10,380,602

Patents

12/384,403

System and method for creation, distribution and tracking of advertising via electronic networks

Abstract

A system and method for creation, distribution and tracking of advertising via electronic networks, enabling creation of advertisements using licensed third party content and placement of said ads at desired network locations, utilizing an auction of ad spaces based on bids placed by advertisers to have their ads displayed at such locations. When a network user/ad viewer requests an ad by clicking or other action, an auction algorithm executes to select the ad to be displayed from those that bid for display at such ad space location and then the ad is composed and delivered to the ad space location by accessing a relational database storing commands that retrieve, assemble and dispatch the licensed ad content. Usage and display of licensed content on designated ad space is tracked to enable cost-per-use charging for both use of licensed content and ad display at the designated ad space.

Images (5186)

Classifications

G06Q30/02 Marketing, e.g. market research and analysis, surveying, promotions, advertising, buyer profiling, customer management or rewards; Price estimation or determination

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US10380602B2

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Description

CONTINUITY/PRIORITY INFORMATION

This application is a continuation in part of co-pending U.S. Nonprovisional patent application Ser. No. 11/803,779 filed on May 16, 2007 now U.S. Pat. No. 10,380,602, which in turn is a continuation in part of U.S. Nonprovisional patent application Ser. No. 11/643,245 filed on Dec. 21, 2006 now U.S. Pat. No. 10,380,597, which is based upon and claims priority back to U.S. Provisional Patent Application Ser. No. 60/753,536 filed on Dec. 24, 2005, the entirety of each of which is incorporated herein by reference. The benefit of the earlier filing date of co-pending Nonprovisional patent application Ser. No. 11/803,779 filed on May 16, 2007 is claimed pursuant to 35 U.S.C. Section 120; the benefit of the earlier filing date of co-pending Nonprovisional patent application Ser. No. 11/643,245 filed on Dec. 21, 2006 is claimed pursuant to 35 U.S.C. Section 120; and the benefit of the earlier filing date of provisional patent application Ser. No. 60/753,536 filed on Dec. 24, 2005 is claimed pursuant to 35 U.S.C. Section 119(e). This application is

also a continuation in part of co-pending Nonprovisional patent application Ser. No. 12/316,781 filed on Dec. 15, 2008, the entirety of which is incorporated herein by reference, and the benefit of the earlier filing date of which is claimed pursuant to 35 U.S.C. Section 120.

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BACKGROUND OF THE INVENTION

A. Technical Field

The present invention relates generally to methods and systems for creation and distribution of advertising, promotional and informational electronic communications regarding products and services via computer and communication networks, and displaying same at desired locations. More specifically, the present invention is a system and method for creation of electronic advertisements using digital content made available for licensing, and placing the ads at desired network locations utilizing an auction of designated advertising space at desired locations on a network. The system can be used to provide an ad content as well as an ad space exchange for content licensors, advertisers and ad publishers, including barter-based implementations.

B. Background

Advertisers seeking the global reach of the Internet and other electronic networks as an effective and efficient medium for disseminating advertisements to consumers have had to deal with various limitations in technology and methods. From the advertiser's perspective, there are two main tasks to accomplish: 1) creation of an effective ad; and 2) effective placement of the ad. From the ad publisher's perspective there are also two main tasks to accomplish: 1) display of the highest revenue-producing ads; and 2) reducing the amount of work necessary to place, maintain, track and process payments for advertising. The creation of electronic advertising content can be an expensive task for those that take the traditional route of either creating content internally or engaging a third party contractor to create same. While there are sources of pre-existing electronic content that can be used in exchange for payment of a fee, because of content provider system limitations in the ability to track usage activity with respect to the content, usually the fee is a flat fee payable up front, which makes the use of such content an expense that users must incur beforehand. This method does not allow for optimization of return on investment, or “ROI,” with respect to ads based on real-time ad response, because if the advertising content is not working effectively, to change the content would mean losing all invested in the purchase of that content. This also can result in content licensors not maximizing the revenues generated from their content.

Effective placement of an ad is crucial for success of any ad campaign. The ad must reach the proper audience and as large an audience as possible in order to maximize the effectiveness of the ad in generating business for the advertiser. Ad display space costs money as well, and advertisers therefore need to make sure that the display locations they select for their ads produce an acceptable ROI to be worthwhile. In the case of the Internet, which is dominated by a large number of personal and special interest websites with relatively low traffic, a simple method for publishers to place advertising on their web sites for optimal return is necessary. Internet advertising charging methods include the pre-pay or billed cost-per-impression, or “CPM,” or cost-per-click, or “CPC,” models, wherein advertisers pay publishers to place their advertisements on a website according to the number of impressions served, or

click actions taken on the advertisement. Usually these transactions are done through a third party agency who receives commissions based on a percentage agency discount offered by the publisher.

~~Methods currently in wide use for placing ads on electronic networks such as, for example, the Internet, are conceived primarily for the search engine business model, and work with an auction or bidding process to influence the position of a search listing within a search result list. Typically the advertiser pays a monetary amount every time action [such as a click] is taken on the listing. The auction can take into account a number of variables including cost-per-click, or "CPC" bid amount and the click-through rate of the advertisement. The advertiser sets up an account at the search engine, submits an ad for listing, enters keywords, and a cost-per-click monetary bid for placement of the ad. When the advertiser enters a bid amount the system then compares the bid amount with other bid amounts for the other ads that reference the same search term and generates a rank value for all search listings having the same search term. The rank value generated by the bidding process determines where the advertiser's listing will appear on the search results list page that is generated in response to a query of the search term by a searcher located at a client computer on the computer network. This system and method was effective in increasing the relevancy and "ROI" of contextual advertising by using corresponding search terms for the advertisement and the search listing, and offering a cost-per-click auction method so advertisers paid a desired amount only when their listing was clicked.~~

~~There remains a long felt need for publishers to easily and efficiently create and display advertising and for businesses to optimize their advertising expenses while increasing effectives of their advertising campaigns. Advertisers would benefit greatly if a system was available for them to easily and cost-efficiently procure quality digital content and create electronic ads using such content and then also direct, control and manage placement of the ads in all desired network locations all via one system, with all content usage and ad placement charges processed and paid for via one system. Advertisers would greatly benefit from a system that manages advertising costs by allowing them to use third party digital content on a cost-per-use basis and also pay for ad space for the ads created using such content in desired locations and in response to desired keywords on a cost-per-click basis, with payment from the advertiser to both the content licensor and the ad display location owner being processed each time the ad content is used by displaying the ad at the particular display location. They would further benefit from being able to manage their ad content composition and placement and make changes to their ad content and ad placement quickly and easily based on their assessment of ad and ad placement ROI or other effectiveness measures made possible by tracking data gathered by such a system. Additionally, advertisers and ad publishers would benefit greatly from having an ad space exchange system where publishers can make available their ad space/impression/view inventory in exchange not only for revenues from ad placements but alternately or also in exchange for ad space for their own ads placed at third party network locations, or other barterable commodities. Ad content licensors can also barter their content for impressions/views of their own ads at third party publishers' network locations. The use of such barterable commodities in an advertisement transaction setting has until now not been utilized effectively. By using bartering of such barterable commodities in an ad space exchange, more active advertising, with more effective use of available ad space, is possible. Advertisers can use untapped assets (e.g., their own unused ad space or their licenseable content) rather than cash to pay for advertising, making advertising less of an expense. As discussed below, the present invention is such a system.~~

~~Previous methods only allow for simple text ads, or listings that link to web page. Larger rich media and professionally designed display ads are proven more effective at getting results, but in the past only available to companies with large budgets. Large professionally designed display ads are more effective then text ads in getting response, but in the past where not easily distributed contextually. Placing large~~

display ads on websites previously would be done by manually placing code in the publisher's web page, or in the web publishers ad distribution system, and if the ad was to be updated it had to be re-inserted. There needs to be one place where anyone who wants to advertise can create a rich media display ad and campaign parameters, and anyone with a website can place one piece of code in their webpage to display and track the advertising. If someone does not have an ecommerce website, there needs to be a simple way to upload products and prices, then connect their online "Store" to advertising they create.

The Applicants' efforts to address these needs have included the use of "File Server Direct Connection" technology, or "FSDC." FSDC is a method to establish a direct connection between a self-contained self-executing file and a custom network server-based application. FSDC preferably uses a .swf file or alternately an HTML or AJAX file which sends a query string directly to a specific URL for a desired network server, without loading variables from the file or requests to the history object of a user's network browser. The files include instruction coding that allows the file to establish a direct connection with one or more network servers, including servers storing content files that can then be run, and servers that when contacted track the access and use of the content files. By use of .swf files with commands coded within the file to establish connection with a tracking server, the tracking issue with cost per click/impression/sale electronic advertising schemes can be overcome. FSDC is described and claimed in the Applicants' pending U.S. non-provisional patent application entitled "Method and System For File Server Direct Connection," application Ser. No. 10/316431 filed on Dec. 11, 2002 and published on Jun. 26, 2003 (Publication No. 20030120727), the specification and figures and all other parts of which are incorporated herein by reference. The coding of the .swf file establishes a connection to the tracking server so that a tabulation may be made, appropriately noting the response to the ad. As the communication to the tracking server is only made once the ad file has been opened, this is preferred over the prior art methodologies, which initiate the communication for tabulation prior to completing the link to the desired ad or site. In many cases, such tabulation is premature, as the user may close the window before the earlier desired material is delivered. The Applicants also have used FSDC in a system and method for creating and distributing customized rich media marketing and sales materials via email, which is described and claimed in the Applicant's co-pending U.S. patent application Ser. No. 10/417,478, filed on Apr. 17, 2003 and published on Oct. 23, 2003 (Publication No. US 2003-0200145-A1), as well as an Internet-based system and method for distributing interstitial advertisements, described and claimed in the Applicant's co-pending U.S. patent application Ser. No. 10/641,104 filed on Aug. 14, 2003 and published on Feb. 17, 2005 (Publication No. US 2005-0038900-A1), the specification and figures and all other parts of each of which are incorporated herein by reference. The system uses a relational database to execute dispatching commands to retrieve, assemble and dispatch ads for display and access destination pages based on ad viewer click action in response to the ad. The relational database used to execute dispatching commands and click action destinations also stores the command data required to execute the retrieval of selected digital content files previously stored in electronic format in one or more servers, messaging and billing for licensed digital media, enabling the viewer's browser to execute the assembly of the final whole advertising content.

