Emerging Research Issues of Effective Utilization of Advertisement on World Wide Web

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ABSTRACT

The online advertising is allowing marketer to use new strategies and tactics to approach and influence the customers. It introduces a new set of paradigms for advertising. The Interactive Advertising Bureau (IAB) has launched a task force to recommend standards and best practices for display advertising.

This paper explores importance and planning for E-advertisement. It mainly emphasizes on Parameters to plan the online advertisement and various models of Ad Delivery. It highlights important emerging research issues of effective utilization of Advertisement on Internet.

KEYWORDS

E-advertisement, Ad Delivery, Internet Advertising Bureau

1. INTRODUCTION

Internet has really metamorphosed into world’s latest global market representing an open market without having geographical or tariff barriers to reach to the customers all over the world. Today, Internet traffic has been shifted from educational sites to business related sites, which are mainly used for business enhancement, development of new market, product advertisement, etc.

Industry can utilize the net for variety of services it offers such as widening its client base, development of new market to sell the products, shopping of things, analyze new product, market research and advertise the product with company profile. It helps companies to manage their business more efficiently and effectively. It is estimated that the volume of sales generated by World Wide Web is enormous.

Advertising on Internet is different in every way from the traditional print advertising and electronic advertising i.e. Radio, T.V. etc. with respect to creativity, functionality as well as economy. No wonder that big ad-agencies are now creating new cell and recruiting techno-savvy creative for conceiving effective ads on nets.

Interest in online advertising has grown exponentially since 1994 with the introduction of World Wide Web (www) where the first web advertisement was placed on the hotwired Website in October 1994[1]. AT&T, Sprint, Volvo, Club med. ZIMA were amongst the first companies to try it out. The web advertising (popularly known as ‘netvertising in the circuit) has not looked back since then. With the rapid growth of Internet, the advertiser in the changed scenario cannot ignore the online medium anymore. According to the Internet Advertising Bureau (IAB), banner ads accounted for the almost 55% of all advertising on the internet. A typical banner advertisement consists of short text and graphic that is hyper-linked to an advertiser’s web site. The World Wide Web is characterized by ease of entry, relatively low set-up cost, globalness, time independence and interactivity.

2. IMPORTANCE OF ON-LINE ADVERTISING

The Internet has changed forever almost every aspect of our lives and has drastically impacted global communication. With a potential to reach millions across the globe instantly, the net offers communication specialists and advertisers, opportunities like never before, and along with it, of course the challenges. The challenges we face on the net today are of precise delivery, measurement of effectiveness and focused targeting. And these are the challenges if we address effectively, makes Internet advertising or netvertising a reality, offering site publishers and advertisers an opportunity to harness the power of the net as an effective marketing tool.

Either the switching from traditional to online advertisement or the use of the later to supplement the former is facilitated by prospective gains for the advertisers. There are unique characteristics of online advertisement which offline advertisement lacks. An online advertisement is extraordinarily cost effective due to nominal wastage, focused and targeted marketing, growing customer-base and unmatched tracking capabilities. Internet enables intuitive two-way relationship with the larger target audience. But the advertiser/organization looses some of its ability to control and disseminate the information since the customer/user is in control and collects the information...
of his choice just at a click of mouse. URL, HTML have made it not only innovative but also user friendly. All the same, there are many factors that make online advertisement better than offline advertisement [2]. Some of the important advantages of online over the offline advertisement are as follows:

<table>
<thead>
<tr>
<th>Online Advertisement</th>
<th>Offline Advertisement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The user has a high attention level and concentration due to which advertisement arouses high brand awareness. High frequency level is required no longer.</td>
<td>Advertisements are passively received. It makes high frequency levels necessary for effectiveness.</td>
</tr>
<tr>
<td>Web page is 91% editorial and 9% advertisements.</td>
<td>Proportion of advertisement to editorial is high, reaching 50:50 ratio at times. This makes readers/viewers skip or become inattentive.</td>
</tr>
<tr>
<td>Net advertisements are in the form of banners usually hyper-linked to company pages. Standard size of banner is 468x60 pixels.</td>
<td>Space is not restricted, but any escalation of space involves higher chunk of media buying cost.</td>
</tr>
<tr>
<td>Online advertisements are easily measured by hits; the number of times a reader accesses the advertisement.</td>
<td>Viewer ship or readership of the advertisement measures the reach of the advertiser. But there is no way for the advertiser to gauge the reach of advertisement as such.</td>
</tr>
<tr>
<td>Message can be created, posted and received or revised in minutes.</td>
<td>Revising an advertisement requires time, and at times, additional expenses.</td>
</tr>
<tr>
<td>Internet advertisement can be much focused. For instance, an advertisement for PC Software can be displayed to PC user and not to Macintosh users.</td>
<td>Advertisement does not always target a much focused audience.</td>
</tr>
<tr>
<td>Advertisement is exposed to user when he is actively on the lookout. For example, while using a search engine to search travel sites, advertisement of travel agents are displayed.</td>
<td>Advertisements are ubiquitous.</td>
</tr>
</tbody>
</table>

3. PLANNING ONLINE ADVERTISING
Parameters to plan the online advertisement are rather similar to that of TV. In fact, it is a lot easier because of detailed demographic and psychographics information. The factors that advertisers should keep in mind for online media planning are:

(1) **Number of Visitors:** This is evaluated by the page impressions, which establishes the popularity enjoyed by the site.

