```
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
-- run in case to fill out without keywords
IF @keywords <> ''
IF @totalAds < @blockSize
BEGIN
SET @rq = 'DECLARE ad_cursor CURSOR SCROLL KEYSET FOR SELECT
TOP 20 [ID], [views], clicks, bid, postingUID FROM dbo.adsWHERE stop_flag IS
NULL AND ad_option=2 AND local_flag IS NULL AND postingUID NOT IN
(SELECT postingUID FROM #table1) ORDER BY [ID] DESC'
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
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
-- Set variables for sorting
DECLARE @totalRating decimal(9,4), @totalViews decimal(9,4), @rating_pr
decimal(9,4), @view_pr decimal(9,4), @avg_rating decimal(9,4), @min_rating
decimal(9,2)
SET @totalRating = (SELECT SUM(rating) FROM #table1)
SET @totalViews = (SELECT SUM([views]) FROM #table1)
```

```
--SET @avg_rating = (SELECT AVG(rating) FROM #table1)
SET @avg_rating = (SELECT MAX(rating) FROM #table1)
-- Sort ads by ratings
DECLARE ad_cursor CURSOR SCROLL KEYSET FOR SELECT [ID], ctr, rating,
bid, [views], clicks, postingUID FROM #table1 ORDER BY rating DESC, bid
DESC
OPEN ad_cursor
SET @numberofrecords = @@CURSOR_ROWS
FETCH ABSOLUTE 1 FROM ad_cursor INTO @ID, @ctr, @rating, @bid,
@views, @clicks, @postingUID
    SET @cnt=0
    SET @li = 0
    SET @numberofBlocks = 1
    SET @total_ratinginBlock = 0
    WHILE @@FETCH_STATUS=0 AND @cnt < (@numberofrecords+1)
    BEGIN
IF @li < @blockSize
SET @li = @li+1
ELSE
BEGIN
SET @li = 1
SET @numberofBlocks = @numberofBlocks + 1
END
IF (@views < 100 OR @views IS NULL) AND (@clicks = 0 OR @clicks IS
NULL)
SET @rating = @avg_rating
IF @totalRating > 0
SET @rating_pr = (100 / @totalRating * @rating)
```

```
IF @totalViews > 0
SET @view_pr = (100 / @totalViews * @views)
IF @cnt < 5
UPDATE dbo.adsSET [views]=[views] +1 WHERE [ID]=@ID AND ad_option=2
INSERT #table2 VALUES (@numberofBlocks, @ID, @ctr, @rating, @bid,
@views, @clicks, @rating_pr, @view_pr, @postingUID)
    FETCH NEXT FROM ad_cursor INTO @ID, @ctr, @rating,
@bid, @views, @clicks, @postingUID
    SET @cnt = @cnt+1
  END
CLOSE ad_cursor
DEALLOCATE ad_cursor
DROP TABLE #table1
SELECT TOP 5 a.[ID], a.rating_pr, a.view_pr, b.area, a.postingUID,
b.posting_date, b.main_categoryUID, folder=CASE WHEN b.url='class'THEN
'class' ELSE 'item' END, b.title, heading=CASE
WHEN (b.heading IS NOT NULL AND b.heading <> '')") THEN b.heading ELSE
b.heading_alt END, b.price, b.specialPrice, b.onSpecial, b.[description], b.src,
region=(b.city+', '+b.stateCode), b.timeZone, b.categoryName,
b.sub_categoryUID, b.subCategoryName FROM #table2 a INNER JOIN
dbo.depot_items b ON a.postingUID=b.[ID]
DROP TABLE #table2
END
GO
```

Using the data from the dispatcher server, the coding of the .swf template file renders the advertisement, drawing a variety of elements including messaging, including text, images, and third party digital content from a variety of locations. A sample of coding that retrieves the parameter/command data for the ad selected by the auction is provided below:

```
<%@LANGUAGE="VBSCRIPT" CODEPAGE="1252"%>
```

```
<%
Dim searchString, numberOfSpots, category, city, stateCode,
postingUID, i
searchString = "key words sent from ad module"
numberOfSpots = 5 ' can be any number starting from 1
category = 3 ' if there are category-based
city = 1180 ' city ID in database
stateCode = "Az" 'AZ" ' or other region criteria
postingUID = 0 ' needed to filter ads of the product on the actual product
page
i= 0
set adsRs = Server.CreateObject("ADODB.Recordset")
adsRs.ActiveConnection = connection_string
adsRs.CursorType = 0
adsRs.CursorLocation = 2
adsRs.LockType = 3
adsRs.Open("dbo.ab_AdAuction ''" & searchString & "', "& ", " &
numberOfSpots &", "& ", " & category & ", "", " & city & ", '"", "' & stateCode
& "', ", " & postingUID)
While Not adsRs.EOF
Response.Write "&ad" & i "=" & adsRs.Fields.Item("ID").Value
i = i + 1
   adsRs.MoveNext
   Wend
adsRs.Close( )
adsRs.ActiveConnection = Nothing
Set adsRs = Nothing
%>
```

Using data received from the dispatcher server, the coding of the .swf file also establishes a connection to a tracking server which is preferably used to store and provide to system users website advertisement viewer activity tracking data. On viewer interaction, such as via clicks, the coding of the .swf file establishes two substantially simultaneous connections, with one to the indicated tracking server for tracking purposes and the second is the actual link from the ad location to the advertised content (click-through scenario). A sample depiction of an ad parameter/command database file stored in the system dispatcher server is provided in FIG. 4.

The method of the present invention in a preferred embodiment comprises the steps of: selecting one or more digital content files previously stored in electronic file format in a mass storage device of a computer system made available for licensing on a cost-per-click, cost-per-impression or other pay-per-use basis for use in creating an ad for placement on a website or other network location; storing in an ad parameter/command file within a database at the system dispatcher server the commands needed to retrieve and assemble said licensed content as well as the total cost-per-click or other cost-per-use of the licensed content used in the ad, the keyword topic terms, if any, that the ad will be associated with and the advertiser's bid amount for display of the ad at a specified location when the specified search terms are entered as search queries or clicked on as links and tracking parameters, for use upon selection of the ad to be displayed placing an ad billboard module at the desired ad display network location, which, when clicked on by the website user, causes the website or other location to communicate with the dispatcher server to execute a real-time auction to select the ad to be displayed, and then retrieve the stored ad parameter/command file for the selected ad from the dispatcher server database and then using the retrieved values in said data string and commands for said ad placement, to retrieve the ad content files from where they are stored, assemble them into the overall ad and display them at the specified network location. The advertisement viewer is then directed to specified go-to web page(s) depending on said advertisement viewer's activity with respect to said advertisement. The advertiser is charged the total cost-per-click or other cost-per-use charge for the licensed and content and the ad space every time the advertiser's ad is run and, the content licensor and ad space location owner are paid.

In a preferred embodiment, the ad viewer can access and view the advertisements without having to download or cache any files on the website user's system. Utilizing FSDC technology, the ad's custom tracking parameters as well as the ad viewer's actions in clicking on the ad links provided is itself used as a tracking signal by the system and is saved in the related tracking database.

Referring now to FIG. 6, when a network user (in an Internet-based embodiment) requests a webpage where the billboard module is embedded, referencing a keyword, or enters a query using the keyword 220, the billboard module executes a request to the system's dispatcher server to run a real-time auction for selection of the particular ad file to be displayed from the group of ad files that have the same keyword and display location references based on the bids placed for display of such ads 240 or based upon 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, and then to retrieve the ad placement parameter file for the selected ad 200. This ad file may be a static HTML image file, but also may be an advertising template file that plays within the module and refers to the dispatcher server which contains unique identifiers for that particular ad placement transaction stored in the database. The database can be in SQL Server format, or, alternatively, it can be in Oracle, Microsoft Access or any other server-based database format. The database stores the unique parameters for the particular ad placement rendering. The stored information contains the following components in addition to other customizable parameters:

1. URL link to the ad content files to be shown (the ad content files can be located on any server, but are preferably stored in a database within a separate content server so that updating of content files can be

done separately from use of the system at one web location rather than on every website where an ad is placed).

2. Variables that hold custom parameters for tracking (as many as needed), including link(s) to click action target page or pages.

3. The cost-per-click or other cost-per-use charge total for the licensed content used in the ad.

4. The “bid” price for display of the ad in a desired location and/or in response to one or more specified search query terms.

5. The specified search keywords/query terms with which the ad will be associated.

The dispatcher server, in response to the request, initiates the link to the ad template file at the ad server and passes into it the following information: messaging including text and font format, location of images, location of third party digital content files, Location of link to go-to page, click destinations and variables that contain custom tracking parameters 210. The ad then grabs this information from the query string and acts accordingly (displaying ad file 250 and sending tracking parameters to a tracking server using FSDC in a preferred embodiment 260).

System Screens

As further described below, FIGS. 7-35 depict representative samples of the system's graphical user interface screens, which provide a system user template for creating parameter/command uniform resource locator address data string files for retrieval, assembly and display, to be stored as files within the database of the dispatcher server.

FIGS. 9-21, each discussed further below, depict sample system user screens for users of the system seeking to create and place ads. These screens walk the advertiser through a straightforward process of creating the ad, including selection of ad content, inputting text and messaging for the ad, designating the ad title, click destination, size, associated keywords and/or categories, ad placement payment options, budgeting, geographic region for ad coverage and other parameters. The screens can have, as depicted in the samples, main menu items such as “Create New Ad” which leads to the screens for creating new ads and “My Rich Media Ads” which leads to screens whereby the users of the system can access and use the ads.