The present invention builds upon the Applicants' basic FSDC rich media marketing material building and advertisement distribution platforms for electronic ad creation, distribution and tracking described in the above-referenced co-pending applications to provide a novel advertising electronic commerce system and method improving both efficiency and effectiveness for ad content licensors, advertisers and the publishers of the advertisements. Publishers and advertisers can benefit greatly from the present invention, which provides a "one stop shop" for electronic advertising on multiple networks" where everything necessary to effectively display, create, distribute, and track advertising is provided.

SUMMARY OF THE INVENTION

The present invention is a system and method for creating electronic advertisements using licensed digital content, and distributing such advertisements for display at desired network locations, including on multiple networks (such as, without limitation, computer networks such as the Internet as well as cellular, wireless, cable, satellite and other networks), whereby the ad to be displayed at a particular network location is selected from a group of ads that reference the same keyword or category and network location via an auction when the display location is acted upon by a network user/ad viewer. The digital content is delivered to designated advertising locations on the network and becomes part of an advertising display composed at the time requested by the network user/ad viewer by using a relational database for storing data required for commands that execute retrieval, assembly and dispatching of the licensed digital content files previously stored in one or more servers, as well as messaging, tracking, display, and billing for both use of the licensed content and display of the ad at the designated location on a cost-per-use basis. Third parties that make their digital content available for licensing and the publishers that display the advertisements on their network locations are automatically paid via the system each time an ad is displayed using their content and ad space, respectively. Ad publishers can participate in a barter-based ad exchange network wherein ad publishers can exchange advertising impressions/views in their publication (whether online or other) for impressions/views of their advertisements via the network. The system and method provides the ability for both publishers and advertisers to optimize the benefits of creating and distributing advertisements electronically, and manage and track every aspect of the advertisement creation and distribution process.

The present invention provides ad publishers with the ability to automatically accept placement of advertising at their network locations by providing a display space module, or “billboard module” that can be easily embedded at the network location where the ad will be displayed, such as, for example, on the ad publisher's web page(s) or, installed in cellular phone or a variety of other network devices that display advertising. This “billboard module” is associated with categories or keywords and communicates with a central dispatcher server that selects advertising and provides instructions to render the advertising in the module.

The present invention allows advertisers to create their own advertisements and license quality third party digital content for use in creating their advertisements (and also for content creators and providers to market their content) with payment for licensing of such third party content and ad distribution based on a cost-per-click, cost-per-impression or other pay-as-used scheme and with clicks/usage of the licensed ad content being accurately trackable. The advertisers can then associate topic keywords with the ads and include a bid for the display of the ad at desired network locations such as in specified areas of websites, search engines, portals or other network location display screens, in response to the “billboard module” being requested or otherwise acted upon. An advertiser can first create a custom advertisement using both content licensed from third parties made available for selection via the system, or use the advertiser's own content, with the instructions being stored in a database to execute and run the created advertisement at a desired location of a website, search engine or other network location when requested. The data stored in the database file for the ad with the rest of the ad execution instructions includes the cost-per-click, cost-per-impression or other charge rates for the licensed content used in the ad, which is the amount that the advertiser will be charged for using the licensed content each time the content is displayed to a user as part of the advertisement. The data stored in the database can also include the cost-per-click or other amount that the advertiser “bids” for display of the advertisement at certain locations on the website, search engine user search results screen, or other network location display screen when specified topic keywords are used as search queries. The system selects the advertisement to display in a designated ad space by conducting a real-time auction based at least in part on the bids placed by the advertisers for display of their ad at the location. The auction can also be based at least in part on the parameters of the advertisements, including, but not limited to, click-through rate,

ad space size, display region and ad type. The auction is conducted immediately upon the request and initiation of the “billboard module” by a network user/ad viewer. If the advertisement is meant to display on a web page, the auction will begin when the web page containing the embedded billboard module is served. Like any page on the Internet, this page may be requested in a variety ways, including entering a URL address in a browser URL field, initiating a search by entering a specified search term in a search engine website, or clicking on the specified link, button or other symbol on any web advertising or content. In the case of search engines, the auctioned ad space is preferably space on the user query search results page other than in the actual search results list, which distinguishes the present invention's auction from those often used with respect to the preferred placement of advertiser listings in search results listings. In fact, present invention's method of auctioning ad space operates completely independently of any search engine query operation; the auction of ad space can be implemented with respect to any ad space, not just space on a search engine screen. Also, ads may be displayed after a search query that have no direct relationship to the search query keywords, making it possible for publishers to display second generation relevant ads. For example, when someone searches for bathing suits, an ad may appear for a diet product, because the ad module on the search result page contained “diet” as a topic keyword. The module may be placed in cell phones or physical electronic billboards presenting advertising as a result of auctions initiated at certain times of the day or when a phone is opened, or based on other customizable parameters. This also can prevent publishers from running advertisements of their competitors, which is something that was not accomplishable under current keyword advertising systems.

The auction comparison can take into a account various customizable parameters to select the ad to be displayed at a designated location, including without limitation, topic keywords, categories, the advertisers' CPC/CPM bids and the ads' click-through, as well as the cost-per-click, cost-per-impression or other cost-per-use license fee for the licensed content comprising the ad. Actual ad parameters such as ad size, ad type, geographic display region, click-through rate and other parameters can also be used in the auction to select the ad to be displayed.

The system's relational database, housed preferably in a dispatcher server, contains data files with the parameters and execution instructions for ads, and each ad parameter file has a unique identifier. The advertising space module or “billboard module,” is preferably of the .swf format, ~~[~~or .net, .asp, AJAX~~]~~ and consists of code placed at the ad display location that triggers ad file selection auction and display of the selected ad when acted upon. The billboard module may be embedded as an object in a web page of a website, search engine or other network location, or used in a self-contained device, such as a cellular phone or other mobile device or electronic billboard. When requested or otherwise acted upon by the viewer, the billboard module communicates with the remote dispatcher server where the relational database is located. The relational database has all the information necessary to run the auction of available advertisements and then retrieve, assemble and present the advertising content of the auction winner to the viewer of the designated billboard module. The billboard module can contain instructions, including ad space size location and keywords associated with the ad space and may display more than one ad simultaneously or rotate different advertising in the same ad space. The keywords associated with the advertising space may be entered into the billboard module in a variety of ways, including manually by a webmaster, or dynamically, such as when a search engine user enters the keyword as a query, in which event the keyword is passed to the billboard module at the time ~~of~~ the search is executed.

The present system provides publishers with an account where they can enter information including their preferred method of receiving payment, address, and other relevant information. Publishers are also provided the opportunity to select ad size parameters, enter keywords or select categories to associate with their ad space. The system then generates the instructions and or the code necessary to embed a

billboard module at the publisher's ad space. In the case of a website with search functionality, instructions will be generated on embedding the module so search query words are automatically passed to the module. The publisher is also given an interface to view metadata associated with the billboard ~~modules~~module's activity, including clicks, impressions, and amount owed.

The present system provides advertisers with an account where they can enter instructions to select ad content from a variety of third party owned digital media and put together an electronic ad. Here they can also create customized advertising content and their advertising campaign by entering keywords to associate with the advertisement, the ad display locations desired and the CPC/CPM bid for display of the ad at such locations, regional targeting information or other parameters. Advertisers are also provided an account to deposit funds that is drawn upon based on their advertising activity. They are also provided an interface where they can view real-time metadata on the advertising campaign activity, including clicks, views, and amount paid.

The system is intended to be used by advertisers to create and place advertisements on third party websites, search engines and other network locations. The system's existence and operation is not apparent to end user/consumer who is the intended viewer of the advertisements. The system serves the advertisement files in addition to tracking impressions and click through rates in real time while the advertisement runs.

~~As noted previously, the~~The present invention, in a preferred embodiment, uses file server direct connection or "FSDC" technology to process ad viewer activity tracking data. This allows the system to send a tracking string with information (variables) received from the dispatcher server by the ad file directly to a tracking server. In a preferred embodiment, the tracking functions of the present invention are performed in a more efficient manner than prior art systems. Instead of redirecting a website user's request as discussed above, when a network user views an advertisement using the present invention and in response clicks or requests a URL or other location address from the information provided, the network user is taken directly to the URL or other location of interest, while a query string is independently sent to the system's tracking server from the ad file. The performance of the tracking server is not apparent to the network user and cannot affect the user. The tracking data is more accurate and can represent several different customizable parameters sent from the destination file viewed rather than merely counting the number of requests. Furthermore, the use of independent connection processes insures that the network user's system and privacy is not further exposed to the tracking system. Within the context of server side data sharing, the present invention provides fast and efficient, predominantly one-way communication, without requiring storage of any files on a network user's computer system. The system, by utilizing FSDC for tracking, directly establishes network connections between the ad file and the dispatcher server system where the tracking parameters and click-through destinations for advertisements are stored in the dispatcher server database by means of a single compiled file that does not require an additional network communications system such as a web browser or other supporting application. Specifically, a network connection is established to an encoded URL or other location address, and information is delivered to the tracking server in the form of a query string. Differing from a typical browser, or other typical network enabling software systems, the communication link established by the compiled file is predominantly one way and non-conversational. Impact on system resources is reduced as overhead support software is not required. Likewise bandwidth is conserved and issues of privacy are maintained as minimal information is exchanged without network user interaction or storage of files on the user's computer memory.

