom right hand corner of Figure 3 attempts to reduce this kind of fragmentation. Section 3.3 discusses other techniques for maintaining coherence and context.

3.2 Narration

Guided tours of existing networks have been observed as having a quality of "aboutness," in part created by the multiple functions of the artifact and the dual roles of the author. The original network in our example served as the analytic medium; the network augmented by metainformation now acts as a presentation vehicle. Since a guided tour, like any text, involves an absentee narrator, an author may wish to provide a sense of the narrative voice and indicate her perspective on the work. Some hypermedia systems geared mainly to the task of presentation solve the narrative problem with an explicit narrator [Salo89]. In NoteCards however, most on-line presentations rely on an implicit presence, as in more conventional literary forms. To establish a narration in our example, the tour author distinguishes metainformation from text already in the network through visual cues. In Figure 2, the use of a larger bold font indicates narration. It may also help readers understand this distinction if the original network can be given a consistent appearance as viewed from the tour. One of our readers had trouble interpreting the introductory tabletop shown in Figure 2 because the original analytic material appeared in two different fonts.

Another complexity in providing narration to present an existing network arises from the disparate goals of the narration. On one hand, the author may be discussing the content of network, and on the other, properties of the medium. It is difficult to adopt a consistent

tone and level of formality when expository text is mixed with a variety of other types of metainformation, including instructions to the reader to "do this" and discussions of the medium. In our example tour, the author tended toward formality in the expository text, and toward informally addressing the reader when network content was not under discussion.

Tour authors also must confront the problem of reference, since they are not present to point and gesture during the reading process. In our experience, graphical arrows, asterisks, and other reference devices have been used to serve as stand-ins for the narrator's gestures and emphasis. Arrows are used to indicate the reading order of cards in a tabletop (Figure 2); they are also used to attach text to figures (Figure 3). In Figure 5, the arrows are annotated by the title of the window containing them, providing additional discourse cues. See [Trig88] for a more thorough discussion of deictic reference in guided tours. Arrows used in this manner illustrate an important distinction between narrative reference and the hypertext notion of reference. By using arrows instead of links, information and metainformation can be kept distinct; the tour remains an adjunct to the original information. The narrative reference is only available in the appropriate context for interpretation.

Reference embedded in text creates another set of problems for the author. It is very difficult to delineate (and interpret) the scope of a given reference in this presentation medium. Scope can vary wildly; a phrase like "The cards on the right half of the screen" can refer to cards within a single tabletop, across multiple tabletops, or in every tabletop of the tour. References to specific pieces of information can refer to a card that's on the screen now, a card the reader has seen in a previous tabletop, or a card at the end of a link. Our readers were disturbed by these questions of unresolved reference and tended to want to flip back and forth between tabletops.

3.3 Maintaining coherence and context

Although methods for maintaining coherence are more or less settled for conventional forms of writing, hypertext violates many of the assumptions underlying these methods. It is important to examine the characteristics of on-line presentations that distinguish them from conventional writing. One important aspect of conventional forms absent from hypertext is the transitional text that helps the reader maintain a sense of the material's coherence. The fragmentation characteristic of hypertext may also lead to a lack of interpretive context [Land87]. Therefore, authors of on-line presentations need to be particularly aware of strategies for promoting coherence, and ways of providing context to the reader.

In our example, sequential stops discuss either the same topic or closely related topics. To convey a sense of continuity and coherence across these stops, the tour makes use of *persistent cards*, cards that remain on the screen across a series of stops. Spatial cues are used to the same end; related tabletops have similar cards in the same (or almost the same) places. The use of persistent cards, combined with similar window layouts in the stops, allows the reader to anticipate material and relate it to previous stops.

Figures 5 and 6 show an example of this strategy. The argument card, A: *It is reasonable to use deadly force to apprehend a dangerous fleeing felon*, and its annotation, *Question: where's the dividing line?*, persist through the successive tabletops defining the notion of "dangerous felon." Figures 5 and 6 also illustrate the idea of *persistent gestures*; the "grey line" dividing dangerous and not dangerous moves across the screen in the two presentations. The author can assume at this point in the tour that the reader understands such higher level graphical metaphors.