FIG. 7 depicts a sample system user/advertiser user registration login screen. Users who are registered with the system enter their user identification and password to access the system as depicted in FIG. 8. New operator users must register with the system by completing an online form as depicted in FIG. 7. Once logged in, website operator users are presented with a screen such as FIG. 8 which has various options, including edit user information, portfolio and tracking and add new advertisement.

FIG. 9 depicts a sample initial advertisement creation input screen. After logging in, the advertisers enters a title for the ad to be created. The advertiser then enters the destination for the advertisement, which is where the ad viewers will be directed when they click on the ad. The advertiser can designate its own website or a third party website or can designate the system's e-commerce depot which allows advertisers that do not have e-commerce capability of their own to use the system's features which allow ad viewers to purchase the advertiser's products on services, providing electronic payment and order/purchase processing. FIG. 10 depicts a sample advertisement click destination input screen. The advertiser then selects the ad size at a screen such as the sample screen depicted in FIG. 411. The advertiser then selects the ad creative content files to be used in the ad, via a content library provided via

a user screen such as the sample screen depicted in FIG. 12. The advertiser then enters the advertiser's desired ad text and messaging, via an input screen such as the sample ad text and messaging input screen depicted in FIG. 13. The advertiser then previews and saves the ad, via a screen such as the sample preview and save screen depicted in FIG. 14. The advertiser then selects the geographic region for which to run the ad. This feature enables very targeted advertising. FIG. 15 depicts a sample geographic region input screen. The advertiser then selects a payment program for the ad via an ad placement options screen such as the sample screen depicted in FIG. 16. The options, as previously mentioned can include all varieties of payment, such as, without limitation, pay-per-click, payment of a specified fixed amount for a specified number of views, ad swapping, bartering, and other payment options. The advertiser then enters keywords to be associated with the ad, as well as the advertiser's bid for display of the ad when triggered by the designated keywords. FIG. 17 depicts a sample keyword and maximum bid amount input screen, in an embodiment utilizing a pay per click ad charging payment option. The advertiser can test in real time the effectiveness of its keyword and bid selections and calibrate them accordingly to achieve best results. The advertiser also creates an advertising budget if the ad is being paid for via a pay per view/impression payment option, via an ad placement plan budget input screen such as the sample screen depicted in FIG. 18. The advertiser also can select target categories to be associated with the ad, via a target category selection screen such as the sample screen depicted in FIG. 19. FIG. 20 depicts a sample of another ad budget data input screen where an advertiser can create a budget using different parameters, such as, for example, but without limitation, a maximum several budget or a maximum daily limit. The advertiser then enters payment information, such as the advertiser's credit card data to pay for the ad. When the advertiser clicks “Submit” as depicted in FIG. 21 (an ad payment data input screen), all of the ad information is sent to the dispatcher server and the ad is published.

FIGS. 22-32, each discussed further below depict sample system users screens for users that have websites and are seeking to publish ads on their own site. As shown in the figures referenced above, the screens can have several menu items, such as, for example but without limitation, “My Websites” which includes the ad publisher's website information, “My Billboards,” which includes the parameter files for billboards established by the ad publisher, and “Create New Billboard,” which leads to the screens that take the ad publisher through the steps for establishing a billboard for display of system ads.

Ad publishers first register their website and upload their website logo into the system via a Website Registration screen such as the sample screen depicted in FIG. 22. The ad publisher then enters an identification for the billboard to be created via a billboard ID input screen such as the sample depicted in FIG. 23. The ad publisher selects a payment program to associate with the billboard being created. These are the parameters by which the ad publisher would charge when an ad is displayed in the billboard. FIG. 24 depicts a sample advertising program selection screen, showing three non-limiting examples of options, such as pay per click or pay per view, ad swapping and affiliate programs. The ad publisher also selects the size for the billboard via a size selection screen such as the sample depicted in FIG. 25. The ad publisher can customize the billboard by selecting border color, background color, text color or select options to match the ad publisher's website. FIG. 26 depicts a sample customization selection screen. The ad publisher then selects target categories to be associated with the billboard for relevant ad placement. FIG. 27 depicts a sample billboard target category selection screen. The ad publisher then receives code to copy and paste into their website page, via a “Get Code for Billboard” screen such as the sample depicted in FIG. 28. If an interstitial advertisement billboard is set up, (where the advertisement runs between web pages) the ad publisher is also prompted to enter the URL for the skip/destination web page. FIG. 29 depicts a sample skip/destination URL input screen. In the case of interstitial ads, the ad publisher is given a unique URL generated by the system which the publisher copies and pastes into the ad publisher's website in the place of the skip/destination URL. When an ad

viewer clicks on the link/billboard space, the user first sees the interstitial ad, then the destination page. If the viewer clicks on the ad then the viewer is directed to the interstitial ad's destination URL that was specified by the advertiser that created the ad. FIG. 30 depicts a sample interstitial URL copying screen. The ad publisher places the billboard module code in their website. When the website page is requested, the billboard module communicates with the dispatcher server and an advertiser's ad is selected and rendered in the billboard module space on the designated page. FIG. 31 depicts a sample ad publisher billboard location within a website screen, showing the placement of the billboard module, represented by the “Need Shoes??? Click Here!” area of the screen. With search engine websites, when the page is requested, the system determines the searched keyword and passes it to the billboard module and the billboard module communicates with the system dispatcher server and advertiser's ad is selected and rendered in the billboard module on the ad publisher's web page. A sample of a rendered shoe ad in response to a query using the Keyword “Shoes” is depicted in the sample ad publisher search engine web page screen in FIG. 32. The system also provides various operational parameter/data screens. 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 statistic screen.

Information about the content file(s) selected are saved in the system ad parameter file database as a row of data and a unique ID is given to the row as shown in FIG. 14. In the example in FIG. 14, the unique id is noted in Column A, the cost per use of the licensed ad content used in the ad is noted in Column H and the cost-per-click bid by the advertiser for display of the ad in response to keywords specified in Column J is noted in Column I. The ad display location owner is also registered with the system and the offered ad display space is embedded with a billboard module associated with specified keywords designated by the ad display location's owner. The designation by the ad space owner/ad publisher of keywords to be associated with the billboard module embedded at a particular network location enables the ad space owner to designate the subject matter of ads that the ad space owner would like to run at the particular location. When a network user/ad viewer either requests a web page that contains the embedded billboard module, otherwise acts on the billboard module or enters one of the designated keywords as a query, the system conducts the auction to select the ad to be displayed from the group of ads that reference the same keyword and display location, and then the ad parameter/command file for the selected ad is accessed and the commands are retrieved and run, retrieving, assembling and displaying the licensed content files in accordance with the instructions.

In one embodiment of the present invention, ad publishers can participate in a barter-based advertising exchange network wherein 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. With this exchange network, ad publishers can also advertise, and advertisers can use their own unused advertising “space” such as views/impressions on their own website, as currency for paying for their own ad placements, making advertising less expensive and increasing ROI for the advertiser by minimizing the out of pocket cash outlay for advertising, and publishers are able to liquidated unsold inventory of ad impressions/views at no incremental cost. Content licensors can also use the system to barter their ad content in exchange for impressions/views of their own ads at third party network locations, or other barterable advertising commodities. The system is used to implement a method for ad publishers to exchange ad views/impressions via bartering, comprising the following steps: contributing ad views/impressions available on an ad publisher's network location to a system for the creation, distribution and tracking of electronic advertisements on a network, comprising a system-end computer equipped and configured for network communications, including computer

processing means, a dispatcher server containing a database that stores one or more files containing parameters and commands for each advertisement, a system advertiser user-end computer configured and equipped for network communications and communicating with said network~~, an~~ and communicating with one or more ad publisher-end ~~computer~~computers configured and equipped for network communications and communicating with said system dispatcher server and network user-end computers, one or more advertisement servers configured and equipped for network communications communicating with said system-end dispatcher server and ad publisher-end computers and having one or more advertisement content files stored thereon which are made available for licensing for use in creating an advertisement, one or more network communications interface software applications for interfacing with system advertiser users and also providing a menu for selection of one or more advertising content files made available for licensing for use in creating an advertisement and creating a file in said dispatcher server database that contains parameters and commands to retrieve, assemble and display said one or more advertisement files as well as the total cost-per-use of the licensed ad content files and the location(s) where the ad will be displayed, network communication means for displaying said advertisement, and a tracking server communicating with said advertisement server and said dispatcher server for tracking of usage of licensed advertisement content files to calculate and charge said system advertiser user the cost-per-use rate for said licensed advertisement content files each time said files are displayed, thereby creating an inventory pool of available ad views/impressions on said system for use by ad publishers and other advertisers seeking to publish their ads, and providing to said ad publishers in exchange for said contributed ad views/impressions the right to display said ad publishers' own ads using network location views/impressions selected from said inventory of said contributed ad views/impressions. FIG. 44 depicts a sample system screen for the ad exchange feature of the system. After the ad exchange program participant signs into the system, the ad exchange program is selected and the participant then creates the “billboard” module for the ad space being contributed by said participant on said participant's website, other network location or publication, where the ads of other participants in the ad exchange program will be displayed. The participant can designate a previously created billboard or can create a new one for use in the ad exchange program. FIG. 45 depicts a sample system screen for the participants in the ad exchange program to specify the identification parameters for the ad space to be made available on said participant's website, other network location or publication. The identification parameters are used for the participant to later find, track or update the billboard space. FIG. 46 depicts a sample system screen for participants to specify the size parameters for the ad space to be made available on the participant's website, other network location or publication. FIG. 47 depicts a sample system screen for participants to customize the appearance of the ad space being made available on the participant's website, other network location or publication to match the overall appearance of said website, other network location or publication. FIG. 48 depicts a sample system screen for participants to select the advertisement for their own products/services to be run at third party program participants' network locations in exchange for the ad space contributed to the program by said participant. FIG. 49 depicts a sample system screen for participants in the program to select target categories to be associated with the ad space on said participant's own website being contributed by said participant to the program. FIG. 50 depicts a sample system screen where participants in the program receive and can copy the code to be placed in said participant's own network location in order to display ads placed by other program participants. As network ads are displayed on the participant's own website or other network location or publication, the participant earns credits or rights to have their own ad displayed at other third party network locations.