The present invention improves over prior advertising systems and methods in many ways. The present invention does not embed advertising HTML files within a web page, providing considerable economies to advertisers in saved labor, time and cost in terms of both inserting advertisements into web page files,

and later changing any of those advertisements. The present invention functions totally transparently to a network user and which neither inconveniences nor burdens the user. The present invention does not require a network user to download or install on the user's computer a separate application program specifically to receive advertising or perform any affirmative act other than normal browsing to receive such advertising. The present invention also provides proper accounting to an advertiser, content licensor and ad publisher by accurately and validly ascertaining and tracking user click-throughs/impressions of fully rendered advertisements. The present invention also allows ad publishers to maximize the revenues an increase effectiveness they receive from running third party ads, by being able to select for display (via the auction) the most profitable ads due to cost-per-click and click-through rate statistics. The present invention allows advertisers to more accurately target their advertising on search engine websites by separating the advertising auction process from the search engine process, allowing for second generation relevancy. The present invention allows for optimization of advertising campaigns by allowing for real-time auctions for available advertising spots, taking into account the amount of available advertising spots at the time of the action, optimizing the value of the advertising spot at the time it is requested, and by allowing for the assembly of advertising on the fly for display on the network, and the ability to license quality digital media creative files on a cost effective cost-per-use basis, and update campaign parameter and creative according to campaign results derived in real time by FSDC tracking.

Additionally, for those advertisers that do not have an e-commerce website, the system allows them to create their own online e-commerce catalog and connect their product or catalog of products to their advertising. Users can then, when viewing the advertisement, access and review the product/catalog information and select items for purchase. The system provides the online e-commerce functionality to allow users to purchase and pay for the advertiser's products online, which is a valuable feature for those that do not have their own e-commerce capability, and provides a turnkey advertising and e-commerce system for users, providing them with the ability to create professional looking large display ads which are more effective in an easy and cost-efficient way.

The present invention can be used to implement a barter-based advertising exchange network where in ad publishers can exchange advertising impressions/views in their publication (whether online or other) for impressions/views of their own advertisements at third party publisher network locations. The ad publishers preferably contribute more ad impression/views than they receive in exchange such that a pool or inventory of available impressions/views is available for selection and use by participating ad publishers/advertisers. Ad content licensors can also participate in barter transactions whereby they can barter their content in exchange for ad impressions/views for display of their own ads at third party network locations or other barterable advertising commodities.

In one embodiment, the invention further includes a system and method for delivering and rendering the ad content automatically and only when and/or to the extent that a pre-defined area of the ad content display page where the content is to be rendered, which is preferably the billboard module location on the ad publisher display location on an electronic network, is within the viewer's browser window dimensions and scrolling position, or within a pre-defined distance from the viewer's browser window dimensions and scrolling position. As used herein, the term “render” or “rendering” refers to the process of requesting and loading content so that it may be viewed, heard or otherwise perceived by a viewer communicating electronically using a browser. The pre-defined area, designated by the ad content display page administrator to trigger rendering, is referred to below as the “ad content display page triggering area.” In a preferred embodiment, the pre-defined area of the ad content display page referred to as the “ad content display page triggering area” is the designated ad content display page area where the content is to be rendered, which is preferably the billboard module location on an ad publisher ad content display location. In other embodiments the ad content display page triggering area can be an area of the ad

content display page other than the billboard module location area where the content will be rendered. The invention in this embodiment can be configured to trigger rendering of content in a designated billboard module ad content display page rendering area when the pre-defined ad content display page triggering area is within the dimensions and scrolling position of a viewer's browser window, or alternatively, when the pre-defined ad content display page triggering area is within a pre-defined distance outside of the viewer's browser screen dimensions and scrolling position. The invention in this embodiment further includes additional interface features, primarily for interaction with publishers (either additional to the billboard module creation interface or included as part of such interface) for receiving, in addition to ad content display page address and ad content file information (which may be in the form of instructions to retrieve one or more ad content files stored in a content server or other storage device, which may be either part of the system-end components or remotely located components), the billboard module ad content display page rendering area and ad content display page triggering area parameters and other ad content display page data from ad content display page administrators for storing one or more records containing such data in a system server database, each record being given an identification code. As with other embodiments of the invention, a system software application generates a single tag based on said ad content display page data, and the tag is placed on the ad content display page as the billboard module. The tag includes the identification code for the corresponding record with ad content display page data stored in the system database and a link to a system server-side application. When a viewer requests the designated ad content display page, the tag is activated and links to a system server-side application. The system server-side application then collects data from the request, including, but not limited to, the address of the ad content display page and the viewer's network address (for example, the Internet Protocol address associated with a viewer computer when the network is the Internet), and retrieves the corresponding record containing ad content display page data stored in the system server database, and generates code, preferably JavaScript code, referred to herein as a “correlator code,” which is written to or otherwise embedded on the ad content display page and interacts with the viewer's browser. The correlator code can be positioned anywhere on the ad content display page, not necessarily the billboard module location on the ad content display page where the particular content will be rendered. The correlator code may also be placed directly on the web page without the use of the server side application. A unique identification code is then assigned to the particular viewer/browser which can be created by the correlator code itself, or can be created by the system server-side software application and be retrieved from cookies or from the system database. The correlator code collects additional information from the viewer's browser, including, without limitation, the viewer's operating system and browser type/version, and a list of other content that was already rendered on the page to prevent duplication of the same content on the ad content display page, among other data and preferably also indexes the page for content and whether the browser window is open, minimized, or otherwise covered by another browser window or other application opened by a viewer. The correlator code in one embodiment dynamically generates HTML code on the ad content display page to be used as a marker for the ad content display page area where the content will be rendered. The marker may be HTML code or coordinates in the correlator code, or can be created by other means for creating a page area marker. The system correlator code then generates a query string link including the data collected via the correlator code and server-side application and the query string link is stored as a variable on the ad content display page. The correlator code periodically checks viewer browser screen coordinate data from the viewer's browser application with ad content display page coordinates for the pre-defined ad content display page triggering area (which may be the same area as the billboard module content display page rendering area), in addition to periodically checking whether the browser window is open, minimized, or otherwise covered by another browser window or other application opened by a viewer. As a viewer scrolls through a ad content display page (whether up and down or left and right) or the viewer's browser window dimensions change, the correlator code periodically checks data from the viewer's browser regarding the viewer's browser window scrolling position and dimensional coordinates and when

there is correspondence between the browser window dimensional and scrolling position coordinates and the coordinates for the ad content display page triggering area (which may be partial correspondence or full correspondence, or correspondence with coordinates that are a pre-defined distance outside the viewer's browser dimensional and scrolling position coordinates), the query string link is activated, activating the billboard module and the content is rendered in the designated ad content display page rendering area. The billboard module may be embedded on the page in a variety of ways, including but not limited to by the web publisher, or by the system itself at the time the correlator code is written or otherwise embedded on the page. The correlator code also records at the display page data retrieved from the viewer's browser regarding the rendering of the content The correlator code is preferably JavaScript code, although the invention is not limited to use of JavaScript; other scripting or compiling languages can be used, such as, without limitation, JScript, ECMAScript or other scripting capable of generating code that determines whether or not the specified ad content display page triggering area is within, or within a pre-defined distance outside of, the dimensions and scrolling position of a viewer's browser window. The correlator code contains all of the necessary variables and functions to execute the correlation process described above in conjunction with the viewer's browser. The correlator code is code delivered in the form of source code that interprets and executes the script accordingly by the browser application of the viewer although it resides on the ad content display page itself. It is not an applet or other compiled file or self-executing software application. Content is only rendered on an ad content display page to a viewer when and/or to the extent that the pre-defined ad content display page triggering area is within, or within a pre-defined distance outside of, the viewer's browser screen dimensions and scrolling position. In a preferred embodiment, the pre-defined ad content display page triggering area is the area of the ad content display page where the content is to be rendered, which is the billboard module location on an ad publisher's site in a preferred embodiment, and content to be rendered in the pre-defined area of the ad content display page is not rendered unless and until the particular area of the ad content display page is within the viewer's browser screen dimensions and scrolling position, or within a pre-defined distance outside of the viewer's browser screen dimensions and scrolling position. This embodiment of the present invention enables use of bandwidth and other communications resources more effectively and efficiently.

Reports regarding the delivery and rendering of content can be generated by the system for use by system users and third party content providers and content publishers (e.g., web pages) to better analyze the effectiveness of their content distribution. Unlike other systems, the invention in this embodiment enables precise and accurate accounting of what content actually appears within in a viewer's browser window dimensions and scrolling position area, in addition to whether the browser window is open, minimized, or otherwise covered by another browser window or other application opened by a viewer and enables analysis of content rendering activity with respect to particular areas of an ad publisher's ad content display page, i.e., which areas are most active with regard to content rendering to viewers, enabling effective content placement page organization schemes and content placement fee structures based on rendering activity for the particular content display area of an ad content display page relative to other areas of the page and the viewer's browser window dimensions. In this embodiment, the invention gathers information to better deliver content loaded, including reach, frequency, viewer's geographic location, the demographics of the viewership, keywords derived from the indexing of page content, among other data, allowing websites to effectively provide content on their web pages on an as needed basis and then to utilize the information in myriad ways. With the invention in this embodiment, content placed in any designated ad publisher's web page area, including but not limited to, below the fold areas of a web page, can be loaded as needed, and its usage/rendering can be reported and billed only if the viewer scrolls them into the available area of their browser window, and when response rates are calculated against the ads loaded and rendered.

The invention in this embodiment gives ad publishers, by specifying a predefined area on the ad content display page which, when its coordinates correspond in a pre-defined manner with coordinates of the viewer's browser dimensions and scrolling position, triggers content rendering at the ad content display page, the ability to provide to viewers of their pages a variety of content including promotions, video promotions, advertising and third party network advertising on their web pages and deliver this content to the page when and/or only to the extent that the pre-defined ad content display page triggering area of the ad content display page is within, or within a pre-defined distance outside of, the then current dimensions and scrolling position of the viewer's browser window. The invention, in this embodiment, may then trigger several actions, including an indicator to show the viewer or system users that the ad content is rendered and available, and report with accuracy whether or to what extent the ad content display page area where particular ad content is to be rendered, which is the billboard module location in the ad publisher's ad content display page in a preferred embodiment, is within the available area of viewer's browser window, for how long the ad content was available to trigger further action, considering whether the browser window where the content is rendered is open, minimized, or otherwise covered by another browser window or other application opened by a viewer, how many unique viewers were presented the ad content (reach), the amount of times each unique viewer was presented the ad content (frequency) the general geographic location of the viewer, the browser version used by the viewer, what actions were taken on the advertisement in the form of clicks, the click rate in relation to the number of views, and other meta data in relation to the rendered content. The ad content can be successively rendered automatically to the viewer as the viewer scrolls through an ad content display page, with the effects of instant rendering attracting the attention of the viewer.