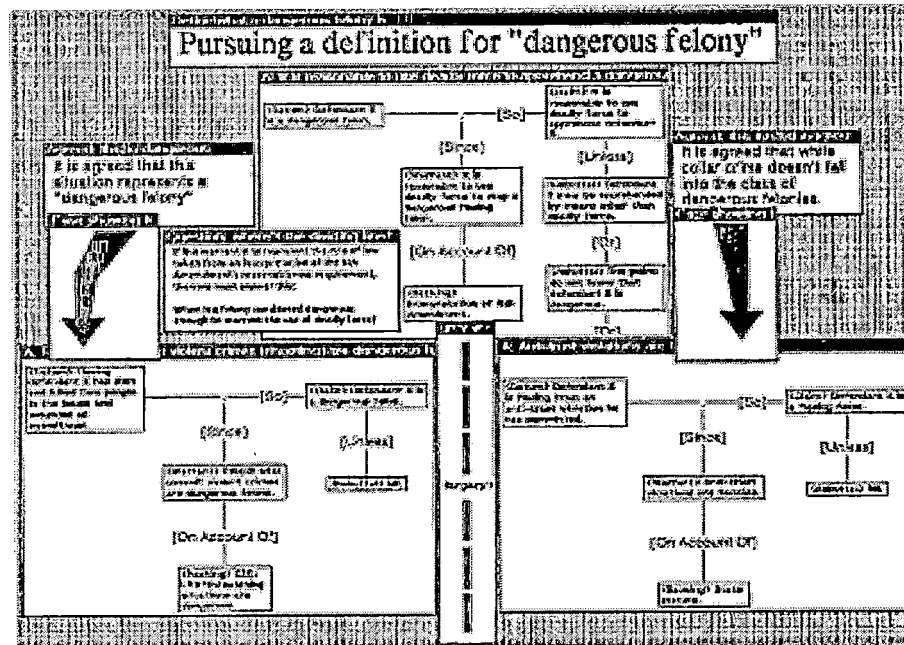


Figure 5. Use of persistent cards and gestures - part 1.

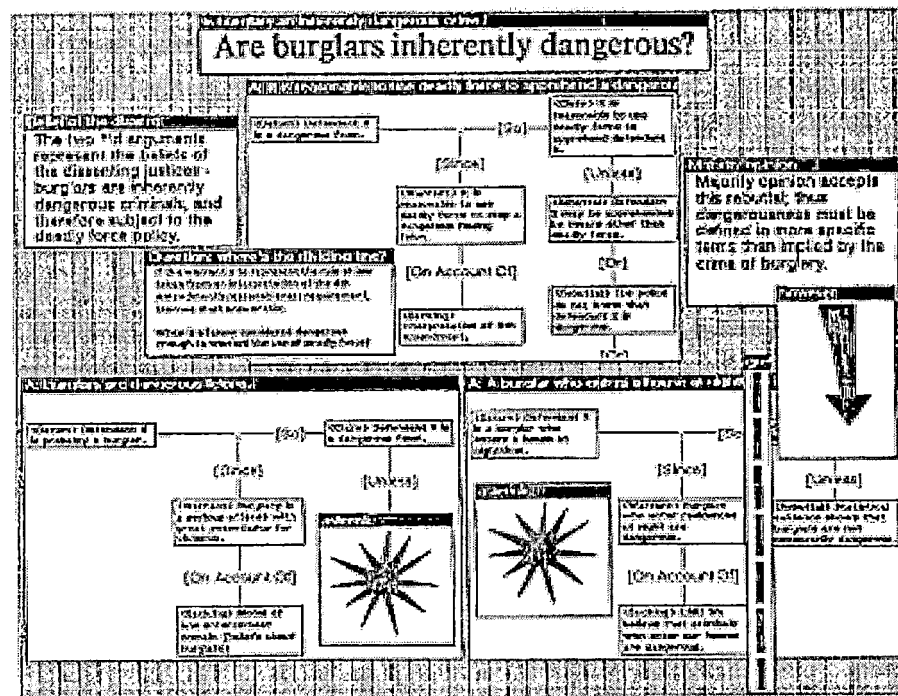


Figure 6. Use of persistent cards and gestures - part 2.

The coherence of a section of a tour can also be maintained using the notion of *spines*. A tour spine (indicated by layout or labels in the guided tour card) is a primary path through the tour with minimal branching. For example, the main portion of the tour shown in Figure 1 has several spines organized by the different argument strategies represented in that series of tabletops, such as the one labeled *D is not known to be dangerous*. Side

trips are defined relative to a spine; they can be taken according to interest, and readers can easily find their way back to the spine.

One complication in the maintenance of coherence and context comes from the inherent interactivity of hypertext. In our task domain, where there is considerable information that falls outside of the tour, readers can make unplanned forays into the network, sometimes resulting in complex and confusing screen layouts. This raises the issue of screen management in touring situations. For example, in Figure 7 the tour author encourages readers to explore the network from a tour stop, but there is currently no way for the author to prevent readers from opening too many cards and getting lost.

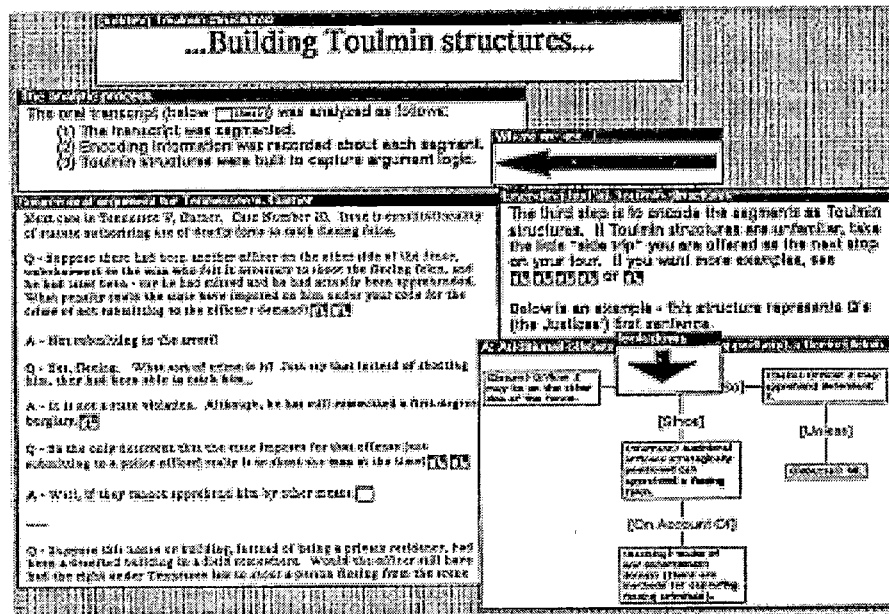


Figure 7. Encouraging readers to explore the network.