As shown in FIGS. 34 and 35, which depict sample system tracking screens, meta data on any action taken on the ad is sent back to the database file for the ad via FSDC, and the licensed ad content usage and ad display location charges are applied. The advertiser preferably places a deposit with the system to be drawn against as the advertiser's ad is displayed.

The ad spots can be made available either generally or in relation to the use of specified search terms or keywords. In the case of a website, the website operator can designate keywords that relate to a particular ad space by entering the words into the code for the billboard module that will be embedded at the ad space location. This is done via the system user interface when the web publisher creates a billboard module. In case of a search engine, keywords can be assigned to an ad space from the search field entry. Advertisers seeking to place an ad at the ad space noted enter into the system ad parameter data file the specific keywords to be associated with the ad and a maximum bid for display of the ad at the designated space when the designated keywords are entered as search queries. The ads are displayed once selected based on the bid for each ad or other customizable parameters such as, for example, frequency of display (e.g., display the ad periodically, such as once a day or every five ads displayed, or other). Advertisers can run test auctions to assess the bid amount and frequency of display of the ad based on such bid amount. Sample system code for executing a test auction is provided below:

Sample Test Bid Ad Auction SQL ~~Procedure~~procedure:

```
CREATE PROCEDURE dbo.ab_testAdauction

(@postingUID INT, @ad_option INT, @test_bid money, @blockSize INT,

@keywords nvarchar(150), @search nvarchar(50), @showtime decimal(9,2)

OUTPUT, @best_ctr decimal(9,2) OUTPUT, @competitors INT OUTPUT,

@goodwords INT OUTPUT)

AS

SET NOCOUNT ON

BEGIN

-- Check first 5 search words (where search is URLencrypted string) against

keywords

DECLARE @mesStr varchar(60), @curStr INT, @var1 varchar(60), @var2

varchar(60), @var3 varchar(60), @var4 varchar(60), @var5 varchar(60)

BEGIN

SET @goodwords = 0

IF (@keywords LIKE '% '+@search+' %' OR LEFT(@keywords,

LEN(@search)+1) LIKE @search+' %' OR RIGHT(@keywords,

LEN(@search)+1) LIKE '% '+@search+' ')

SET @goodwords = 1

ELSE

BEGIN
```

```
SET @var1 = ‘’
SET @var2 = ‘’
SET @var3 = ‘’
SET @var4 = ‘’
SET @var5 = ‘’
SET @mesStr = @search
-- Word # 1
SET @curStr = 0
WHILE @curStr < LEN(@mesStr)
BEGIN
IF SUBSTRING (@mesStr, @curStr,1) = ‘+’
IF @var1 = ‘’
BEGIN
SET @var1 = LEFT(@mesStr,@curStr −1)
SET @mesStr = RIGHT(@mesStr, LEN(@mesStr) − (LEN(@var1)+1))
END
SET @curStr = @curStr +1
END
IF @var1 = ‘’
SET @var1 = @mesStr
ELSE
IF (@keywords LIKE ‘% ’+@var1+‘ %’ OR LEFT(@keywords,
LEN(@var1)+1) LIKE @var1+‘ %’ OR RIGHT(@keywords, LEN(@var1)+1)
LIKE ‘% ’+@var1+‘ ’)
SET @goodwords = 1
-- Word # 2
IF LEN(@search) >= (LEN(@mesStr) + 1 + LEN(@var1))
BEGIN
```

```
SET @curStr = 0
WHILE @curStr < LEN(@mesStr)
BEGIN
IF SUBSTRING (@mesStr, @curStr,1) = '+'
IF @var2 = ''
BEGIN
SET @var2 = LEFT(@mesStr,@curStr -1)
SET @mesStr = RIGHT(@mesStr, LEN(@mesStr) - (LEN(@var2)+1))
END
SET @curStr = @curStr +1
END
IF @var2 = ''
SET @var2 = @mesStr
END
IF (@keywords LIKE '% '+@var2+' %' OR LEFT(@keywords,
LEN(@var2)+1) LIKE @var2+' %' OR RIGHT(@keywords, LEN(@var2)+1)
LIKE '% '+@var2+' ')
SET @goodwords = 1
-- Word # 3
IF LEN(@search) >= (LEN(@mesStr) + 1 + LEN(@var1) + 1 + LEN(@var2))
BEGIN
SET @curStr = 0
WHILE @curStr < LEN(@mesStr)
BEGIN
IF SUBSTRING (@mesStr, @curStr,1) = '+'
IF @var3 = ''
BEGIN
SET @var3 = LEFT(@mesStr,@curStr -1)
```

```
SET @mesStr = RIGHT(@mesStr, LEN(@mesStr) − (LEN(@var3)+1))
END
SET @curStr = @curStr +1
END
IF @var3 = ‘’
SET @var3 = @mesStr
ELSE
IF @search LIKE @var3 SET @goodwords = 1
END
IF (@keywords LIKE ‘% ’+@var3+‘ %’ OR LEFT(@keywords,
LEN(@var3)+1) LIKE @var3+‘ %’ OR RIGHT(@keywords, LEN(@var3)+1)
LIKE ‘% ’+@var3+‘ ’)
SET @goodwords = 1
-- Word # 4
IF LEN(@search) >= (LEN(@mesStr) + 1 + LEN(@var1) + 1 + LEN(@var2)
+ 1 + LEN(@var3))
BEGIN
SET @curStr = 0
WHILE @curStr < LEN(@mesStr)
BEGIN
IF SUBSTRING (@mesStr, @curStr,1) = ‘+’
IF @var4 = ‘’
BEGIN
SET @var4 = LEFT(@mesStr,@curStr −1)
SET @mesStr = RIGHT(@mesStr, LEN(@mesStr) − (LEN(@var4)+1))
END
SET @curStr = @curStr +1
END
```

```
IF @var4 = ‘’
SET @var4 = @mesStr
ELSE
IF @search LIKE @var4 SET @goodwords = 1
END
IF (@keywords LIKE ‘% ’+@var4+‘ %’ OR LEFT(@keywords,
LEN(@var4)+1) LIKE @var4+‘ %’ OR RIGHT(@keywords, LEN(@var4)+1)
LIKE ‘% ’+@var4+‘ ’)
SET @goodwords = 1
-- Word # 5
IF LEN(@search) >= (LEN(@mesStr) + 1 + LEN(@var1) + 1 + LEN(@var2)
+ 1 + LEN(@var3) + 1 + LEN(@var4))
BEGIN
SET @curStr = 0
WHILE @curStr < LEN(@mesStr)
BEGIN
IF SUBSTRING (@mesStr, @curStr,1) = ‘+’
IF @var5 = ‘’
BEGIN
SET @var5 = LEFT(@mesStr,@curStr −1)
SET @mesStr = RIGHT(@mesStr, LEN(@mesStr) − (LEN(@var5)+1))
END
SET @curStr = @curStr +1
END
IF @var5 = ‘’
SET @var5 = @mesStr
ELSE
IF @search LIKE @var1 SET @goodwords = 1
```

```
END
IF (@keywords LIKE '% '+@var5+' %' OR LEFT(@keywords,
LEN(@var5)+1) LIKE @var5+' %' OR RIGHT(@keywords, LEN(@var5)+1)
LIKE '% '+@var5+' ')
SET @goodwords = 1
END
END
IF @goodwords=1
BEGIN
SET @search = Replace(@search,'+',' ')
IF EXISTS (SELECT postingUID FROM dbo.ad_classifieds WHERE
FREETEXT(*, @search) AND stop_flag IS NULL AND ad_option=1 AND
postingUID <> @postingUID AND postingUID IS NOT NULL)
-- There are competitors!!!
BEGIN
-- Set temp tables
CREATE TABLE #table2 (blockNumber INT DEFAULT (0), [ID] INT
DEFAULT (0), ctr decimal(9,4) DEFAULT (0), rating decimal(9,4) DEFAULT
(0), bid money DEFAULT (0), [views] decimal(9,4) DEFAULT (0), clicks
decimal(9,4) DEFAULT (0))
CREATE TABLE #table1 ([ID] INT DEFAULT (0), postingUID INT DEFAULT
(0), ctr decimal(9,4) DEFAULT (0), rating decimal(9,4) DEFAULT (0), bid
money DEFAULT (0), [views] decimal(9,4) DEFAULT (0), clicks decimal(9,4)
DEFAULT (0))
-- Set common variables
DECLARE @totalRating decimal(9, 2), @blockRating decimal(9, 2),
@blockNumber INT, @rq varchar(8000)
DECLARE @li INT, @record_postingUID INT, @total_ratinginBlock
```

```
decimal(9,4), @procentage decimal(9,4), @numberofrecords 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)
-- Set request and run it
SET @rq='DECLARE ad_cursor CURSOR SCROLL KEYSET FOR
SELECT [ID], postingUID, [views], clicks, bid FROM dbo.ads WHERE
FREETEXT (*,'''+@(*,'''+@search+''')+''') AND stop_flag IS NULL AND
ad_option='+='+Str(@ad_option)+')+' AND postingUID <> '+STR(@postingUID)
EXEC (@rq)
OPEN ad_cursor
SET @numberofrecords = @@CURSOR_ROWS
FETCH ABSOLUTE 1 FROM ad_cursor INTO @ID, @record_postingUID,
@views, @clicks, @bid
    SET @cnt=0
    WHILE @@FETCH_STATUS=0
    BEGIN
-- Set click through rate and rating based on bid amount and click through
rate as a coefficient
SET @ctr = 0
SET @rating = 0
IF (@views > 0 AND @clicks > 0 AND @bid > 0)
BEGIN
SET @ctr = ((100 / @views) * @clicks)
SET @rating = (@bid * @ctr)
END
```

```
-- save record in temp table
INSERT #table1 VALUES (@ID, @record_postingUID, @ctr, @rating, @bid,
@views, @clicks)
    FETCH NEXT FROM ad_cursor INTO @ID,
@record_postingUID, @views, @clicks, @bid
    SET @cnt = @cnt+1
  END
CLOSE ad_cursor
DEALLOCATE ad_cursor
-- Set testing click through rate and rating based on average stats
IF EXISTS (SELECT [ID] FROM #table1 WHERE ctr > 0)
BEGIN
SELECT @av_views = AVG([views]), @av_clicks = AVG([clicks]), @av_ctr =
AVG(ctr) FROM #table1
SET @rating=(@test_bid * @av_ctr)
END
ELSE
SELECT @av_views=0, @av_clicks=0, @av_ctr=0,
@rating=100.00/(@numberofrecords+1)
-- Keep testing record
INSERT INTO #table1 ([ID], postingUID, ctr, rating, bid, [views], clicks)
VALUES (0, @postingUID, @av_ctr, @rating, @test_bid, @av_views,
@av_clicks)
-- Sort by ratings and blocks to be shown where rating is used as % of total
views
DECLARE ad_cursor CURSOR SCROLL KEYSET FOR SELECT [ID], ctr,
rating, bid, [views], clicks FROM #table1 ORDER BY rating DESC
OPEN ad_cursor
```

```
FETCH ABSOLUTE 1 FROM ad_cursor INTO @ID, @ctr, @rating, @bid,
@views, @clicks
    SET @cnt=0
    SET @li = 0
    SET @numberofBlocks = 1
    SET @total_ratinginBlock = 0
    WHILE @@FETCH_STATUS=0
    BEGIN
IF @li < @blockSize
SET @li = @li+1
ELSE
BEGIN
SET @li = 1
SET @numberofBlocks = @numberofBlocks + 1
END
IF @av_ctr=0 SET @rating = 100.00/(@numberofrecords+1)
INSERT #table2 VALUES (@numberofBlocks, @ID, @ctr, @rating, @bid,
@views, @clicks)
        FETCH NEXT FROM ad_cursor INTO @ID, @ctr, @rating,
@bid, @views, @clicks
        SET @cnt = @cnt+1
    END
CLOSE ad_cursor
DEALLOCATE ad_cursor
SELECT @blockNumber=blockNumber FROM #table2 WHERE [ID]=0
SET @totalRating = 0
SET @blockRating = 0
IF EXISTS (SELECT rating FROM #table2 WHERE rating > 0)
```

```
BEGIN
SELECT @totalRating=SUM(rating) FROM #table2
SELECT @blockRating=SUM(rating) FROM #table2 WHERE
blockNumber=@blockNumber
END
-- Get % of the times for the testing ad will show up
SET @showtime = 0
IF @totalRating > 0 AND @blockRating > 0
SET @showtime=ROUND((100.00/@totalRating * @blockRating),2)
-- Get the best click through rate
SET @best_ctr = 0
SELECT @best_ctr=MAX(ctr) FROM #table2 WHERE [ID] <> 0
-- Get number of competitors
SET @competitors = @numberofrecords
SELECT * FROM #table1
SELECT * FROM #table2
DROP TABLE #table1
DROP TABLE #table2END
ELSE
-- No competitors
SELECT @blockNumber=1,@best_ctr=0, @showtime=100,
@competitors=0
END
ELSE
-- Keywords do not contains search words
SELECT @blockNumber=0, @best_ctr=0, @showtime=0, @competitors=0
END
GO
```