The invention in this embodiment also allows ad publishers (e.g., ad content display page administrators), to generate accurate reports to analyze ads on their pages according to different areas of their ad content display pages and how they relate to the available areas of viewer's browser windows, enabling accurate accounting and reporting of ad content rendering and viewer ad content display page viewing and scrolling characteristics, providing insights as to what display areas of a content display site are most effective for ad content display. The reports consist of accurate data of their pages, and how often they become available to a viewer within their browser window. Ad content display pages are, in one embodiment, divided into four areas, top, above the fold, below the fold, and bottom, although further division is programmable as desired. The data for each area is based on the collected rendering activity data from the rendering of ad content in the specified area of the ad content display page.

In a preferred embodiment, the computer and communications network is the Internet, the content display sites and pages websites and web pages, and ad content display page administrators may be web page administrators, but this embodiment of the present invention is not limited to any particular communications network or content display site. The content can be stored at a network location other than the content display site server, such as, for example, one or more content file servers, which can be remotely located, with the instructions being stored in the system database to execute and render the content at the specified rendering area on a ad content display page when requested.

This embodiment of the present invention allows content display page administrators to divide their content display site pages into one or more content rendering areas. Ad publishers, as ad content display page administrators, interact with the system to designate such content rendering areas, specifying their position and size and designating the billboard modules and/or content files to be located and/or rendered thereat. The system processes the specified information and provides a JavaScript tag that includes the identification code for the system server database record storing the ad content display page information provided by the ad content display page administrator and includes a link to a system server-side application at the system server. When the viewer requests the particular ad content display page, the

JavaScript tag links to the system server-side application and the system server-side application retrieves data from the viewer's request as well as the record with data for the particular ad content display page and generates code, referred to as a “correlator code” which is preferably JavaScript code, that dynamically creates a marker for the ad content display page area, and also correlates the pre-defined ad content display page triggering area with viewer browser window scrolling position and dimensions, and the correlator code generates a query string link which is stored as a variable on the ad content display page, including data collected from the viewer's browser via the correlator code. The marker may be HTML code or coordinates in the correlator code, or can be created by other means for creating a page area marker. As the viewer scrolls through the ad content display page, the correlator code determines whether the browser scrolling position and dimensional coordinates correspond with ad content display page coordinates for the pre-defined ad content display page triggering area on the ad content display page, (which may be the area on the ad content display page where the billboard module is located, which is where the content is to be rendered or any other pre-defined area of the ad content display page) and when browser window and the pre-defined ad content display page triggering area's coordinates correspond (the correspondence can be customized and pre-defined as well, and can be partial correspondence, full correspondence or correspondence with coordinates that are a pre-defined distance outside of the viewer's browser window dimensional and scrolling position coordinates), the query string link stored on the page is triggered, activating the billboard module, and the real time auction is conducted to select a bidding advertiser's ad parameter and command file at the dispatcher server for rendering at the designated billboard module location at the ad content display page, and the content designated for rendering at or in relation to such billboard module ad content display page area is retrieved, assembled and rendered in the designated billboard module ad content display page rendering area. The specified content is rendered only if and when such pre-defined content triggering area, which can be the same as the content rendering area, is determined by the correlator code to be within, or within a pre-defined distance outside of, the dimensions and scrolling position of the viewer's browser window. When the pre-defined ad content display page triggering area is the area where the content is to be rendered, i.e., the billboard module location on the ad publisher's ad content display page, the content is rendered only when and/or to the extent that the billboard module area of the ad content display page where the content is to be rendered is within, or within a pre-defined distance outside of, the dimensions and scrolling position of the viewer's browser window.

As with other embodiments of the present invention, the system database storing the records with ad content display page data is preferably a relational database, housed preferably in a system-end server, preferably the system dispatcher server. Each such record has a unique identifier. The system server-side software application contains all code that is necessary to communicate with the system server database as well as with the ad publishers and their ad content display pages and generate the correlator code which is written to or otherwise embedded on the ad content display page and interacts with the viewer's browser to control the triggering of billboard modules, content requesting and rendering when the billboard module display page area where the content is to be rendered is within, or within a pre-defined distance outside of, the dimensions and scrolling position of a viewer's browser window. The JavaScript tag placed on the ad content display page for the particular content rendering area consists of a tag placed somewhere on the ad content display page containing a link to the system server-side software application and an encrypted ID for the applicable content rendering area record stored at the system database located preferably at the system server. When a viewer requests the particular ad content display page, the request activates the link to the system server-side application, which retrieves the record with data corresponding to the encrypted id for such record and retrieves viewer data from the http request itself. The system server-side application generates the custom correlator code to be written to or otherwise embedded on the ad content display page. The correlator code then creates a marker for the ad content display page area where the content will be rendered. The marker may be HTML code or

coordinates in the correlator code, or can be created by other means for creating a page area marker. The correlator code collects additional information from the viewer's browser, which may include information regarding the viewer's computer system, browser type/version, and information regarding content that has previously been rendered on the ad content display page to prevent duplication of content on the page, among other data, and also collects and indexes data pertaining to text on the ad content display page. A unique identification code is then assigned to the particular viewer/browser, which can be created by the correlator code itself or can be created by the system server side software applications and be retrieved from cookies or from the system database. The correlator code creates a query string link with the information collected by the correlator code attached thereto and the query string link is stored as a variable on the ad content display page. When the pre-defined ad content display page triggering area is within, or within a pre-defined distance outside of, the dimensions and scrolling position of the viewer's browser screen, the correlator code triggers the query string link that is stored on the page and activates the billboard module. Then the billboard module establishes communication with a separate ad dispatcher server database, which selects an ad/content record to render in the billboard. The instructions in the record are retrieved by the billboard module and the content is rendered in the designated billboard module within content display page rendering area. The correlator JavaScript code on the ad content display page contains the variables and commands to continuously determine what ad content display page area(s) is/are within, or within a pre-defined distance outside of, the dimensions and scrolling position of the viewer's browser, including whether the browser window where the content is rendered is open, minimized, or otherwise covered by another browser window or other application opened by a viewer. The correlator code establishes continuous communication with the billboard module. The information gathered can be sent back to any server for tracking and reporting via the billboard module using FSDC. The billboard module may also cease rendering or send additional requests to the ad dispatcher server to select a new ad/content to render in the billboard module, say if the billboard was in view for a pre-determined period of time, or has been scrolled outside the viewer's browser window dimensions.

BRIEF DESCRIPTION OF THE DRAWINGS

All of the figures depict preferred embodiments although other embodiments are contemplated and the present invention is not limited to the embodiments shown.

FIG. 1 is diagrammatical overview of the communication flow of the present invention.

FIG. 2 is a diagrammatical representation of system components and their interrelationship.

FIG. 3 is a diagrammatical overview of the relationship among system servers and website viewers.

FIG. 4 depicts a sample system dispatcher server database parameter file.

FIG. 5 is a flow chart depicting the pay-per-use content licensing process flow.

FIG. 6 is a flow chart depicting the ad spot-auction process flow.

FIG. 7 depicts a sample system user registration screen.

FIG. 8 depicts a sample system user log-in screen.

FIG. 9 depicts a sample initial advertisement creation input screen.

FIG. 10 depicts a sample advertisement click destination input screen.

FIG. 11 depicts a sample system user ad size selection screen.

FIG. 12 depicts a sample system advertisement creative content catalog and selection screen.

FIG. 13 depicts a sample system ad text and messaging input screen.

FIG. 14 depicts a sample system ad preview and save screen.

FIG. 15 depicts a sample system geographic region designation screen.

FIG. 16 depicts a sample ad payment option selection screen.

FIG. 17 depicts a sample keyword and maximum bid data input screen.

FIG. 18 depicts a sample ad placement plan budget input screen.

FIG. 19 depicts a sample target category selection screen.

FIG. 20 depicts a sample ad budget data input screen.

FIG. 21 depicts a sample ad payment data input screen.

FIG. 22 depicts a sample ad publisher website registration screen.

FIG. 23 depicts a sample ad publisher billboard identification screen.

FIG. 24 depicts a sample billboard advertising program selection screen.

FIG. 25 depicts a sample ad publisher billboard size selection screen.

FIG. 26 depicts a sample billboard module customization selection screen.

FIG. 27 depicts a sample ad publisher billboard target category selection screen.

FIG. 28 depicts a sample ad publisher billboard code copying screen.

FIG. 29 depicts a sample skip/destination URL input screen, for use when billboard is created for an interstitial ad.

FIG. 30 depicts a sample interstitial ad/billboard URL copying screen.

FIG. 31 depicts a sample ad publisher billboard location within an ad publisher web page, showing billboard module placement at top bar.

FIG. 32 depicts a sample rendered ad in an ad publisher search engine web page screen.

FIG. 33 depicts a sample ad parameter data base listing showing multiple ad parameter files.

FIG. 34 depicts a sample ad campaign statistics screen with data regarding performance of ads and budget consumption.

FIG. 35 depicts a sample single ad statistics screen.

FIG. 36 describes the system process flow in an embodiment wherein the billboard module is embedded in an informational website.

FIG. 37 describes the system process flow in an embodiment wherein the billboard module is embedded in a search engine screen.

FIG. 38 describes the system process flow in an embodiment wherein the billboard module is embedded in a mobile device such as a cellular phone.

FIG. 39 describes the system process flow in an embodiment wherein the billboard module is embedded in an electronic billboard.

FIG. 40 depicts a sample system user screen for posting product catalog information in the system, enabling advertisement viewers to purchase the advertiser's product/service via the system e-commerce functionality.

FIG. 41 depicts a sample system screen showing products posted by advertisers for sale via the system.

FIG. 42 depicts a sample product information and selection page.

FIG. 43 shows a sample check-out and payment screen used in the e-commerce functionality provided to advertisers that do not have their own e-commerce capability.