4. CONCLUSIONS

Our experience with guided tours and ad hoc on-line presentations in NoteCards highlights a need to distinguish between the formulation of a hypertext network for a user's own research or other use and the presentation of the same network to an audience. Because these two very different processes are easily confounded in hypertext, it is necessary to provide support for each. The trail-blazing and path-following metaphors that have been proposed in earlier work such as [Bush45] and [Trig86] may be insufficient for a reader to make sense of another's path in the absence of context-creating metainformation and narration.

Mechanisms that provide representations for guiding a future reader through a network [Stot88], [Trig88], [Zell88] offer partial solutions, especially from the reader's point of view, but they do not provide support for authoring on-line presentations. Since we have found that considerable metainformation is necessary to structure a network for presentation, we need to consider how we can help an author provide this audience-directed narration. Future support for authoring guided tour-like presentations should include frameworks for:

- Annotated graphical overviews.
- Tour stops that explicate layout conventions.
- Integrating expository text with other types of metainformation.
- Context-sensitive reference.
- Persistent gestures and cards.
- Tools to support activities from other disciplines.
- Examples of successful presentation strategies.

As the hypertext community's experience with on-line presentations grows, an increased appreciation of what it means to produce an intelligible network will emerge. Furthermore, as a wider community of readers and writers begins to communicate about the content of existing networks, conventions will continue to evolve for hypertext as a presentation medium.

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<http://www4.informatik.uni-erlangen.de/Perplex/>.

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Supporting Hierarchical Guided Tours in the World Wide Web

Franz J. Hauck

Dept. of Math. and Computer Science, Vrije Universiteit
Amsterdam, The Netherlands

Email: fjh@cs.vu.nl

Abstract: Guided tours are well known from hypertext systems as a means to collect hypertext documents in a sequence with a certain meaning. This can be followed by readers using *next* and *previous* links. As there is almost no support for guided tours in the World Wide Web so far, these structures have to be built up manually, which not only causes a lot of work on updates but is also almost impossible in the case of non-local documents. This paper presents a simple server-side concept for building guided tours using any existing Web pages. The pages used within a tour need not be aware of being used, and thus, need no special preparation at all. Pages may occur multiple times within several tours or even within one tour. We present a server-based implementation demonstrating the concept.

Keywords: Guided Tours, Authoring Environments, WWW Server

1 Introduction

2 Structuring Web Documents

2.1 Tour Structures

2.2 Decoration

2.3 Meta Nodes

3 Implementation

3.1 The Perplex Server

3.2 The Tour DFS

3.3 Decoration and Configuration

3.4 Frames

3.5 Recursive Tours

4 Related Work

5 Conclusion

6 Acknowledgments

7 References

1 Introduction

The authoring of hypertext documents requires some thought about how to split information into different documents, usually called nodes, and how to interconnect the nodes using hyperlinks, which allow readers to navigate through the entire system. Usually, hypertext systems, and also new hypermedia design methods such as RMM [TSB95], allow authors to give hypertext links a special meaning. For example, a node representing a painting may have a link to the node representing its painter. In this case,

the meaning of the links is 'painted by'. In [GMP95] these links are called *schema links*, in contrast to *generic links*, because they result from a schematic design process of the presented information. It is up to the hypertext system in companion with the author to render schema links in such a way that the reader immediately understands their meaning.

One often used pattern is a guided tour [Trigg88]. This is a sequence of nodes. There are schema links which allow readers to follow the sequence back and forth. As nodes may be part of several guided tours these nodes may have several schema links for each tour. Since it is confusing to show readers all these links, only the one which is necessary to follow the current tour will be displayed.

In contrast, the World Wide Web provides only one type of hypertext link and it is completely up to the author to decorate these links in a consistent way, such that readers are aware of the meaning of the link. As the HTTP protocol [HTTP96] for the transportation of Web pages is stateless, Web pages are almost static and all their possible dynamic behaviour can hardly depend on the history of the reader's actions. This does not allow the usage of a single Web page in multiple guided tours without showing all the schema links of other guided tours the page is involved in.

While modern hypertext systems support authors by building up schema links, there are almost no such means for Web pages. The organization of a guided tour requires the author to insert the schema links manually in each page. Imagine a department of a university which wants to serve the WWW documents of its staff members. Each staff member has his or her own Web page. These pages are linked together, so that a reader can follow hypertext links to the next or previous staff member in alphabetical order: a guided tour. Whenever a new member is employed, or another leaves the department, hypertext links in several documents have to be updated. Thus, manually maintaining the schema links has a serious drawback. As Web pages may be distributed over the entire world, this update may be impossible because it is often not possible to change non-local documents for inserting the schema links. This happens, for example, when an author wants to show his readers a sequence of selected search engines used in the WWW.