When the billboard module embedded in the ad space and the web page is requested or otherwise acted upon by a network user/ad viewer, the ~~ad~~billboard module is initiated and a message is sent to the system dispatcher server passing the specific keyword and ad space data for the system software applications to identify the group of ads that will participate in the auction, and then conduct the auction for the spot to determine which ad will be displayed in the particular instance. A number of variables can be compared in the auction selection process, including, for example, the number of ads in queue that are associated with the keyword at the time of the request, the number of total available advertising spots associated with the keyword, bid amount, and the current click-through rate of each ad associated with the keyword. The advertisement that is selected is then displayed and the advertiser is charged each time the ad is displayed or clicked for both use of the licensed content comprising the ad and the display of the ad at the designated location. The advertiser can easily manage an online ad campaign based on a budget, geographical region and tracking details such as click-through rate, and sales rate, as shown in the system advertiser account screen. The system allows for targeted advertising with increased flexibility, as the ad placement and selection for display is not limited to any search system or technology.

FIG. 36 describes the system process flow in an embodiment wherein the billboard module is embedded 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 position product/catalog information in the system, by advertiser that do not have their own e-commerce capability can sell their products to users that view their advertisements. Advertisers click on “post” to post their product information creating their own e-commerce catalog in the system and then connect their products to their ads, with the system providing the functionality to process orders, purchases and payment electronically. FIG. 41 depicts a sample system screen showing the posted products of advertisers. FIG. 42 depicts an information and selection page for the same products. When a viewer of the ad clicks on “buy,” the system adds the item to a system electronic shopping chart and then completes processing of the purchase transaction, including payment processing. FIG. 43 shows a sample checkout payment screen. Various options for payment exist such as, without limitation, check, credit card, paypal or other forms of payment.

Embodiment Including Content Rendering Control

According to a preferred embodiment hereof, the present invention further includes a system and method for controlling the activation of billboard modules and thereby controlling the rendering of ad content on ad publishers' ad content display pages whereby content is rendered only if and/or to the extent that a designated portion of the ad content display page area (the “ad content display page triggering area”) is within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position. The pre-defined ad content display page triggering area can, in a preferred embodiment, be the area of the ad content display page where the content is to be rendered, i.e., the billboard module location on the ad publisher's ad content display page. Billboard modules are activated, real time auctions are run and the winning advertiser bidder's designated ad content is requested, delivered and rendered automatically and sequentially for pre-defined areas of the ad content display page that come within the dimensions and scrolling position of the viewer's browser window as the viewer scrolls across or down the content display site page without further viewer click action or other action being required. Furthermore, billboard module activation can be controlled to activate only when and to the extent that the viewer's browser window area corresponds with ad content display page area where particular billboard module is located rather than rendering an entire ad content display page when only a portion is within the viewer's

browser window dimensions and scrolling position, resulting in greater efficiency in bandwidth and other communications resource utilization. In a preferred embodiment, the computer and communications network is the Internet and the ad publishers' ad content display sites are websites, but this embodiment of the present invention is not limited to any particular communications network or content display site.

The system in such embodiment further includes a system for controlling the activation of billboard modules, and thereby controlling the rendering of ad content via an electronic communications network at a designated content rendering area of an ad content display page to one or more viewers having a network communications device with a browser software application with adjustable window dimensions and scrolling position, for viewing ad content display pages within said browser's window dimensions and scrolling position. The control system uses the system end computer equipped and configured for communications via said electronic communications network, including one or more computer processing units, and means for communicating with one or more ad publisher ad content display pages that have one or more of said billboard modules located at one or more ad content rendering areas and one or more ad content display page triggering areas on said pages, and a system dispatcher server including a database that stores one or more records containing data pertaining to said one or more ad content display pages, said one or more ad content display page triggering areas, said one or more billboard modules located at said one or more ad content display page rendering areas and said one or more content files, said content files being stored in one or more content file servers, and one or more network communications interface software applications for receiving from system users data designating one or more ad content display pages, one or more billboard modules located at said one or more ad content display page rendering areas within said one or more ad content display pages, one or more ad content display page triggering areas that, when determined to be within, or within a pre-defined distance outside of, an ad content display page viewer's browser window dimensions and scrolling position, will result in activation of said one or more billboard modules, causing a real time auction to occur and the winning advertiser bidder's designated ad content being rendered in said ad content display page rendering area. The system software applications for creating and writing to or otherwise embedding on said designated ad content display page a correlator code to determine when said designated ad content display page triggering area is within, or within a pre-defined distance outside of, a content viewer's browser window dimensions and scrolling position, for dynamically generating a marker for said designated ad content display page rendering area, and for communicating with said correlator code to cause said one or more billboard modules to be activated, causing such real time auction(s) to occur and causing the winning advertiser bidder's designated ad content files to be rendered in said one or more billboard module ad content display page rendering areas when said correlator code detects that said designated ad content display page triggering area is within, or within a pre-defined distance outside of, said content viewer's browser window dimensions and scrolling position. 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 in embodiments including content rendering control includes computer processing means such as one or more conventional computer processing units and microprocessors and one or more Internet or other network communications interface software applications for interfacing with system users (i.e., advertisers and ad publishers (in this embodiment, as the ad content display page administrators), as well as ad content licensors) providing a graphical user interface for system ad publisher users to enter data regarding their ad content display page(s), and designation of the ad content display page triggering area(s) that will trigger billboard module activation when such ad content display page areas are within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position, and ad content files to be rendered. Content display sites can access the system and enter registration information and provide instructions to cause billboard modules to be activated when the ad content display page area where the billboard module is located, or when specified areas of their ad content