FIG. 44 depicts a sample system screen for the ad exchange feature of the system.

FIG. 45 depicts a sample system screen for participants in the system's ad exchange program to specify the identification parameters for ad space to be made available on the participant's network location for placement of other participants' ads.

FIG. 46 depicts a sample screen for participants in the system's ad exchange program to specify size parameters for the ad space to be made available on the participants network location for placement of other participants' ads.

FIG. 47 depicts a sample system screen for participants in the system's ad exchange program to customize the appearance of the ad space to be made available on the participant's network location for placement of other participants' ads.

FIG. 48 depicts a sample system screen for participants in the system's ad exchange program to select the advertisement for said participant's own products/services to be placed at third party network locations in exchange for the ad space contributed by said participant.

FIG. 49 depicts a sample system screen for participants in the system's ad exchange program to select target categories to be associated with the ad space on said participant's network location contributed to said program by said participant.

FIG. 50 depicts a sample system screen for participants in the system's ad exchange program to receive and copy ad space code to be placed in said participant's own network location to run ads placed by other program participants.

FIG. 51 is a diagrammatical overview of the interplay and overlap of a viewer's screen display area, browser application, browser window and ad content display page.

FIG. 52 is a diagrammatical representation of system components and their interrelationship with ad publishers as ad content display page administrators, viewers and communications network(s) in an embodiment including the content rendering control feature of the present invention.

FIG. 53 is a diagrammatical overview of the communication flow among system components, ad content display page administrators and website viewers in an embodiment including the content rendering control feature of the present invention.

FIG. 54-A is a process flow diagram showing the process flow of the present invention in an embodiment including the content rendering control feature of the present invention.

FIG. 54-B is a continuation of a process flow diagram showing the process flow of the present invention in an embodiment including the content rendering control feature of the present invention.

FIG. 54-C is a continuation of a process flow diagram showing the process flow of the present invention in an embodiment including the content rendering control feature of the present invention.

FIG. 56 depicts a sample system ad publisher content site administrator user registration screen in an embodiment including the content rendering control feature of the present invention.

FIG. 57 depicts a sample system ad publisher content site administrator user login screen in an embodiment including the content rendering control feature of the present invention.

FIG. 58 depicts a sample system user site registration screen showing data entry relating to ad content display page title, uniform resource locator address and optional logo image in an embodiment including the content rendering control feature of the present invention.

FIG. 59 depicts a sample user registration screen whereby ad publisher ad content display page administrators enter their ad content display page's primary audience geographic location in an embodiment including the content rendering control feature of the present invention.

FIG. 60 depicts a sample user registration screen whereby ad publisher ad content display page administrators enter their ad content display page's content type in an embodiment including the content rendering control feature of the present invention.

FIG. 61 depicts a sample user registration screen whereby ad publisher ad content display page administrators enter their ad content display page audience demographic data in an embodiment including the content rendering control feature of the present invention.

FIG. 62 depicts a sample ad content display page registration confirmation screen in an embodiment including the content rendering control feature of the present invention.

FIG. 63 depicts a sample ad content display page rendering area creation screen in an embodiment including the content rendering control feature of the present invention.

FIG. 64 depicts a sample ad content display page rendering area dimension selection screen in an embodiment including the content rendering control feature of the present invention.

FIG. 65 depicts a sample ad content display page rendering area dimension specification screen in an embodiment including the content rendering control feature of the present invention.

FIG. 66 depicts a sample screen wherein a JavaScript tag with link to the system server-side application is generated for ad publisher ad content display page administrators to copy and paste into the page code of the ad content display page in which the designated ad content display page rendering area resides in an embodiment including the content rendering control feature of the present invention.

FIG. 67 depicts a sample ad content display page with the content rendering area of the ad content display page located below the viewer's browser window dimensions and scrolling position, noted by an oval indicator in an embodiment including the content rendering control feature of the present invention.

FIG. 68 depicts a sample ad content display page with the content rendering area entering the viewer's browser window dimensions and scrolling position, noted by an oval indicator in an embodiment including the content rendering control feature of the present invention.

FIG. 69 depicts a sample ad content display page with the content rendering area fully within the viewer's browser window dimensions and scrolling position in an embodiment including the content rendering control feature of the present invention.

FIG. 70 depicts a sample ad content display page with the content rendered and an indicator showing the time that the content has been rendered in an embodiment including the content rendering control feature of the present invention.

FIG. 71 depicts a sample ad content display page with the content rendering area partially outside of the viewer's browser window dimensions and scrolling position in an embodiment including the content rendering control feature of the present invention.

FIG. 72 depicts a sample system ad content display page data report screen in an embodiment including the content rendering control feature of the present invention.

FIG. 73 depicts a sample system content rendering area data report screen in an embodiment including the content rendering control feature of the present invention.

FIG. 74 depicts a sample system content rendering area activity report screen in an embodiment including the content rendering control feature of the present invention.

FIG. 75 depicts a sample system content rendering area data report screen in an embodiment including the content rendering control feature of the present invention.

FIG. 76 depicts a sample system content rendering activity report screen in an embodiment including the content rendering control feature of the present invention.

FIG. 77 depicts a sample system viewer browser type data report screen in an embodiment including the content rendering control feature of the present invention.

FIG. 78 depicts a sample system viewer geographic location report screen in an embodiment including the content rendering control feature of the present invention.

FIG. 79 depicts a sample content rendering area activity report screen in an embodiment including the content rendering control feature of the present invention.

FIG. 80 depicts a sample content rendering time data report screen in an embodiment including the content rendering control feature of the present invention.

FIG. 81 depicts a sample ad content display page using the system to determine viewer browser screen dimensions and scrolling position to provide scaled rendering of content in an embodiment including the content rendering control feature of the present invention.

FIG. 82 depicts a sample ad content display page showing content rendered scaled to a predefined size in relation to the viewer's browser window dimensions and scrolling position in an embodiment including the content rendering control feature of the present invention.

FIG. 83 depicts a sample ad content display page showing content re-rendered and re-scaled to a predefined size in relation to modified viewer browser window dimensions and/or scrolling position in an embodiment including the content rendering control feature of the present invention.

DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION

According to a preferred embodiment hereof, the present invention is an all inclusive electronic advertising network system and method, including means for advertisers to create advertisements using licensed digital content on a cost-per-use basis, and means for distributing said advertisements via a "billboard module" and a dispatcher server automatically conducting a real-time auction to select an ad for display whenever a billboard module on the network is requested by a network user/ad viewer. When the billboard module is requested at a network location it communicates with the relational database using the protocol appropriate for the particular network. At this time the auction takes place, first finding all of the ad parameter files in the database for the ads waiting for display that reference the same billboard module associated keywords or categories and other information passed from the billboard module, then using an algorithm to determine which ad (s) will ultimately be displayed in the ad space. Once the winning ad of the auction is determined, the ad is displayed within the designated billboard module according to the instructions in the relational database file for the ad. This file stores data required for commands that execute assembly, retrieval of selected digital media files previously stored in electronic format in one or more servers, as well as ad viewer tracking data, billing for licensed digital media and for display of the ad at the designated location, as well as where to direct the viewer of the ad, such as, in web implementations, to the desired destination website page relating to said advertisement, if the viewer desires to obtain more information regarding the advertisement, or to the next or previous designated web page or other network location. The relational database containing the ad placement parameters is stored in an ad dispatcher server which can be separate from the database and server providing the actual ad and digital media files. The real-time auction to select the ad to be displayed can be based on the advertiser bids or the advertisement parameters of the advertisements, such as, without limitation: click-through rate, ad space size, display region and ad type, or a combination of such parameters and bids. In a preferred embodiment, the triggering of the billboard module is controlled by a control mechanism based on whether the billboard module display location area on the ad publisher's ad content display page is within the dimensions and scrolling position of the viewer's browser window, or within a pre-defined distance from the viewer's browser window dimensions and scrolling position.

The system of the present invention in a preferred embodiment comprises: a system-end computer equipped and configured for Internet or other network communications, including a dispatcher server including an ad parameter and command file database, and one or more software applications to execute a real-time auction to select an ad to be displayed at a particular network location; and also including computer processing means and one or more Internet or other network communications interface software applications for interfacing with system advertisers, providing a menu screen for advertisers to enter instructions for the creation of an ad, including messaging to be included in the ad, selection of an ad template, selection of digital content for the ad which may be licensed from third parties, and an area to enter instructions for an ad campaign, including selection of ad display locations, entry of cost-per-click bids for display of the ads and keywords or categories to be associated with the ad, and creating a data file in said dispatcher server database that contains parameters and commands to be used by the billboard module to provide access to said template advertisement file, licensed digital content, messaging, as well as the total cost-per-use of the licensed digital media files, the keywords/categories

the ad will be associated, the network locations where the ad will be displayed and the advertiser's bid for display of the ad at the desired location; one or more content servers configured and equipped for Internet or other network communications communicating with said system-end dispatcher server and network user/ad viewer-end computer systems and having one or more digital content files stored thereon; an ad publisher interface ~~including at the~~communicating with one or more ad publisher end ~~a computer~~computers configured and equipped for Internet or other network communications and also providing a menu screen for ad publishers to enter registration information, select categories or keywords to associate with their ad spaces and provide instructions to embed or install any number of "billboard modules" on their ad spaces~~, which~~. When activated/initiated, said billboard modules establish communications with the dispatcher server ~~when an ad viewer acts on the billboard module~~, causing a real-time auction to be executed for all advertisements in the dispatcher database with like parameters (e.g., the same keywords, categories and geographical region) and selecting one or more advertisements for display at the billboard module location based on the advertisers' bid for same or based on the advertisement parameters, including, but not limited to, click-through rate, ad space size, display region and ad type, or a combination of such parameters and bids, and then causing the selected ad to be displayed at the module by executing the instructions for the selected ad stored in the ad parameter/command file in the dispatcher server; ~~and a~~said one or more ad publisher computers communicating with one or more network user/ad viewer-end computer configured and equipped for Internet or other network communications and communicating with said ad space location.