This paper elaborates a server-side mechanism to create the schema links automatically for lists, sequences, and even hierarchical guided tours, according to some meta-information stored in a separate configuration file. These structures can enumerate arbitrary WWW documents on arbitrary servers while the configuration remains on the local server, and thus with the administrator or creator of the structure.

The paper is organized as follows. [Section 2](#) explains the structures which need to be supported and what this support looks like. [Section 3](#) presents our implementation which is based on an experimental WWW server called *Perplex*. [Section 4](#) compares our mechanism to related work. Finally, [Section 5](#) gives some conclusions.

2 Structuring Web Documents

The mechanism we want to provide allows authors to configure hypertext structures in terms of predefined hypertext links (schema links), like *next* and *previous*, connecting ordinary WWW documents. In the following we call these structures *tour structures*. The documents used in a tour structure need not be aware of being used. As HTTP does not carry the information about the history of the client, we have to give the original document an additional URL which names it inside a tour structure. A document may be used several times in one or in different structures which adds one more URL for each occurrence. Retrieving the document using the new URL automatically adds the schema links to the contents of the original document, according to its position inside the tour structure.

Thus, the server side mechanism is mainly to retrieve the original document, add some decoration to it--the schema links--, and send it on to the client.

2.1 Tour Structures

Guided tours and lists have a quite simple sequential structure, as shown in [Fig. 2.1](#). The boxes represent hypertext nodes or WWW pages respectively, as used inside the structure. Each node is related to an *original node* which may be located on some server. The arrows show hypertext links. These links allow readers to navigate through the entire structure, e.g., a guided tour.

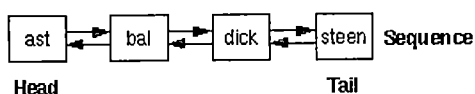


Figure 2.1: A simple sequential hypertext structure.

For example, this list may represent the staff members of a university. The nodes are named from the user's login names and ordered alphabetically. A sequence has two designated elements: the *head* and the *tail* node which do not have a predecessor or

successor, respectively. The links between the nodes have the meaning *next* and *previous* and allow readers to follow the sequence from the head to the tail and vice versa. Thus, node **ast** has a *next* link to node **bal**, node **bal** a *next* link to **dick** and a *previous* link to **ast**, etc. Additionally, sequences may be cyclic which adds a *next* link from the tail to the head and a *previous* link in the opposite direction.

Each node of the tour structure of Fig. 2.1 needs an additional URL which is composed of a URL prefix assigned to the structure and the node's name in the structure. In our case the structure may have the URL prefix <http://sunray.cs.vu.nl/tour/staff/>. The tour structure is located on the WWW server of host **sunray.cs.vu.nl**. This server identifies the local URL **/tour/staff** as the starting point of a tour structure and acts appropriately. In the example in Fig. 2.1, the first node would have the URL <http://sunray.cs.vu.nl/tour/staff/ast>.

For the configuration of this tour structure on server **sunray.cs.vu.nl** we need to provide the URL prefix of the entire structure (here: **/tour/staff/**), the structure itself in terms of names and node order (here: **ast, bal, dick, steen**), and finally, a mapping of each node to its original URL (here e.g.: **ast** -> <http://www.cs.vu.nl/%7East/> etc.). This information is sufficient for our system to retrieve the original document and determine the structural *next* and *previous* links for it. It is obvious that changing the order of the nodes in the tour structure simply requires some changes in this configuration and none in the original documents.

In fact, our system allows more complex tour structures than sequential ones. To that end, we introduce some hierarchy. Fig. 2.2 shows a hierarchical structure of hypertext nodes.

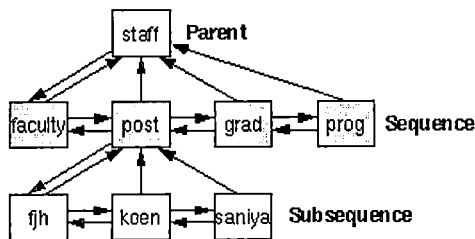


Figure 2.2: Hierarchical tour structure.

The hierarchical tour structure consists of sequences which are linked together using *next* and *previous* links. A sequence may have a parent node. All members of a sequence have an *up* link to the parent node. The parent has an additional *down* link to the head node of its subsequence. This scheme applies recursively. Thus, each member of a sequence can itself be a parent of a subsequence and so on. The simple list shown in Fig. 2.1 is only a special case of this general structure. The single parent node **staff** shown in Fig. 2.2 is itself a sequence with only one element.

Hierarchical tour structures can be used to implement guided tours with different levels of detail. In our example, the **staff** node provides a subsequence of different groups of staff members: faculty members, postdocs, graduate students, and programmers. Here, the postdoc node **post** has a subsequence providing all the postdocs in alphabetical order. The reader may stop following the subsequence and returning to the subsequence's parent node using the *up* link.

The URL of each node is composed of the URL of the sequence's parent node and an additional syllable denoting the node in a sequence, similar to the composition of UNIX pathnames using nested directories. Given the URL prefix <http://sunray.cs.vu.nl/tour>, the URL for node **fjh** in Fig. 2.2 would be <http://sunray.cs.vu.nl/tour/staff/post/fjh>. Thus, nodes have to have unique names in a sequence but not necessarily a unique name in the entire tour structure.