display pages are within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position, and obtain a JavaScript tag and link for placement on the ad content display page where the billboard module is located, which tag establishes communications with the system side server when a viewer initially requests the particular ad content display page. The system server-side application receives the JavaScript tag request, retrieves from the system database the data record corresponding to the requested page and retrieves viewer and browser address and other data from the viewers' browser request itself, and generates the custom correlator code to control billboard module activation, and thereby controls ad content rendering, to activate the designated billboard module when and/or only to the extent that the pre-defined area of the ad content display page is within, or within a pre-defined distance outside of, the viewer's browser screen dimensions and scrolling position. The correlator code is generated for each viewer's request of the particular ad content display page and is customized for each viewer in that its functioning is tied to each specific viewer's browser window dimensions and scrolling position, but may be customized by a web administrator and placed directly on the page without the use of the server side application. The correlator code is written to or otherwise embedded on the ad content display page. The correlator code determines whether the page coordinates of the pre-defined area of the ad content display page correspond with the coordinates of the viewer's browser window dimensions and scrolling position. The correspondence may be partial or full or can be correspondence with coordinates that are a pre-defined distance outside of the viewer's browser window dimensional and scrolling position coordinates. 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, tabbed away from or otherwise covered by another browser window or other application opened by a viewer. The correlator code dynamically generates 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. When the pre-defined content triggering page area is also the area of the page where the designated billboard module is located, i.e., where the ad content is to be rendered, the designated billboard module can be activated only when the correlator code determines that the designated billboard module on the ad content display page is within, or within a pre-defined distance outside of, the viewer's browser screen dimensions and scrolling position. The correlator code periodically determines whether there is any correspondence between ad content display page area coordinates and browser screen dimension and scrolling position coordinates and when the required correspondence is detected (which may be partial or full correspondence, or correspondence with coordinates that are a pre-defined distance outside of the viewer's browser window dimensions and scrolling position, as desired and as designated by system users or as programmed into the system), the correlator code activates the query string link, passing the information associated with the query string to the designated billboard module thus activating the billboard module and causing the real time auction to occur, which can consider the information passed to the module, and causing the winning advertiser's designated ad content to be retrieved and rendered, or other action to be triggered. Viewers can access content sites and ad content display pages by existing or future means, such as via a viewer-end computer configured and equipped for Internet and communicating with said content display site. The electronic communications network used in this embodiment can be as with the rest of the system, one or more of multiple network types, such as, without limitation, networks of computers communicating via common protocols such as the Internet, as well as cellular, wireless, cable, satellite, power line or other networks or combinations of such networks. Viewer-end communication devices can be a typical microprocessor-based desktop or laptop computer, or a personal digital assistant wireless phone or other

electronics network communication device, typically having a microprocessor supported by a read only memory, a random access memory and input and output devices such as display screens and keyboards/keypads, capable of running a browser application. Viewers access the particular network typically via a telecommunications service provider (e.g. an Internet service provider) and use a browser application to access websites.

The content files are not limited to any particular form, and may be static HTML images or rich media files such as .swf. The content files are preferably stored at a content server. The interface means, processor means and computer communications means can have various embodiments, including, without limitation, use of traditional Internet browser applications.

The method of the embodiment of the present invention that includes billboard module activation control comprises the steps of: designating one or more ad content display pages, one or more ad content display page triggering areas, one or more billboard modules that communicate with a system end dispatcher server to retrieve one or more ad parameter and command files containing commands, parameters and instructions to retrieve, assemble and render one or more designated ad content files stored at one or more ad content servers at said designated ad content display page rendering areas of said ad content display page or other network location where said one or more billboard modules are located; storing as a record within a system-side database data pertaining to said ad content display page, ad content display page triggering area and billboard module; generating and writing to or otherwise embedding on the designated ad content display page a tag/link that when activated by an ad content display page viewer request of the designated ad content display page, links to a system server-side application and retrieves, via said server-side application, data from said record stored in said system server-side database and data pertaining to said viewer and viewer browser from said ad content display page request, and generating and placing a correlator code on the designated ad content display page which determines whether said ad content display page triggering areas of the ad content display page is within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position; said correlator code then generating a marker for the designated ad content display page rendering area, generating a query string and link for placement at the ad content display page, which based on detection that the designated 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 window, passing the information associate with it and activating the designated billboard module causing a real time auction to occur, which can consider the information gathered and passed to the module and causing the winning advertiser's designated ad content to be rendered in the designated billboard module ad content display page rendering area of the ad content display page where the billboard module is located. FIGS. 54-A and 54-B, discussed further below, depict the process flow of the method in a preferred embodiment.

Referring to FIG. 51, which depicts a diagrammatical overview of the interplay and overlap of a viewer's screen display area, browser application, browser window and ad content display page, there is a content display page 21 with space on its pages for content to be rendered, which appears within a browser window 41, a portion of which is within the viewer's display screen area 31. As can be seen, the ad content display page is larger than the browser window, so not all of the ad content display page area is within the browser window dimensions and scrolling position shown on the viewer's display screen. In this embodiment the activation of billboard modules can be controlled so that only the billboard module that is designated to activate when a pre-defined area within the ad content display page area is within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position is activated, and so that billboard module activation occurs only when such pre-defined ad content display

page triggering area is within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position.

Referring now to FIG. 52, an overview of system interactions in this embodiment with one or more ad publisher ad content display page viewer computer systems or other communications devices having a browser application 22, 33, 44 and nnn, and communicating via the Internet 112 with the ad content display page computer system 101. The ad publisher ad content display page computer system 101 comprises an ad content display page server 121 and file storage device 211 as with the typical Internet client-server model utilizing HTTP. HTTP is a known application protocol that provides users access to content in different formats such as text, graphics, images, sound, video, as well as programs. HTML is a standard page description language which provides basic document formatting and allows the programmer to specify links to other servers and files. Links are specified via a Uniform Resource Locator or URL. Upon specification of a link, the client makes a TCP/IP request to the server and receives information that was specified in that URL (for example another Web page that was formatted according to HTML) in return. The information returned may be generated in whole or in part by a program that executes on the server. Such programs are typically known as Common-Gateway-Interface scripts and can be written using known programming languages or methods that the server supports. A typical Web page is an HTML document with text, “links” that a user may activate (e.g. “click on”), as well as embedded URLs pointing to resources (such as images, video or sound) that the client must fetch to fully render the Web Page in a browser. These resources may not be located on the same server that the HTML document was sent from. Furthermore, HTTP allows for the transmission of certain information from the client to a server. This information can be embedded within the URL, can be contained in the HTTP header fields, or can be posted directly to the server using known HTTP methods. Both the viewer and the ad publisher as the ad content display page administrator can communicate with the system via various input and output devices, as previously described. System computer components are as described previously with reference to FIG. 2.

The system in this embodiment includes, either as an additional graphical interface or as part of the overall system graphical user interface, a graphical user interface for system users, e.g., advertisers and ad publishers as ad content display page administrators, to create a system account, register the ad content display page and the area of the ad content display page where a billboard module is to be located and the area of the ad content display page that will cause the billboard module to be activated when such area is within the viewer's browser window dimensions and scrolling position, and provide demographic and other pertinent information regarding the ad content display page and information pertaining to the billboard module to be activated in the designated page area. The ad content display page triggering area and the ad content display page rendering area where the billboard module is located can be the same or different areas of the ad content display page. The information is stored as a record in the system server-side database, and the system generates a single tag and link, preferably a JavaScript tag, with the link linking to the system server-side software application, to be placed by the ad publisher as the ad content display page administrator at the ad content display page where the specified billboard module is located (although the positioning of the tag/link can be anywhere on the ad content display page, not necessarily in the location of the page where the billboard module is located). When the ad content display page where the JavaScript tag and link is written/embedded is requested by a viewer via the viewer's browser, the link to the system server-side application is activated and the system server-side application retrieves the corresponding record stored in the system database for the ad content display page and retrieves viewer and browser data from the page request itself. The system server-side software application then generates the custom correlator code. This correlator code assigns a unique ID to the particular viewer/browser and generates a marker for the ad display page are where the billboard module is located. 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 also generates a query string link that includes the data collected via the correlator code and stores the query string link as a variable on the ad content display page. The correlator code includes the variables and functions to execute the browser window/ad content display page area correlating, based on the positional coordinates of said ad content display page triggering area and the positional coordinates of said viewer's browser window dimensions and scrolling position. When the correlator code determines that the designated 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 window, the query string link stored as a variable on the ad content display page is activated and a JavaScript tag is created that can execute any number of actions, including, but not limited to, generating JavaScript functions to initiate actions and HTML tags to request content or activate a billboard module, causing a real time auction to occur and for the winning advertiser bidder's designated ad content to be rendered in the designated ad content display page rendering area where the billboard module is located.