Additionally, for those advertisers that do not have an e-commerce website, the system allows them to create their own online e-commerce catalog and connect their product or catalog of products to their advertising. Users can then, when viewing the advertisement, access and review the product/catalog information and select items for purchase. The system provides the online e-commerce functionality to allow users to purchase and pay for the advertiser's products online, which is a valuable feature for those that do not have their own e-commerce capability, and provides a turnkey advertising and e-commerce system for users, providing them with the ability to create professional looking large display ads which are more effective in an easy and cost-efficient way.

As noted previously, the auction occurs when a billboard module is activated/initiated anywhere on the network. The billboard module then establishes communication with the relational database containing information on all of the advertisements ready for display in the ad space on the network, then sends a request for advertising. This request includes a variety of information not limited to the keywords or categories associated with the advertising module and the size and dimensions of the available advertising space. The system runs a comparison, based on an algorithm, of all advertisements in the database with keywords that match the keywords associated with the advertising display location up for auction. This algorithm takes into account a variety of customizable parameters, including, without limitation the CPC/CPM bid on the advertisement and the click-through rate of the advertisement. The winning advertisement is then displayed in the advertising space. The advertisement displayed may also be assembled according to instructions in the same or other database. These instructions may call elements from a variety of locations, and assemble them for display within the advertising module. All actions taken on the advertising content are then sent back to the relational database using FSDC.

The billboard modules themselves are preferably .swf files, any comparable code such as .net .asp or AJAX that contains all the necessary code to send and retrieve data and variables from the dispatcher server. The module, when initiated, it establishes communication with the dispatcher with the appropriate network protocol, then the database runs applications required for the advertising auction. Based on the results of the auction, communication is sent back to the module with instructions on how to assemble and display the ad(s) where to retrieve the ad template file, files and digital media to present.

The ad template files themselves are preferably rich media files, preferably .swf, which is a Macromedia/Adobe Flash format any comparable code such as .net .asp, or AJAX that can be embedded to dynamic. This is a smart rich media file that can gather from and send information to a relational database and can retrieve and display an ad file from any server location. This ad file may be a static HTML image, or a rich media file such as .swf. The .swf file acts as a template file implements all of the necessary actions to retrieve a variety of data, including text messaging, digital media files including picture and rich media files including video, instructions on when to play or to be skipped, to track all custom parameters and to load a go-to page when it is a appropriate (for instance at the ~~and~~end of the ad or when it is skipped by user, or if an ad is clicked by a viewer). The template .swf file can be stored on any server connected to Internet. The digital media files are preferably stored at a content server or content database. The graphical user interface is stored preferably on the dispatcher server, and includes “thumbnails” or preview displays of the ad content files templates, digital media libraries with elements ready for licensing on a cost per use basis, and information regarding the location of the ad content files in order to easily identify and manage ads, but not necessarily the full ad file. It should be understood that the ad file and associated messaging and digital media files can be stored and accessed from any server. As the ad plays in the billboard module, tracking metadata is sent back to the dispatcher server enabling the billing of the advertiser, and payment to the ad publisher and owners of licensed digital content.

The interface means, processor means and computer communications means can have various embodiments, including, without limitation, use of traditional Internet browser applications, whether customized for use in the present system, or existing third party software applications to provide the advertisements to the user. In a preferred embodiment, the network location where the ad is desired contains an embed object command which activates the billboard module when the web page is requested or the location is otherwise acted upon. The billboard module is preferably an .swf file but may be an asp, .net or AJAX file, that establishes communication with the system-end dispatcher server. The billboard module file may reside in any server or other hardware connected to the network. When network users act upon a network location with an embedded billboard module, the billboard module loads in the viewer's browser and establishes communication with the dispatcher server. The module then transmits an identifier, and associated information such as keywords, categories, geographical location, ad size, etc, to the dispatcher server and the system auction software application conducts an auction to select the ad to be displayed from those that are associated with and have placed bids for display at the billboard module by comparing all advertisements in the database with like parameters and applying an algorithm that takes into account a number of variables such as, without limitation, cost-per-use bid, click-through rate and then retrieves the selected ad parameter/command file from the database and then communicates the location of the selected advertising or advertising template file. The dispatcher then passes all necessary information from the database into the advertisement template file. The advertisement is then rendered in the template file~~,~~ within the ad billboard module, according to the instructions in the ad parameter/command file in the dispatcher server database. Use of a template file is optional. Instructions may include, but are not limited to, text messaging, location of licensed digital media content, go-to locations (upon click action by viewer) and other tracking information. That information can be passed to the advertising template via a data string that loads the ad and then some of the information can be used as part of the tracking string sent from the ad file. When the ad files are retrieved and run, metadata is sent to the dispatcher server using FSDC and the system calculates and charges the specified cost-per-use of the display of the ad at the desired location, and of the licensed content, drawing funds from the advertiser's system account to pay the content licensor and ad space location owner.

Referring to FIG. 1, which depicts a diagrammatical overview of the communication flow of the present invention, without reference to any particular type of network, there is an ad publisher with ad space made available for ad placement 5 which communicates with the system-end dispatcher server 126 to

create the ad publisher's system account, enter the keywords or categories that the ad publisher wants associated with the ad publisher's ad space, and receive from the dispatcher server 126 the software code comprising the billboard module 10 to be embedded at the ad publisher's ad space 5. In FIG. 1, the billboard module 10 is depicted on the ad publisher's ad space 5 represented by the screen on the computer icon, and the computer 30 is a network user/ad viewer-end device. Advertiser computer 2 communicates with the content server 125 to license content to create an ad and with the dispatcher server 126 to enter the parameters and commands to retrieve the content files (the dispatcher server and the content server can comprise the same server), assemble them into the overall ad, preview and display the ad at the designated ad space 5, also including the keywords to be associated with the ad, possibly geographical, timing, or other parameters as to display of the ad, the location of the ad space 5 where the ad will be displayed, and a bid for display of the ad at the ad space 5 when an ad viewer acts upon the billboard module 10 and the ad is the one selected in the auction that automatically ensues at the dispatcher server 126 when the billboard module 10 is activated. The advertiser's ad parameters and commands and bid display are stored as a file in the ad parameter and command file database 20 within the dispatcher server 126. When an ad viewer requests or otherwise acts upon the location where the billboard module 10 is embedded, the billboard module 10 communicates with the dispatcher server 126 and ad parameter and command file database 20 and the relevant keywords and other information relating to the ad space 5 is provided from the billboard module 10 which are used by the system software applications to conduct a real-time auction to select an ad for display from those that have the corresponding keywords and other parameters based on the bids placed with respect to such ads for display or based on ad parameters, including, but not limited to, click-through rate, ad space size, display region and ad type, or a combination of such parameters and bids. Once the auction is conducted and an ad is selected, the corresponding ad parameter and command file for the ad in the ad parameter and command file database 20 is activated to retrieve the ad content files comprising the ad from the ad content file server(s) 125, assemble and display the ad at the ad space 5. Meta data relating to the ad is sent back to the dispatcher server 126 for tracking and also charging for use of the licensed content and display of the ad at the ad space 5. The advertiser's account is debited and the content licensors and ad publishers are paid.

The system is preferably made available to website operators and advertisers via a system website for use by them after registering as a website advertisement administrator. Referring to FIG. 5, which shows the process flow of the advertising method implemented with the system of the present invention via the Internet, an advertiser creates and places an ad by executing the following steps:

Registering with the system as an advertisement administrator 300, 310 advertisers are directed to a menu where they create their advertising display by entering messaging, uploading logos or pictures, selecting from a variety of digital content libraries made available through the system for licensing on a cost-per-use basis, and create an advertising campaign by entering keywords or selecting categories to associate with said advertisement, network location and geographical region for the advertisement's display, go-to location upon click action on the advertisement, cost-per-use bid, minimum daily budget and other ad parameter data. Advertisers are also provided the opportunity to run real-time test auctions to evaluate approximate results of their campaign with the parameters they have selected. These items of information are then stored as the unique record in the database that can be retrieved and used by the billboard module and advertisement template file (.swf .asp, .php, .net, AJAX or other file format) parameter command file for that particular ad placement 330. The record also includes the cost-per-use data for all of the ad content files forming part of the ad, and also the “bid” for display of the ad at specified network locations in response to user queries on search engines and/or websites using specified words or other user action at the specified network location where the ad is to be displayed.

After clicking “Save” in the system user screen when the above-referenced data is entered, a unique specific database record containing the specified custom parameters in the system's dispatcher server. When a billboard module on the network is requested, a communication is established with the dispatcher server, and after comparison, one or more of these specific database records are requested and the advertising is displayed/placed in the module. This placement can be “bid” on by multiple advertiser's that seek to have their ads displayed in such locations, and the system's auction function allows the website operator/ad displayer to display the ads that are most profitable for it to display, i.e., those that generate the most advertising revenue or otherwise have the most favorable parameters. This relational database entry also may contain custom parameters which, with the help of the FSDC tracking system, will pass tracking data relating to impressions and any actions (clicks on multiple parameters) taken on that particular advertisement for tracking and compilation for the website operator/advertiser's future reference. The present invention makes serving ads possible without any pre-loading technology required.

Registering with the system as a publisher administrator, publishers are directed to a menu where they enter information including contact information, and account information as to where they would like payments for advertising made to. They are also offered a menu to select preferred ad space sizes and dimensions, and enter keywords to associate with the ad space (billboard module) or select from a list of categories to associate with the billboard module. Upon submission the code necessary to embed the module in a web page is generated, with instructions. In the case of a website with search functionality, instructions will also be given on dynamically associated keyword requests with the advertising module.

Referring now to FIGS. 2 and 3, an overview of a preferred embodiment of the present invention is shown. The present invention ~~includes~~communicates with a ~~system~~ website viewer and ad creator/publisher computer ~~system~~systems 108. The ad creator can publish other advertisers' ads on his own site or publish his own ads on other sites having billboards made available by others. The computer system 108 comprises input and output devices, as is well-known in the art. For example, the computer system 108 preferably comprises a display screen or monitor 104, a keyboard 116, a printer 114, a mouse 106, etc. The computer system 108 is preferably connected to the Internet 112 that serves as one preferred communications medium. The Internet 112, as previously discussed, comprises a global network of networks and computers, public and private. The Internet 112 is the preferable connection method by system users 118, 120, 122 and nnn in preferred embodiments of the present invention. The website user/advertisement viewer's computer is preferably similar in its features.