2.2 Decoration

The tour structure mechanism has to decorate the original document automatically with the schema links of the structure. One place to do this is the top of the document. This part is even visible if the document is longer than the browser's canvas. An alternative would be the bottom part of the document which may not be visible without scrolling on long documents. It may also be appropriate to decorate both sides of the document. Another alternative is the use of Netscape's Frames [Net96] which will be described in Section 3.4.

The decoration should be configurable by the author of the structure. It has to contain at least the *next*, *previous*, *up*, and *down* schema links. Authors may want to add short descriptive texts that name sequences and individual nodes. Additional links are introduced in Section 2.3. Fig. 2.3 shows the rendered decoration of node **post** of Fig. 2.2 containing schema links and descriptions. Here, the links are represented by clickable arrow images, but the author can configure arbitrary icons or text strings to represent schema links.

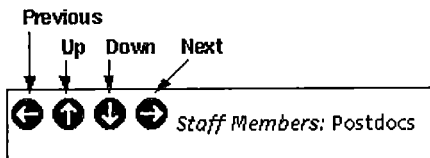


Figure 2.3: Decoration of a document's head as part of a tour structure.

The *next* link leads to the graduate students' node, the *previous* link to the faculty members' node. The *down* link leads to the head of a sequence of postdocs, here to the node **fjh**. The *up* link points to the staff members' parent node **staff**.

2.3 Meta Nodes

Sometimes authors may want to add additional schema links to every node in a tour structure. Examples are links to a detailed description of the node or to a help document explaining tour navigation. We call these linked nodes *meta nodes*.

An author of a tour structure simply adds a schema link to the configured decoration giving it a general name like **description**. Additionally, the author has to provide a mapping for each node of the tour structure to a URL representing the original contents of the meta node.

Meta nodes are addressed using the URL of the node they refer to, suffixed by an additional syllable containing the name of the schema link and the letters **%7e** which represent the tilde character. We disallow ordinary nodes to have names ending with a tilde character such that URLs of meta nodes are distinguishable from URLs of ordinary nodes. Thus, the URL for the description meta node of the node **post** of Fig. 2.2 is <http://sunray.cs.vu.nl/tour/staff/post/description%7e>.

Meta nodes are rendered with a special decoration containing an *up* link back to the node of the tour structure to which the meta node belongs.

A special meta node is the **index** node which is an automatically generated index of the current sequence. An index is a list of all nodes of the sequence listed in the order of appearance. Each entry in the list describes the node using the node's description text provided by the author. It is clickable and leads immediately to the corresponding node of the tour structure. This allows readers to skip certain nodes of the sequence or to immediately go back to a previously visited node.

Sometimes, it is useful to have a parent node present an index of its subsequence. To that end, parent nodes may be configured individually to be decorated with an additional index of all the nodes of the subsequence. The decoration is added immediately after the top decoration. Often, a parent node with index decoration does not need any further information, and thus may have an empty node as its original node.

There are more implicit meta nodes called **head**, **tail**, and **origin**. The head and tail meta nodes refer to the head and tail nodes of the current sequence. Thus, <http://sunray.cs.vu.nl/tour/staff/post/head%7e> redirects to the URL of node **faculty** in Fig. 2.2. The meta node **origin** refers to the original node.

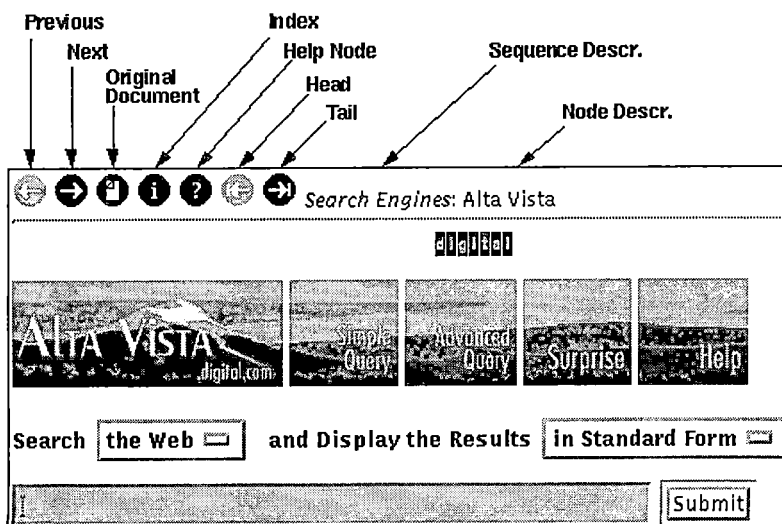


Figure 2.4: Exemplified decoration of a tour stop.

Fig. 2.4 shows the rendered first node of a sequence of the Web's search engines. Schema links are rendered in two different styles at the top of the document. When the link is not available or refers to the node itself it is rendered by a grey icon (disabled) otherwise by a blue icon (enabled).