In a preferred embodiment, during the registration process the ad publisher, as the ad content display page administrator, enters information related to the ad content display page such as name of page, content data, the specific area of the ad content display page that will trigger content rendering when it is partially or completely within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position, the specific area of the ad content display page where the billboard module is located (which can be the same as or different from the ad content display page triggering area), and demographic and other information pertaining to the ad content display page. The system then saves this data as a record in the system server relational database, and assigns the record an id, which may be encrypted. The system then generates JavaScript code comprising a single tag with the encrypted ID, with a link to the system server-side application, and the ad publisher/ad content display page administrator places this single tag/link on the ad content display page.

When the webpage containing the JavaScript tag is requested by a viewer, the JavaScript tag link that contains an encrypted ID of the stored data record at the system database in its query string triggers the server-side software application. This custom server side software application is preferably housed in the system server and can be written in C#, PHP or any other appropriate programming language. When the tag/link is a JavaScript tag/link, the server-side application disguises itself as JavaScript in order to respond to the JavaScript tag's request, and collects a variety of information from the request such as domain/address of the ad content display page, the IP address associated with the viewer, and other information from the stored data for the ad content display page, such as information regarding the billboard module to be activated, rendering area size, previously entered ad content display page demographics and other information retrieved from the system's relational database.

According to this initial information, as a response, the server side application generates and prints on the ad content display page additional JavaScript code that dynamically creates on the ad content display page a placeholder or marker for the area of the ad content display page, where the billboard module is located and contains all the necessary variables and functions to execute the billboard module activation and thereby the rendering control and data gathering process described herein from the viewer's browser and the ad content display page, correlating billboard module location on a content display page with viewer browser window dimension and scrolling position data. 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. This code also collects additional information available from the viewer's browser such as the viewer's operating system, browser version, as well as a unique browser/user computer id that is 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 retrieved from cookies or from the system database. The

correlator code also gathers the most frequently occurring words in the ad content display page text (for ad content display page indexing), and a list of other content that was already rendered on the page to prevent duplication of the same content on the page, whether the browser window is open, minimized, or otherwise covered by another browser window or other application opened by a viewer. and other specific filtering and management, for instance while rendering an image in one content rendering it may be preferred to stop loading video in another content rendering and/or custom information previously stored in cookies, and information collected from the ad content display page. A query string link is then created and all collected information is attached. Then this query string which is stored as a variable on the web page. A webpage or other ad content display page may be divided into or otherwise contain any number of pre-defined designated billboard module content rendering areas and the system can monitor if any of those pre-defined content rendering areas of the ad content display page are within the dimensions and scrolling position of the viewer's browser window. If any of the pre-defined billboard module content rendering areas come within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position, the query string link that is stored as a variable on the page is activated, activating the billboard module, and passing all of the information associated with the query string to the module. The ad content display page area/browser dimension and scrolling position correlator code communicates with the billboard module as well as the ad content display page and the browser.

Content rendering activity information is sent in the form of a self-contained file, preferably to the system tracking server. Preferably, such file is a flash file identified by the .SWF suffix or any comparable code such as, without limitation. .net, .asp or AJAX, as previously described. 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. The billboard module does not perform the function of the correlator code; instead, the correlator code exists and functions as described above and when it detects the correspondence between the pre-defined ad content display page triggering area and the viewer's browser window dimensions and scrolling position, it triggers the billboard module, which causes a real time auction to occur for the designated advertisement placement and causes the winning advertiser bidder's designated ad content files to be rendered, instead of triggering content rendering directly. Enhanced viewer activity tracking can be enabled by use of a .swf or other self-contained application described herein as the billboard module embedded in the ad content display page, when the correlator code determines that the content rendering area where the billboard module is located is within (or is within a pre-defined distance outside of) the viewer's browser window dimensions and scrolling position, which includes all necessary code to communicate with the correlator code, a content server and the system server or tracking server. The billboard module then renders content within itself and communicates back to the correlator code and tracking server that the content has been fully rendered. The correlator code described above continuously communicates with the browser and web page to correlate the coordinates for the pre-defined ad content display page triggering area of the web page within the viewer's browser window dimensions and scrolling position, in addition to whether the browser window has been minimized, tabbed away from or otherwise covered by another application window, and communicates the information to the billboard module. The messages can be sent to the billboard module continually in pre-defined increments, such as every second, or fraction of a second, essentially communicating to the billboard module how many seconds the area of the webpage is available in a viewer's browser window. In addition, the billboard module itself continues to collect information related to the content rendered, including, but not limited to, clicks, videos watched, and other data. The billboard module then sends the information it is collecting to the system server or tracking server at pre-defined intervals (information can be sent immediately, or collected and sent). All of this information can be sent from the billboard module to the system server or tracking server(s) and can be stored in the system (or

other) database(s) using file server direct connection communication or FSDC technology. Tracking information can be sent to a tracking server for storage and retrieval by system users. Content rendered via the billboard module can communicate, via the billboard module, with the web page area/browser window dimensions and scrolling position correlator code with useful effect; for example, a video may be part of the advertisement rendered at the designated ad content display page area via the billboard module and upon viewer's click on an optional video preview button the same correlator code creates another dynamic layer above all the existing layers on the web page that covers a certain portion of the viewable area of the browser window to show content/video above the content of the page. The same ad content display page area/browser dimension and scrolling position correlator code tracks how many times content was rendered at a particular billboard module and how many other billboard modules are designated on an ad content display page but are not in view because the area on the ad content display page where such billboard module is located was not within, or not within a pre-defined distance outside of, the dimensions and scrolling position of the viewer's browser window or did not completely render for a certain period of time, or if the browser window the module resides on is open, minimized, tabbed away from or otherwise covered by another browser window or other application opened by a viewer. The same web page area/browser window dimensions and scrolling position correlator code can also keep track of billboard module Id's to prevent duplication of content on the same page. The same correlator code also may store the collected and or custom information in cookies using the website domain for the page where the content rendering area is located and may request it later and send this information, when needed, to the domain of the system server for tracking and reporting. This feature is optional and designed to optimize the process, for if information previously gathered in cookies can be saved and retrieved when a viewer returns to the web page there is no processing unnecessarily repeated by the system. It is important to note here that if optional cookies are utilized by the system, they are saved by the ad content display page/website itself, and consequently attributed to the ad content display page/website's domain, not the billboard module system server domain, so the cookies are not considered “third party” or data mining cookies that are typically flagged or blocked by web security applications. When a viewer leaves or closes the ad content display page the correlator code indicates to all the billboard modules that are then loaded how much time, if any, that their content has been rendered and sends this information to the system server or tracking server using FSDC and the data can be stored in a system or other database. The record that is already stored is updated.

The correlator code described above periodically checks the location of the billboard module content rendering area location. The portion of the designated content triggering area that needs to fall within the browser window dimensions and scrolling position in order to initiate content rendering can be varied, and may be customized by the system administrator. For example, the system may send a message that the content is available when 90% of the designated ad content display page triggering area is within the viewer's browser window dimensions and scrolling position, or is within a specified distance from the viewer's browser window dimensions and scrolling position. The area/browser dimension and scrolling position correlator code at the ad content display page can send these messages to a billboard module or server side application continually in pre-defined increments, such as, for example, every second, or fraction of a second, communicating to the dimensions and scrolling position of the viewer's browser. The billboard module then sends the information it is collecting from the content rendering area/browser dimension and scrolling position correlator code to the ad dispatcher database, which is preferably housed in the server for tracking at pre-defined intervals (information can be sent immediately, or it can be collected and sent periodically).

The system is preferably made available to website operators via a system website for use by them after registering as a website content administrator. Referring to FIGS. 54-A, 54-B and 54-C, which show the process flow of this embodiment of the present invention, as shown in FIG. 54-A, an ad publisher as an

ad content display page administrator accesses the system, which is preferably accessible via the Internet as a website, and is presented with the system graphical user interface screens, beginning with a registration screen. FIG. 56 depicts a sample system ad publisher/ad content site administrator user registration screen whereby a ad content display page administrator can register with the system. FIG. 57 depicts a sample system login screen. As shown in FIG. 54-A, ad content display page administrators first register with the system 101 as a content display site administrator and enter data pertaining to the ad content display page, the ad content display page triggering area that will trigger billboard module activation when it is within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position, the area of the ad content display page where the designated content will be rendered (which may be the same area as the area of the ad content display page that will trigger billboard module activation when such area is within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position), as well as designating the content to be rendered in a particular area of the ad content display page, ad content display page demographics and other pertinent information 201. The system user interface screens provide means for receiving from ad content display page administrators the ad content display page address, content file information (which may be in the form of instructions to retrieve one or more content files stored in a content server or storage device), billboard module data and content display area parameters and other ad content display page data from ad content display page administrators and system server with a database for storing one or more records containing such data, each record being given an identification code. FIG. 58 depicts a sample system user registration screen showing data entry relating to ad content display page title, uniform resource locator address and optional logo image. FIG. 59 depicts a sample user registration screen whereby ad content display page administrators enter their ad content display page's primary audience geographic location. Ad content display page administrators can select the geographic region that represents the location of the ad content display page's primary audience, if any. FIG. 60 depicts a sample user registration screen whereby ad content display page administrators enter their ad content display page's content type. FIG. 61 depicts a sample user registration screen whereby ad content display page administrators enter their ad content display page audience demographic data. FIG. 62 depicts a sample ad content display page registration confirmation screen. FIG. 63 depicts a sample ad content display page billboard module creation screen in this embodiment of the invention including billboard module activation control. Ad content display page administrators can designate a billboard module ad content display page rendering area for a ad content display page by entering a name for the billboard module located at such ad content display page rendering area, selecting a previously registered ad content display page, and designating content distribution parameters. FIG. 64 depicts a sample billboard module ad content display page rendering area dimension selection screen in this embodiment of the invention including billboard module activation control, whereby ad content display page administrators can select one or more pre-set billboard module ad content display page rendering area dimensions. FIG. 65 depicts a sample billboard module ad content display page rendering area dimension specification screen where ad content display page administrators can enter customized ad content display page billboard module rendering area dimensions and position parameters.