Referring now to FIG. 3, the system-end computer 108 is shown. The computer system 108, in a preferred embodiment, comprises an ad dispatcher server 126, a tracking server 124 (which can be the same as or part of the dispatcher server), one or more licensed digital content file servers 125. The dispatcher server 126, licensed digital content file servers 125 and tracking server 124 preferably run in a variety of operating system environments, including MS Windows NT, MS Windows 2000, Linux and others, and preferably utilize a variety of database management systems, including MS SQL Server, Oracle and others.

Connectivity between the system user-end, the system-end and ad viewer-end may be effected in various forms without violating the scope and spirit of the present invention. In particular, network connectivity may be made by a telephone line/modem combination as is well known in the art, a dedicated ISDN line or a cable modem-type set-top-box which provides for Internet connectivity through certain forms of cable television services. Wireless communication can also be utilized. In each of the aforementioned cases, the computer of the website user-end portion will need to be provided with a suitable I/O card, such as a modem, ISDN card, and the like, in order to effect an appropriate interface with the network connection.

In application, the system provides for placement and delivery of advertisements as a compiled file. Preferably, this compiled file is a flash file identified by the .SWF suffix other files can be used. The use of the Macromedia/Adobe Flash file is preferred because of the ability to provide instructional code within the .swf file, and because nearly all customer computer systems have been enabled with the Flash player as a result of normal Internet browser configuration. Also, .swf files have become more universal, and able to execute in a variety of devices, including cell phones, PDA's, television and other devices. It is to be understood that under the teachings of the present invention, any type of file that is capable of operation without the initiation of an additional application could be used in place of Flash and the .swf file and use of a .swf file is not a limitation of the present invention.

Under the present invention, the clicking of the ad link or entry of the specified keyword as a search query, or other ad viewer action at the billboard module placed at the display location activates the corresponding ad parameter/command file in the ad parameter file database at the dispatcher server. Sample billboard module code is provided below:

```
KeyFrame # 1

_root.stop( );

// Get Objects for Template

sendForObjects = new LoadVars( );

receiveObjects = new LoadVars( );

// event handler to kickoff

_root.onLoad = function( ) {

// the send ForObjssendForObjs keywords for ad auction and receive variable that are

used for ad population

   sendForObjects.sendForObjs = “flashPort”;

   send ForObjectssendForObjects.sendAndLoad(“http://www.3cdepot.com/adAuction/

/getAds.asp?keywords=”+q+”&nocache=”+=“+new Date( ).getTime( ),

receiveObjects, “POST“);”);

   // used in below function to check if our receiveObjects object

has loaded

   receiveObjects.onLoad = receiveObjectsLoaded;

};

// if object data received, send to next frame

function receiveObjectsLoaded(success) {

   if (success) {
```

```
        // destroy the objects
        delete receiveObjects( );
        delete sendForObjects( );
        _root.nextFrame( );
    } else {
        (_root.errorMsg.text="Error Accessing Database");
}
    }
}
KeyFrame #2
//create variables to store ads's clientUID and userUID
catClientUID = receiveObjects.catClientUID;
catUserUID = receiveObjects.catUserUID;
catalogName = receiveObjects.catalogName;
//create array to store Ad Optional Attributes
catArray = receiveObjects.catAttribsList.split('|');
for (n=0; n<catArray.length; n++) {
    d = catArray[n].split('#');
    item = {AdTitle:d[0], AdHeight:d[1], AdWidth:d[2], image_src:d[3],
url:d[4], message:d[5], subTitle:d[6], bgColor:d[7], textColor:d[8],
sound:d[9]};
    catArray[n] = item;
}
//remove last object from array since its undefined
catArray.pop( );
//initialize catalog attribute variables from array
AdTitle = _level0.catArray[0]["AdTitle"];
bgColor = _level0.catArray[0]["bgColor"];
```

```
AdHeight = _level0.catArray[0]["AdHeight"];
AdWidth = _level0.catArray[0]["AdWidth"];
url = _level0.catArray[0]["url"];
textColor = _level0.catArray[0]["textColor"];
inseam = _level0.catArray[0]["inseam"];
image_src = _level0.catArray[0]["image_src"];
subTitle = _level0.catArray[0]["subTitle"];
sound1 = _level0.catArray[0]["sound"];
/*----------*/
//create array to store item and its properties
itemPropArray = receiveObjects.itemObjsList.split('|');
for (n=0; n<itemPropArray.length; n++) {
   d = item PropArrayitemPropArray[n].split('#');
   item = {auctionUID:d[0], adUID:d[1], order_num:d[2],
adName:d[3], img:d[4], clientUID:d[5], userUID:d[6], title:d[7],
caption:d[8]};
   itemPropArray[n] = item;
}
//remove last object from array since its undefined
itemPropArray.pop( );
//sort array by order_num
itemPropArray = itemPropArray.sortOn("order_num");
nextFrame( );
KeyFrameKeyframe # 3
_root.stop;
// create array to store to be duplicated clip names
clipNames = new Array( );
//function which loops through array and generate a duplicatemovie
```

```
statement for each item in array
//numItems accepts number up to max items in catalog
//imageDir points to folder structure where images are stored (either “”,
“1”, or “1/2”)“½”)
//clipToDuplicate is the name of the parent movieclip to duplicate
//imageHolderPath is the dot notation target path to the imageHolder mc
function
createItems(numItems,imageDir,clipToDuplicate,imageHolderPath,image
image Spacing) {
//for (var h = 0; h<itemPropArray.length; h++) {
for (var h = 0; h<numItems; h++) {
   //get the adUID from array to be used for duplicate movieclip
name
   itemObjUID = itemPropArray[h][“itemUID”];
   //get the adName from array to be used in textfield
   itemThumbNail = itemPropArray[h][“thumbNails”];
   //get the title from array
   itemTitle = item PropArrayitemPropArray[h][“title”];
   itemCaption = itemPropArray[h][“caption”];
   //get the clientUID and userUID to be used in path to image
   clientUID = itemPropArray[h][“clientUID”];
   userUID = itemPropArray[h][“userUID”];
   //duplicate the movieclip
   randomNum = random(1000);
   _root[clipToDuplicate].duplicateMovieClip(itemObjUID,
randomNum);
   //store newly duplicated clipnames in array
   clipNames.push(itemObjUID);
```

```
    //set the textfields with title and caption
    set(itemObjUID + imageHolderPath + ".textF.text",
String(itemTitle));
    set(itemObjUID + imageHolderPath + ".captionF.text",
String(itemCaption));
    //set background color of caption textBox
    set(itemObjUID + imageHolderPath +
".captionF.backgroundColor", "0x5A6B73");
    set(itemObjUID + imageHolderPath + ".captionF.borderColor",
"0xCCCCCC");
//position movie clips
          if (h<1) {
          var xpos = 5;
          setProperty(itemObjUID, _x, xpos);
       }
       else {
          xpos = xpos + imageSpacing;
          setProperty(itemObjUID, _x, xpos);
       }
       //load thumbnails
    loadMovie("http://www.3cdepot.com/ads/images/"+clientUID+"/"+
userUID+"/"+imageDir+"/"+itemThumbNail, itemObjUID +
imageHolderPath + ".imageHolder");
    }
}
//store the number of items from array to be duplicated
arrLength = itemPropArray.length;
play( );
```

Duration Media Ex-1013

KeyFrame # 4

_root.stop;

// create array to store to be duplicated clip names

thumbClipNames = new Array( );

//function which loops through array and generate a duplicatemovie

statement for each item in array

//numItems accepts number up to max items in catalog

//imageDir points to folder structure where images are stored (either “”,

“1”, or ~~“1/2”)~~“½”)

//clipToDuplicate is the name of the parent movieclip to duplicate

//imageHolderPath is the dot notation target path to the imageHolder mc

function

createThumbs(numItems,imageDir,clipToDuplicate,imageHolderPath,

image Spacing) {

  //for (var h = 0; h<itemPropArray.length; h++) {

  for (var i = 0; i<numItems; i++) {

    //get the adUID from array to be used for duplicate

movieclip name

    th_itemObjUID = itemPropArray[i][“itemUID”];

    //give special movieclip name designation to thumbnails

    th_itemObjUID = th_itemObjUID + “th”

    //get the adName from array to be used in textfield

    th_itemThumbNail = itemPropArray[i][“thumbNails”];

    //get the clientUID and userUID to be used in path to

image

    th_clientUID = itemPropArray[i][“clientUID”];

    th_userUID = itemPropArray[i][“userUID”];

    //duplicate the movieclip

```
        th_randomNum = random(10000);
    _root[clipToDuplicate].duplicateMovieClip(th_itemObjUID,
th_randomNum);
        //store newly duplicated clipnames in array
        thumbClipNames.push(th_itemObjUID);
        //position movie clips
            if (i<1) {
            var th_ypos = 400;
            setProperty(th_itemObjUID, _y, th_ypos);
        }
        else {
            th_ypos = th_ypos + imageSpacing;
            setProperty(th_itemObjUID, _y, th_ypos);
        }
//load thumbnails
loadMovie("http://www.3cdepot.com/ads/images/
"+th_clientUID+"/"+th_~~user~~userUID+"/"+th_itemThumbNail,
~~UID+"/"+th_itemThumbNail,~~ th_itemObjUID + imageHolderPath +
".imageHolderSm");
    }
}
//store the amount of items from array to be duplicated
thumbArrLength = itemPropArray.length;
//function that places thumbnail clips at specified x and y points
function placeThumbs(clipNum,x,y) {
__setProperty(thumbClipNames[clipNum], _x, x);
_setProperty(thumbClipNames[clipNum], _y, y);
    }
```

```
play( );
KeyFrame # 5
//Send tracking parameters
if (_level0.x != null && _level0.x != “”) {
   loadVariablesNum(“http://www.3cdepot.com/ads/counter/?x=”+_level
0.x+“&t=”+_level0.catalogName+“&c=”+_level0.c+“&p=”+_level0.p,
0);
   }
KeyFrame # 6
//call the functions to create ads
createItems(arrLength,“1”,“itemHolderLg”,“”, 180);
createThumbs(thumbArrLength,“”,“itemHolderSm”,“”,60);
placeThumbs(0,353,-150);
```