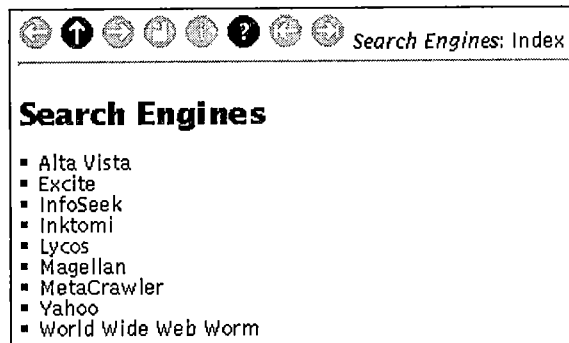


Figure 2.5: Exemplified decoration of an index meta node.

Fig. 2.5 shows the index node of the sequence which is shown when the reader clicks on the index icon of Fig. 2.4. The *up* link leads back to the node shown in Fig. 2.4.

3 Implementation

The implementation is based on the *Perplex* server software which is an experimental WWW server written by the author [Hau96]. The server is completely written in the *Perl 5* language [Perl96]. In principle, it would be possible to implement the ideas presented in Section 2 in any WWW server, but we will see that the special structure of Perplex's stackable DFS modules simplified the implementation task.

3.1 The Perplex Server

The Perplex server contains a main module which waits for a request from a client. Furthermore, there are a configurable number of so-called *Document File System* (DFS) modules which serve parts of the server's URL space. The name DFS is related to file systems in operating systems. In fact, DFS modules act like file systems, not on files but on Web documents. DFS modules have a generic interface which represents the contents of HTTP request/reply messages [HTTP96] by a suitable data structure.

This structure allows DFS modules to be stacked, as was done with file systems in various operating systems, e.g., in the *Spring* system [KhNe93]. An example of this is the Perplex root DFS. The main module of Perplex forwards a request from a client to the root DFS through its request interface and waits for an answer from its reply interface, which is then returned to the client. In most configurations the root DFS reads its configuration file and forwards the request to one of several other DFS modules. These serve different purposes, such as mapping URLs to UNIX files, gatewaying to the *finger* daemon, serving *CGI* scripts, and many more. These DFS modules reply to the root DFS which returns the response to the main module. Fig. 3.1 shows a typical Perplex server configuration.

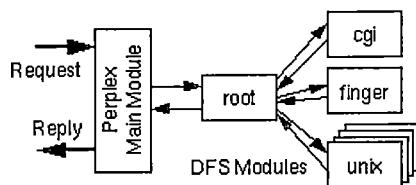


Figure 3.1: Perplex server configuration of DFS modules.

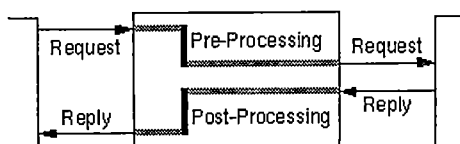


Figure 3.2: Pre- and post-processing in a stacked DFS module.

In general, stackable DFS modules can be used to pre-process a request before sending it on to another DFS, or post-process the response of an other DFS before sending the reply back to the caller, or both. For the implementation of the desired tour structure support, we will use both possibilities. Fig. 3.2 presents a stacked DFS module and shows the pre- and post-processing phases. For example, in the root DFS the pre-processing consists only of selecting the DFS to process the request according to the requested URL.

3.2 The Tour DFS

The DFS implementing our tour structure mechanism is named *Tour DFS*. When it gets a request it translates the URL of the request to their original nodes (pre-processing) according to the mapping of nodes in the tour structure. It forwards the translated request to another DFS module which retrieves the original document. The returned document is then decorated by the Tour DFS with the schema links such as *next* and *previous* (post-processing). Then, the changed document is returned to the calling DFS module, and finally to the main module which sends it to the client.

If the original document resides on the same server, the request is forwarded back to the root DFS. In this case, a forward-trace logs all forwardings and thus detects endless recursion in bad configurations.

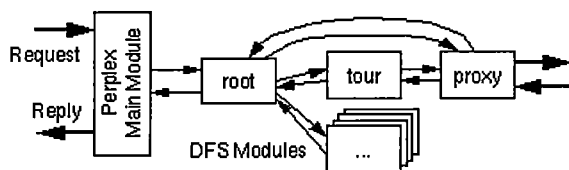


Figure 3.3: The Tour DFS configuration inside of a Perplex server.

Since we want to incorporate documents from all over the Web into a tour structure, we need to forward the request for these documents to a proxy DFS which can retrieve the documents from any server using the HTTP protocol [HTTP96]. In the current implementation the proxy DFS is also used to handle local documents because it automatically detects them and forwards requests for them back to the root DFS. Fig. 3.3 shows the configuration for the tour DFS in relation to other DFS modules.

3.3 Decoration and Configuration

As a Web page may have hypertext links expressed as so-called relative URLs [Bern94] we cannot simply assign a new URL to an original document. In this case, a relative URL would not refer to the right resource because the browser would use the new tour URL to compose an absolute URL from a relative one. Fortunately, the Hypertext Markup Language HTML [BeCo95] knows the <BASE> tag for providing the base URL for building absolute URLs from relative ones. In our case, it has to name the URL of the original document. It is added as part of the decoration process. If there is already a base tag in the original document it must not be changed.

If the original node is not available because its server is down or not reachable, the tour DFS creates a dummy page containing an appropriate error message. Thus, a sequence cannot be broken and a reader may go on navigating through the entire tour structure because the schema links are provided in any case, or at least as long as the tour server itself is available.