Referring to FIG. 54-A, the above-referenced data is then saved by the system as a data record in the system database and an identification code is assigned to the data record 301, as shown in FIG. 65. The system software applications then generates a JavaScript tag with the link to the system server-side application including the ID of the record stored in the system database pertaining to the particular ad content display page, billboard module and rendering area 400, and the ad content display page administrator places the JavaScript tag and link on the ad content display page 500. The tag includes the identification code for the corresponding record stored in the system database and a link to a system server-side application. FIG. 66 depicts a sample screen wherein a JavaScript tag with link to the system

server-side application is generated for ad content display page administrators to copy and paste into the page code of the ad content display page in which the designated billboard module resides.

As shown in FIG. 54-B, when an ad content display page viewer requests the ad content display page that has such JavaScript tag and link 600, the request activates the link to the system server-side application and the system application collects a variety of information from the viewer's HTTP 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 the viewer when the network is the Internet) 700, and retrieves the corresponding data record stored in the system server database, and generates code, preferably JavaScript code, referred to as a "correlator code," which is written to or otherwise embedded on the ad content display page. This correlator code then dynamically generates on the ad content display page a marker for the billboard module ad content display page area where the content will be rendered 800. 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 can be positioned anywhere on the ad content display page, not necessarily the location on the ad content display page where the particular billboard module is located. 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, the most frequently occurring words in the web page text, 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 900. The correlator code application then generates a query string link including the data collected via the correlator code and the query string link is stored as a variable on the ad content display page 1000. The correlator code periodically checks viewer browser screen coordinate data from the viewer's browser application with ad content display page coordinates for the ad content display page triggering area. FIG. 54-B and FIG. 54-C provides a diagrammatical representation of the communication flow between system components, ad content display page administrators and ad content display page viewers in an embodiment that includes a billboard module. The various arrows indicate the flow of communication between system components as the system operates, as explained below. 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 the viewer's browser window scrolling position and dimensional coordinates and when there is correspondence (either partial or full, as has been designated or programmed into the system) between the browser window coordinates and the coordinates for the pre-defined ad content display page triggering area (or between coordinates that are a pre-defined distance outside of the viewer's browser window dimensional and scrolling position coordinates) 1100, the query string link is activated 1200 passing the information associated with it and activating the billboard module, causing a real time auction to occur 1300, which can consider the information passed to the module and cause the winning advertiser bidder's designated ad content to be rendered in the billboard module 1400. The correlator code also records at the ad content display page data retrieved from the viewer's browser regarding the rendering of the content, including, but not limited to the IP address associated with the viewer, browser and operating system version, unique identifier assigned by the server side application and information related to the text on the web page. The communication flow between system components is indicated in FIG. 53 by the arrows: Ad publishers, as ad content display page administrators, 101 register ad content display page data with the system server 126 and the information is stored as a data record in the system database which resides in the system server, with a tag/link sent back from the system to the ad content display page administrator 101 (as indicated by the arrows between ad content display page administrator 101 and system database), who then places such tag/link on the ad content display page (as indicated by the arrow from ad content display page administrator 101 to the ad content display page

21 at “tag”). When a viewer requests the ad content display page 21, the tag links to the custom application (as indicated by the arrow from tag to custom application), the custom application retrieves data from the database (as indicated by the arrows between custom application and system database). The custom application then generates the correlator code and it is written to or otherwise embedded on the ad content display page (as indicated by the arrow from the custom application to the correlator code box in the ad content display page 21). The correlator code communicates with the ad content display page 21 and with browser 11 as indicated by the arrows between said elements and also dynamically generates a marker for the billboard module, (as indicated by the arrow between the correlator code and the billboard module boxes).

When the designated ad content display page triggering area (which may be the same as the billboard module ad content display page rendering area) is determined to be within the viewer's browser window dimensions and scrolling position, the billboard module is activated. The correlator code in this embodiment activates the billboard module .swf or other file (which can be comparable code such as .net .asp, AJAX or other form that contains all the necessary code to communicate with the correlator code on the webpage, retrieve and render content from a remote content server and send and retrieve data and variables from a remote server or servers). As shown in FIG. 54-C, the request contains the previously stored query string with unique ID of the billboard module content rendering area stored in a remote server and the information previously collected by the system database and correlator code 1200 (all of which is passed to the module). The billboard module set inside the ad content display page rendering area is initiated and establishes communication with the correlator code on the ad content display page where it is embedded as well as the system server or any remote server with the appropriate network protocol 1300. The billboard module then sends a request to the content server where the designated content files are located or to a database where a command and parameter file is stored with commands and parameters to retrieve, assemble and load the designated content files, and the content is rendered within the module area 1400. The billboard module then checks if all of the elements of the content are loaded and rendered and communicates that this is so to the correlator code 1500, and to the system database residing in the system server. The correlator code continues to monitor the location of the billboard module ad content display page rendering area and once it receives a signal from the billboard module that the content is loaded and rendered it communicates back to the billboard module whether it is within the viewer's browser window dimensions and scrolling position or not 1600. The billboard module then sends information it is collecting via the correlator code to a system database, residing in the system server for reporting, preferably using FSDC 1700. The correlator code can communicate directly back to the system database with data retrieved from the browser and ad content display page (as indicated by the arrow from the correlator code back to the system database). The communication flow between system components is indicated in FIG. 55 by the arrows: Ad content display page administrator 101 registers ad content display page data with the system server 126 and the information is stored as a data record in the system database which resides in the system server, with a tag/link sent back from the system to the ad content display page administrator 101 (as indicated by the arrows between ad content display page administrator 101 and system database), who then places such tag/link on the ad content display page (as indicated by the arrow from ad content display page administrator 101 to the ad content display page 21 at “tag”). When a viewer requests the ad content display page 21, the tag links to the custom application (as indicated by the arrow from tag to custom application), the custom application retrieves data from the database (as indicated by the arrows between custom application and system database). The custom application then generates the correlator code and it is written to or otherwise embedded on the ad content display page (as indicated by the arrow from the custom application to the correlator code box in the ad content display page 21). The correlator code communicates with the ad content display page 21 and with browser 11 as indicated by the arrows between said elements and also dynamically generates a marker for the ad content display page rendering area (as indicated by the arrow

between the correlator code and the ad content display page rendering area and billboard module boxes). When the correlator code determines that the ad content display page triggering area, which, in the case of FIG. 55, is the billboard module ad content display page rendering area, the query string link that is stored as a variable on the ad content display page is activated and the correlator code dynamically activates the billboard module. The billboard module when initiated establishes communication with the correlator code on the webpage and the system database residing on the system server then requests, loads and renders content from a remote content server and the content is rendered in the billboard module ad content display page rendering area (as indicated by the arrows between the ad content display page rendering area and the content server). The correlator code communicates in this embodiment preferably directly back to the billboard module rather than directly to the system database, with the billboard module then communicating back to the system database, with data forwarded by the correlator code which was retrieved from the browser and ad content display page (as indicated by the arrows from the correlator code to the billboard module and from the billboard module back to the system file).

FIG. 67 depicts a sample ad content display page as presented to an ad content display page viewer, with the billboard module 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. Billboard module activation for the particular ad content rendering area is not yet triggered because the designated area of the ad content display page that must be within the viewer's browser window dimensions and scrolling position is not yet within such dimensions and scrolling position. FIG. 68 depicts a sample ad content display page with the billboard module content rendering area entering the viewer's browser window dimensions and scrolling position. At this point, if the billboard module is set to trigger when the designated area of the ad content display page is partially within the viewer's browser window dimensions and scrolling position, the correlator code would proceed to activate the billboard module. 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. As this point, if the billboard module is set to trigger when the designated area of the ad content display page is wholly within the viewer's browser window dimensions and scrolling position, the correlator code would proceed to activate the billboard module. 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. FIG. 71 depicts a sample ad content display page with the billboard module content rendering area partially outside of the viewer's browser window dimensions and scrolling position. As the designated ad content display page area that has to be either partially or wholly within the viewer's browser window dimensions and scrolling position is no longer within such dimensions and scrolling position, the previously rendered content can be removed from the page and/or be replaced with new content and content related to the ad content display page area that is then within the viewer's browser screen dimensions and scrolling position would be triggered for rendering. The system rendering counter stops counting when the predefined page area is no longer within the viewer's browser window dimensions and scrolling position, such as when a window is opened over the browser window that is showing the ad, or the viewer minimizes the browser or tabs away from the page on a browser with tab features, and can resume counting if the area returns within the viewer's browser window dimensions and scrolling position. The system users can log onto a password protected system, preferably web-based interface and view detailed reports related to content rendered via the system. Reports may be customized to reflect different time periods and different meta-data. Reporting features for website and other content publishers include, but are not limited to, information for rendering activity in particular website page sections that shows, for example, the number of times content was rendered, the number of times content was within the dimensions and scrolling position of the viewer's browser window, the duration of time that content was within the dimensions and scrolling position of the viewer's browser window, considering if the browser window was minimized, tabbed away from, or otherwise covered by