A sample of code that is embedded in the ad publisher's ad space on a website is provided below:

```
<%@LANGUAGE=“VBSCRIPT” CODEPAGE=“1252”%>
<!DOCTYPE html PUBLIC “-//W3C//DTD XHTML 1.0
Transitional//EN” “http://www.w3.org/TR/xhtml1/DTD/xhtml1-
transitional.dtd”>
<html xmlns=“http://www.w3.org/1999/xhtml”>
<head>
<meta http-equiv=“Content-Type” content=“text/html;
charset=iso-8859-1” />
<title>Ad Module</title>
</head>
<body>
<object classid=“clsid:D27CDB6E-AE6D-11cf-96B8-
444553540000”
codebase=“http://download.macromedia.com/pub/shockwave/cabs/
```

flash/swflash.cab#version=7,0,19,0” width=“260” height=“400”

title=“Ad_module_1”>

<param name=“movie”

value=“http://www.3cdepot.com/ads/module_1.swf?keywords=<%

= Request.QueryString(“q”) %>” />

<param name=“quality” value=“high” />

<embed

src=“http://www.3cdepot.com/ads/module_1.swf?keywords=<%=

Request.QueryString(“q”) %>” quality=“high”

pluginspage=“http://www.macromedia.com/go/getflashplayer”

type=“application/x-shockwave-flash” width=“260”

height=“400”></embed>

</object>

</body>

</html>

</html>

A sample of code embedded in a search engine ad publisher's ad space is provided below:

<!DOCTYPE html PUBLIC “-//W3C//DTD XHTML 1.0

Transitional//EN” “http://www.w3.org/TR/xhtml1/DTD/xhtml1-

transitional.dtd”>

<html xmlns=“http://www.w3.org/1999/xhtml”>

<head>

<meta http-equiv=“Content-Type” content=“text/html;

charset=iso-8859-1” />

<title>Ad Module</title>

</head>

<body>

<object classid=“clsid:D27CDB6E-AE6D-11cf-96B8-

444553540000”

codebase=“http://download.macromedia.com/pub/shockwave/cabs/

flash/swflash.cab#version=7,0,19,0” width=“260” height=“400”

title=“Ad_module_1”>

<param name=“movie”

value=“http://www.3cdepot.com/ads/module_1.swf” />

<param name=“quality” value=“high” />

<embed src=“http://www.3cdepot.com/ads/module_1.swf”

quality=“high”

pluginspage=“http://www.macromedia.com/go/getflashplayer”

type=“application/x-shockwave-flash” width=“260”

height=“400”></embed>

</object>

</body>

</html>

As directed by the billboard module, the dispatcher server conducts an auction to select the ad to be displayed from those that have bid for display with reference to the particular keyword(s) or topic and then retrieves the selected ad's ad parameter/command file from the dispatcher server (.swf file or HTML, asap, net, or AJAX file in which .swf file is embedded). Sample ad auction algorithm code is provided below:

```
CREATE PROCEDURE dbo.ab_AdAuction

(@keywords nvarchar(50), @blockSize INT, @area tinyint, @cityUID INT,

@stateCode varchar(2), @dup_postingUID INT)

AS

SET NOCOUNT ON

BEGIN

DECLARE @areaStr varchar(200), @postingSrt varchar(200), @rq

varchar(8000), @li INT, @total_ratinginBlock decimal(9,4), @procentage

decimal(9,4), @numberofrecords INT, @item_table TINYINT,

@fakeCategoryUID INT, @postingUID INT
```

```
DECLARE @ID INT, @views decimal(9,2), @clicks decimal(9,2), @percentage
decimal(9,4), @bid money, @cnt INT, @ctr decimal(9,4), @rating decimal(9,4)
DECLARE @numberofBlocks INT, @av_clicks decimal(9,2), @av_views
decimal(9,2), @av_ctr decimal(9,4), @totalAds tinyint
CREATE TABLE #table2 (blockNumber INT, [ID] INT, ctr decimal(9,4), rating
decimal(9,4), bid money, [views] INT, clicks INT, rating_pr decimal(9,4), view_pr
decimal(9,4), postingUID INT )
CREATE TABLE #table1 ([ID] INT, ctr decimal(9,4), rating decimal(9,4), bid
money, [views] decimal(9,4), clicks decimal(9,4), postingUID INT)
SET @totalAds = 0
-- Get city local -based search result
SET @areaStr = ‘’“
IF @area <> 0
SET @areaStr = ‘ AND area=’+Str(@area)
SET @postingSrt = ‘’“
IF @dup_postingUID <> 0
SET @postingSrt = ‘ AND postingUID <> ’+Str(@dup_postingUID)
SET @rq = ‘DECLARE ad_cursor CURSOR SCROLL KEYSET FOR SELECT
TOP 20 [ID], [views], clicks, bid, postingUID FROM dbo.adsWHERE ad_option =
2 AND cityUID=’+=‘+Str(@cityUID)+‘)+’ AND local_flag IS NOT NULL AND stop_flag
IS NULL’+@NULL‘+@areaStr+@postingSrt
IF @keywords <> ‘’”
SET @rq = ‘DECLARE ad_cursor CURSOR SCROLL KEYSET FOR SELECT
TOP 20 [ID], [views], clicks, bid, postingUID FROM dbo.adsWHERE FREETEXT
(*,‘’’+@(*,“‘+@keywords+‘’’)+’”) AND ad_option = 2 AND cityUID=’+=‘+Str(@cityUID)+‘)+’ AND
local_flag IS NOT NULL AND stop_flag IS NULL’+@NULL‘+@areaStr+@postingSrt
EXEC (@rq)
OPEN ad_cursor
```

```
SET @numberofrecords = @@CURSOR_ROWS
FETCH ABSOLUTE 1 FROM ad_cursor INTO @ID, @views, @clicks, @bid,
@postingUID
    SET @cnt=0
    WHILE @@FETCH_STATUS=0 AND @cnt < 20
    BEGIN
SET @ctr = 0
SET @rating = 0
IF @views > 0 AND @clicks > 0
BEGIN
SET @rating =100
SET @ctr = ((@rating / @views) * @clicks)
SET @rating = (@bid * @ctr)
END
INSERT #table1 VALUES (@ID, @ctr, @rating, @bid, @views, @clicks,
@postingUID)
        FETCH NEXT FROM ad_cursor INTO @ID, @views, @clicks,
@bid, @postingUID
        SET @cnt = @cnt+1
        SET @totalAds = @totalAds +1
    END
CLOSE ad_cursor
DEALLOCATE ad_cursor
-- Get state-based search result (it could be also based on msa, cbsa, csa or
other region criteria)
IF @totalAds < @blockSize
BEGIN
SET @rq = 'DECLARE ad_cursor CURSOR SCROLL KEYSET FOR SELECT
```

```
TOP 20 [ID], [views], clicks, bid, postingUID FROM dbo.adsWHERE ad_option =
2 AND stateCode ='' + @ = '' + @stateCode + '' + '' AND local_flag IS NULL AND stop_flag IS
NULL' + @NULL' + @areaStr+@postingSrt
IF @keywords <> ''
SET @rq = 'DECLARE ad_cursor CURSOR SCROLL KEYSET FOR SELECT
TOP 20 [ID], [views], clicks, bid, postingUID FROM dbo.adsWHERE FREETEXT
(*,'' + @(*,'' + @keywords + '')+'') AND ad_option = 2 AND stateCode='' + @='' + @stateCode + ''+''
AND local_flag IS NULL AND stop_flag IS NULL' + @NULL' + @areaStr+@postingSrt
EXEC (@rq)
OPEN ad_cursor
SET @numberofrecords = @@CURSOR_ROWS
FETCH ABSOLUTE 1 FROM ad_cursor INTO @ID, @views, @clicks, @bid,
@postingUID
    SET @cnt=0
    WHILE @@FETCH_STATUS=0 AND @cnt < 20
    BEGIN
SET @ctr = 0
SET @rating = 0
IF @views > 0 AND @clicks > 0
BEGIN
SET @rating =100
SET @ctr = ((@rating / @views) * @clicks)
SET @rating = (@bid * @ctr)
END
INSERT #table1 VALUES (@ID, @ctr, @rating, @bid, @views, @clicks,
@postingUID)
        FETCH NEXT FROM ad_cursor INTO @ID, @views, @clicks,
@bid, @postingUID
```

```
        SET @cnt = @cnt+1
        SET @totalAds = @totalAds +1
    END
CLOSE ad_cursor
DEALLOCATE ad_cursor
END
-- Get national search result
IF @totalAds < @blockSize
BEGIN
SET @rq = 'DECLARE ad_cursor CURSOR SCROLL KEYSET FOR SELECT
TOP 20 [ID], [views], clicks, bid, postingUID FROM dbo.adsWHERE ad_option =
2 AND stateCode <> ''+@"'+@stateCode+''+'" AND local_flag IS NULL AND stop_flag
IS NULL'+@NULL'+@areaStr+@postingSrt
IF @keywords <> ''
SET @rq = 'DECLARE ad_cursor CURSOR SCROLL KEYSET FOR SELECT
TOP 20 [ID], [views], clicks, bid, postingUID FROM dbo.adsWHERE FREETEXT
(*,''+@(*,"'+@keywords+'')+'") AND ad_option = 2 AND stateCode <> ''+@"'+@stateCode+''+'"
AND local_flag IS NULL AND stop_flag IS NULL'+@NULL'+@areaStr+@postingSrt
EXEC (@rq)
OPEN ad_cursor
SET @numberofrecords = @@CURSOR_ROWS
FETCH ABSOLUTE 1 FROM ad_cursor INTO @ID, @views, @clicks, @bid,
@postingUID
    SET @cnt=0
    WHILE @@FETCH_STATUS=0 AND @cnt < 100
    BEGIN
SET @ctr = 0
SET @rating = 0
```