The basic decoration of all nodes of a tour structure is configured using a single configuration. This minimizes configuration work and achieves consistency. The author specifies a single string which expands to the complete decoration placed on the top or the bottom of the document or at both sides. This string may contain arbitrary HTML tags. Thus, it is easy to include static links, for example, to the author's Web page.

On the other hand, the author may use several special commands inside of the decoration string which are expanded by the system individually on a per-node basis. To place one of the schema links, the author simply places a corresponding special command into the string.

The following schema links are available:

next, previous, up, and down

These correspond to the inter-node links of a tour structure as explained in Section 2.

head and tail

These schema links expand to links to the head or tail node of the current sequence.

index

This schema link connects to an automatically generated index of the current sequence.

origin

This is the schema link referring to the original node as configured within the tour structure.

user defined schema links

As explained in [Section 2.3](#), authors may define meta nodes with corresponding schema links.

The rendering of each schema link is configured independently. It may be done in two different styles:

if-present

The decoration shows the configured rendering only if the node's position needs the schema link or if the link is available. Otherwise, the schema link is simply not rendered. In this mode head and tail nodes do not show a *previous* or *next* link, respectively.

indicating

In this mode a schema link is always shown but rendered in different styles indicating whether the schema link is available for this document or not. If a schema link is not available, e.g. the *previous* link in the head node, the author may configure its rendering as a grey shaded arrow instead of a blue one.

Additionally, the user may use commands to render the description text of the current node and/or the current sequence in the configuration string. As an example, the configured decoration string used in [Fig. 2.4](#) and [2.5](#) is:

```
'%prev% %up% %down% %next% %origin% %index% %help% %head% %tail% <I>%seqdesc%</I>:
%desc%'
```

Special commands are bracketed by % characters. The *up* and *down* links in the examples are rendered using 'if-present' style, all other links use 'indicating' style. This is configured outside of the decoration string.

3.4 Frames

In the tradition of inventing its own HTML tags, Netscape Comm. Corp. added some new functionality to the newest Netscape browser software: Frames [[Net96](#)]. Frames allow several HTML windows at once in a browser's canvas, each showing a different HTML document. Clicking links in one of the frames may display a new document in another frame. The big advantage is that you can display tables of contents or other information in one frame and the main document in another frame, and each frame is independently scrollable.

Framed documents would not show our decoration. That is why we adopt to the concept of Frames. In the current implementation of the Tour DFS, there are two ways to cope with Framed documents:

- If the original document uses Frames, we put the decoration in a static, extra Frame at the top of the document. All other documents are decorated as described so far (at the top and/or bottom of the document).
- We always turn the original document into a Framed document and display the decoration in a static, extra Frame.

Putting the tour decoration in an extra Frame has the big advantage that it is always visible even when the main Frame was scrolled.

In every case, browsers not capable of the Frame concept will get the same result as they would get with the original document but with an added decoration. The Tour DFS is thus compatible with old browser software.

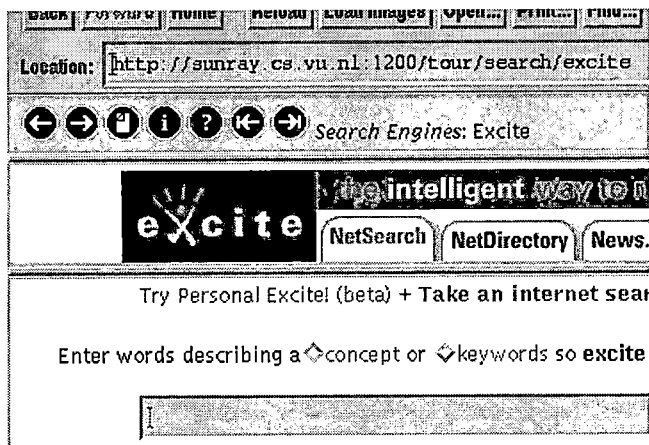


Figure 3.4: Tour decoration using Netscape's Frames.

Fig. 3.4 shows a tour stop with an original node using Frames. The tour decoration is added as an extra Frame on top of the original Frames of the document.

3.5 Recursive Tours

Tour structures may be recursive. That means that the URL of a tour structure node is mapped itself to a URL of a node within another tour structure. This case needs special handling. Otherwise, the decoration of schema links may appear twice or more in the top and/or bottom of the document each with different links.

First, the Tour DFS signals the server of the original document that it expects it not to decorate the document as part of a tour. This is done using an additional HTTP header as shown in Fig. 3.5.

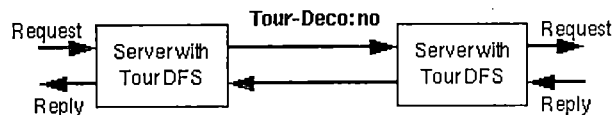


Figure 3.5: Additional HTTP header used in requests between two Tour servers.

A Tour DFS receiving this header will not decorate the original document, but send it unchanged to the first server which finally decorates it. Thus, we can pick up one node of another tour and insert it in a new tour as if it were the original node.