another browser or application window, as well as data such as video viewed, video view duration, click to http destination, custom button clicks (such as print coupon, email), number of unique computer browser users each content rendering was available to (reach) and how many times each billboard module content rendering was available to each unique computer browser user (frequency), the browser type of each viewer for which the content was rendered, and the general geographic location of each user the content was available to (by ISP) and the percentage of the network users reached by billboard module content in a region or nationally. Other custom parameters not mentioned here may be reported. Reports may be parsed by all web site sections or one website section/page or otherwise. FIG. 72 depicts a sample system ad content display page data report screen showing the ad content display pages registered, date created, with the ad content display page triggering areas and billboard module ad content display page rendering areas that have been designated indicated (see the column titled "billboards #"), and data retrieved such as number of times that the content related to a designated billboard module ad content display page rendering area has been requested, number of times that the content related to a designated billboard module ad content display page rendering area has been rendered, the percentage of content rendering vs. content request, click-through rate and total number of clicks, and other content rendering activity data. FIG. 73 depicts a sample system content billboard module rendering area data report screen showing content rendering activity for specific ad content display page rendering areas of a ad content display page, including the billboard module content rendering area dimensions, date created, number of times ad content display page area was requested, number of times the content designated for the particular billboard module has been rendered, and other ad content display page rendering area activity data. FIG. 74 depicts a sample system content rendering area activity report screen showing a report and bar graph of data pertaining to content rendered within viewer browser screen dimensions and scrolling position in a given period (a monthly period is indicated in the exemplary report shown in FIG. 74). FIG. 75 depicts a sample system content rendering area data report screen indicating data pertaining to the viewers of rendered content, such as their Internet protocol address, as well as the number of unique viewers and the content's reach and frequency of rendering. FIG. 76 depicts a sample system content rendering activity report screen showing a graph and table of the content rendered, organized by content name, including billboard module activation and ad content rendering data for each, which ad content display page administrators can use to assess which billboard modules and/or which content is more often rendered than others. FIG. 77 depicts a sample system viewer browser type data report screen providing information as to the types of browsers being used by viewers to view rendered content. FIG. 78 depicts a sample system viewer geographic location report screen providing information regarding the location of the viewership of the rendered content. FIG. 79 depicts a sample general billboard module content rendering area activity report screen providing information regarding the ad content display pages and billboard module ad content display page rendering areas within said ad content display pages and their rendering activity. FIG. 70 depicts a sample content rendered time data report screen providing information regarding how long content was rendered within a viewer's browser window dimensions and scrolling position.

The system can be utilized to determine a viewer's browser window dimensions and scrolling position to provide content scaled to size to better fit the viewer's browser window by including scaling factor reduction or enlargement based on the system server side application's comparison of the designated billboard module ad content display page rendering area for the content and the viewer's browser window dimensions and scrolling position as determined by the correlator code. 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. 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. 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.

Also, the system in a preferred embodiment may estimate or forecast ad content display page/ad content display page area inventory availability for future specified periods helping content publisher optimally sell and fill their content space inventory. Based on tracking data retrieved for a specific time period regarding ad content display page/page area usage, the system can estimate activity for future time periods.

A sample of the JavaScript tag/link that is placed on the ad content display page that links to the system server-side software application when a viewer first requests an ad content display page is provided below: <script language="javascript" type="text/javascript" src="http://cityads.net/display/?key=waCcZO4I1GInZjIdFQdSELCe4PcWdeXgGXkMuaWqUPs%3d"></script>

A sample of a correlator code dynamically written to or otherwise embedded on the ad content display page which functions to control the billboard module activation based on whether the designated ad content display page triggering area is within, or within a pre-defined distance outside of, the viewer's browser window dimensions and scrolling position, is provided below:

```
 var _viz_check = {

xs1:0,

ys1:0,

xs2:1000,

ys2:800,

curtop:0,

curleft:0,

navigate:function( )

{

  if( this.location[0]==“top” ) this.location[0]=“bottom”;

  else this.location[0]=“top”;

},

update:function( )

{

  this.xs1 = this.getScrollLeft( );

  this.ys1 = this.getScrollTop( );

  this.xs2 = Number(this.xs1)+Number(this.getClientWidth( ));

  this.ys2 = Number(this.ys1) +Number(this.getClientHeight( ));
```

```
  var i=0;
  while ( i < _i )
    {
      var adi = _adi[i];
      if( adi != null)
        {
          adi.findPos( );
          var x1 = adi.x;
          var y1 = adi.y;
          var x2 = Number(x1)+Number(adi.width);
          var y2 = Number(y1)+Number(adi.height);
          var vm = 20 ;
          //       if (Number(adi.height) > 500) vm = 220 ;
          if ( adi.done==0 ) {
            if ((x2>=this.xs1)&&(y2>=this.ys1)&&
            (x1<=this.xs2)&&(y1<=this.ys2) ) {
              if ( (  popul==0) || (typeof [u  popul] != 'undefined') ) {
                _popul++ ;
                adi.markwords = _marksfinder.get_words( );
                adi.ea =   ea  list ;
                adi.populate( );
              }
            }
          } else {
          if (adi.rend==1) {
            if ( (x1>=(this.xs1-20))&&(y1>=(this.ys1-
vm))&&(x2<=(this.xs2+20))&&(y2<=(this.ys2+vm)) ) {
              if (adi.vid==0) {
```

```
                    if (adi.viz==0) {
                      if (adi.t >=1) {
                        adi.sec = 1;
                        _av(i,1) ;
                      }
                    }
                    else {
                      if ((adi.sec +1.1) <= adi.t) {
                        adi:sec ++ ;
                        if (adi.sec < 61) _av(i, adi.sec) ;
                      }
                      if (adi.paused==1) {
                        adi.paused=0 ;
                        _pv(i) ;
                      }
                    }
                    adi.t += 0.1 ;
                  }
                }
                else {
                  if (adi.paused==0) {
                    adi.paused=1 ;
                    _sv(i) ;
                  }
                }
              }
            }
          }
```

```
        i++;
    }
  },
  findPos:function(p)
  {
    curleft = curtop = 0;
    var obj = document.getElementById(p) ;
    if (obj.offsetParent) {
        curleft = obj.offsetLeft
        curtop = obj.offsetTop
        while (obj = obj.offsetParent) {
            curleft += obj.offsetLeft
            curtop += obj.offsetTop
        }
    }
  },
  //---
  getClientWidth:function( ) {
    var w1=0;
    if( window.innerWidth ) w1=window.innerWidth;
    var w2=0;
    if(document.documentElement)
    w2 = document.documentElement.clientWidth;
    if(w1<w2) w1=w2;
    return w1;
  },
  getClientHeight:function( ) {
    var h1 = 0;
```

```
    if( window.innerHeight ) h1 = window.innerHeight;
    var h2=0;
    if( document.documentElement )
    h2=document.documentElement.clientHeight;
    if(h1<h2) h1=h2;
    return h1;
  },
  getScrollLeft:function( ) {
    var sL1=0;
    if( window.pageXOffset ) sL1 = window.pageXOffset;
    var sL2=0;
    if(document.documentElement)
    sL2=document.documentElement.scrollLeft;
    if(sL1<sL2) sL1=sL2;
    return sL1;
  },
  getScrollTop:function( ) {
    var sT1=0;
    if(window.pageYOffset) sT1=window.pageYOffset;
    var sT2=0;
    if(document.documentElement)
    sT2=document.documentElement.scrollTop;
    if(sT1<sT2) sT1=sT2;
    return sT1;
  },
}
```

A sample of the code dynamically written to the ad content display page that indexes the web page text for the most frequently occurring words is as follows:

```
var   index = {
   exc:[ “and”, “com”, “can”, “from”,“for”,“the”, “them”, “that”, “gif”,
      “similar”, “page”, “www”, “with”,“which”, “hi”,
“you”,“your”,“did”,“does” ], top_max:5,
top:[“”,“”,“”,“”,“”],
get_words:function( )
{
      var s = “”;
      for( var i=0; i<this.top_max; i++)
         {
            if( this.top[i]==“” ) break;
            if(s.length>0) s += “,”;
            s += this.top[i];
         }
         return encodeURI(s);
      },
      find_words:function( )
      {
         try{
            try{
               a=var_words;
            }
            catch(e1)
            {
               var txt = document.body.innerHTML.toLowerCase( );
               var sn = txt.split(/\<\s*script/);
               for(var i=0; i<sn.length;i++)
                  {
```

```
            var n = sn[i].search( /\<s*\/scripts*\>/ );
            if(n==-1) n=0;
            var m = sn[i].indexOf(">",n)+1;
            sn[i] = sn[i].substring(m);
        }
        txt = sn.join(" ");
        var tst_msg = document.getElementById('tst_msg');
        txt = txt.replace(/(\<[{circumflex over ( )}\>]*\>)/g, " ");
        txt = txt.replace(/(&.*\;)/g, " ");
        txt = txt.replace(/[\W\d]/g," ");
        txt = txt.replace(/\s{1,}/g," ");
        txt = txt.replace(/\s\w\w\w\s/g," ");
        txt = txt.replace(/\s\w\w\s/g," ");
        txt = txt.replace(/\s\w\s/g," ");
        txt = txt.replace(/ies\s/g,"y ");
        txt = txt.replace(/ives\s/g,"fe ");
        txt = txt.replace(/ves\s/g,"f");
        txt = txt.replace(/([{circumflex over ( )}s])s\s/g,"$1 ");
        for(j=0;j<this.exc.length;j++)
          {
            var ex = new RegExp( "\\s"+this.exc[j]+"\\s", "g");
            txt = txt.replace( ex," ");
          }
        var w = txt.split(/\s+/);
        w = w.sort( );
        var t="", to="";
        var k=1;
        w = w.sort( );
```