Second, we allow inheritance of subsequences if the author maps a tour node to another tour node. This has to be explicitly enabled on a per node basis to distinguish this situation from the first case. Imagine that the node **p** in the tour structure of Fig. 3.6a is mapped to node **post** in the structure of Fig. 2.2. If inheritance is enabled for node **p**, the resulting structure would be as seen in Fig. 3.6b.

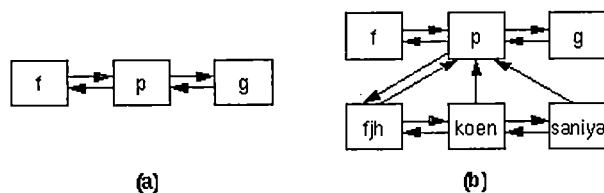


Figure 3.6: Tour structure using inheritance of subsequences.

For node **p** the first server sends a modified HTTP header to signal that inheritance is allowed:

Tour-Deco: no;allowdown

If the second server knows about a subsequence he returns the name of the first node in that sequence in a response header to the first server:

Tour-Deco: down="fjh"

Thus, the first server can add a *down* link to its decoration and can generate an own URL for the first node of the inherited subsequence.

All nodes of inherited subsequences are recognized because there is no information about them in the first server. Imagine that the URL prefix for the structure of Fig. 3.6 is <http://gig.cs.vu.nl/tour/new/>. If the first server gets the URL <http://gig.cs.vu.nl/tour/new/p/fjh>, it knows that this node is inherited via node **p**. It forwards the request to the second server and adds an additional HTTP header:

```
Tour-Deco: root="http://gig.cs.vu.nl/tour/new/p"; ref="fjh"
```

The second server can retrieve the document and decorate it. For all schema links it uses the URL prefix provided by the first server so that all schema links can be processed by this server first. The second server acknowledges that it decorated the node by an additional response header:

```
Tour-Deco: done
```

Thus, the *next* link in the decoration will have the URL <http://gig.cs.vu.nl/tour/new/p/koen> which causes similar processing in the first server again. All URLs, including meta node URLs, prefixed with <http://gig.cs.vu.nl/tour/new/p> are forwarded to the second server. So, all meta nodes of the second server are reachable as well.

This handling allows nodes of tour structures to be mapped to other nodes of tour structures. The decoration is done by the first tour structure in the chain. Subsequences may be inherited by the mapped structure and will be decorated by it. The usage of the HTTP headers also ensures that non-local servers using the same or a compatible tour structure mechanism can work together.

4 Related Work

Brooks et. al. describe in [BMMM95] the usage of proxies as application-specific transducers. In fact, a Tour DFS is such a transducer in their senses specialized for building tour structures. Brooks et. al. implemented a toolkit for building transducers which allows much more processing than is needed for tour structures. Their approach can even carry state from one request to the other while requests for tour nodes are processed without any extra state. However, a Tour DFS is a transducer on a finer level of granularity because it can transduce original documents within one server without using HTTP at all. Thus, if the nodes of tour structure are locally available, the Tour DFS does not need to call another server.

The *Boomerang* tool [DySI95] allows the reconfiguration of original Web pages using a powerful editing language. Indeed, Boomerang could be configured to do almost the same work as our tour structure mechanism. Nevertheless, Boomerang has some serious disadvantages. Boomerang is not able to fetch non-local pages. Of course, it would be possible to enhance the CGI based Boomerang tool to fetch non-local pages but the fetch engine must be completely integrated into the CGI script so that almost the same code may appear several times in the server software. All needed parameters for Boomerang have to be passed by query strings or hidden variables in form postings. This makes the URLs used for derived pages somewhat messy, and finally, it sometimes disallows original nodes from being CGI scripts.

HSDL [Kesse95] goes one step further than our tour structure mechanism and allows authors to generate a skeleton of HTML pages with all the necessary schema links out of a sophisticated graphical hypertext design tool. Thus, there is more expressivity and some guaranteed consistency for schema links in HSDL. On the other hand, HSDL does not allow the integration of non-local Web pages and it is not known how to incorporate existing local documents into the system. Finally, reconfiguring the HSDL definitions of a large hypertext document requires regeneration of the HTML pages, while with our tour structure mechanism the final pages are generated on the fly.

5 Conclusion

We introduced a mechanism for the automatic generation of schema links for hierarchical tour structures. Mostly, these structure are used to build guided tours. The nodes collected for a guided tour can be arbitrary even non-local Web pages and need not be aware of their usage in a tour structure.

The tour structure concept is a mechanism not a policy. Authors of complex hypertext documents may use our mechanism to design good or bad documents. Nevertheless, we believe that the introduced concept will help in the design of better hypertext documents.

The implementation was done using the experimental Perplex server software and especially using its stackable Document File Systems (DFS). A demo of the tour structure mechanism is available on the Perplex home page:

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08/922,063	09/02/1997	DAMON C. TORRES	IWY-080

JOSEPH SOFER, ESQ.
SOFER & HAROUN, LLP
342 MADISON AVENUE
SUITE 1921
NEW YORK, NY 10173

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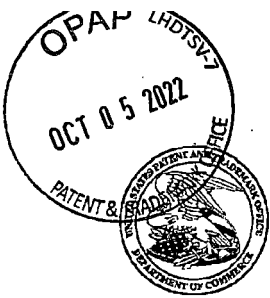
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