(2) **Demographic profiles of the site visitors:** These are usually available with the site, which establishes the number of people having the desired demographic profiles who are surfing the site.

(3) **Loyal base or visiting base:** This type of site e-mail, search engine, along with the demographic data available.

(4) **Page view per visit:** Checking page view helps to get a clear indication of what type of site it is and whether it conforms to the product profile, which is to be advertised. For example, an impulse-based youth could do well in cursory site but a financial portal may not suit him.

(5) **Cost:** Cost efficiency is one of the most crucial aspects of any form of advertising, more so on the Net. The advertiser is always looking at the ways of stretching his money by getting the most out of it and more importantly, this object warrants the minimizing of all forms of wastage. But the cost can be calculated in terms of –

1. Price per thousand of users who see the banner of advertisement (cost per thousand, CPT);
2. Price per thousand of users who click on the banner (click per thousand ratio, CTR);
3. Combination of a and b both; and
4. Time as cost per month.

Anyhow, cost should not be viewed in terms of the number of visitors a site gets. The number of unique visitors that belong to the target audience, which can be reached, may do it better. Thus, a site with high traffic may attract a lot of visitors but the same may be reached more cost effectively at niche sites, which they visit too. Click per thousand ratios (CTR) has always been regarded as most suitable mode of measuring online campaign effectiveness [3].

4. MODELS FOR AD DELIVERY
At a very fundamental level, there are five step involved in an ad delivery system:

1. User or client request a page form the website,
2. Website request an ad to be placed on the page,
3. Ad is inserted in to the page,
4. page and ad are downloaded by the user,
5. Ad is displayed on the user screen.

Some companies use cache more effectively by setting up a proxy server on the client side. The server serves as a Web cache for a number of different clients. This proxy server caches recently used pages by the Web clients and these pages are not subsequently downloaded. This constitutes a series problem for the ad delivery system. Some ad delivery systems now use cache-busting mechanisms to prevent proxy servers from repeatedly caching pages and banners, but these methods have met with limited success. Figure 1 show the mechanism used in cache-based ad delivery systems [4].

**Fig.1: Proxy Server – Cache Mechanism**
We classify ad delivery models into two types:
- Static AD Model
- Dynamic Ad Model
- Measurement Ad Model

**4.1 THE STATIC AD MODEL**
In the static Ad Model when a user requests a page, the Web server responds with the requested page. The page has content and HTML code to insert a banner image into the Web page. This banner image is the advertisement. In this model each page has only one ad associated with it and this ad is changed in batches, either once per day or once per week. Figure 2 provides a graphical representation of the process. The basic model consists of the following computer components: client computer [including browser, cache, log], proxy server and Web server [including Web server log] [4].

**Fig. 2 : Static Ad Model**

<table>
<thead>
<tr>
<th>System</th>
<th>Component</th>
<th>Description</th>
</tr>
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**4.2 THE DYNAMIC AD MODEL**
The Dynamic Ad Model is very similar to the Static Ad model in addition to the Web server, there is a separate server called as server which store all the banner advertisement that are delivered to the client. The Ad server also has special software that make a decision regarding which ads should be server to the client or user [4]. Figure -3 graphical represent are delivery mechanism of the Dynamic Ad Model.

![Dynamic Ad Model](image)

**4.3 THE MEASUREMENT-BASED MODELS**
This model is based on address measurement of ad delivery. The first, cache measurement allows for the appropriate measurement of ads stored and provided from cache by a proxy server or browser as well as those ads actually provided by the ad server. The second browser measurement allows for the recording of ad-related activity using software that runs on the requesting browser [5].

<table>
<thead>
<tr>
<th>Model</th>
<th>Content Delivered By</th>
<th>Ad Delivered By</th>
<th>Measurement Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cache Measured</td>
<td>Web Server</td>
<td>Ad Server</td>
<td>Emphasis on counting Ads provided from cache by a Proxy Server.</td>
</tr>
<tr>
<td>Browser Measured</td>
<td>Web Server</td>
<td>Ad Server</td>
<td>A Browser run program keeps track of Ads downloaded.</td>
</tr>
</tbody>
</table>

**Table 2: Measurement Based Model**

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**Table 1: Ad Delivery Model Component**

<table>
<thead>
<tr>
<th>User of client computer</th>
<th>Browser</th>
<th>Cache</th>
<th>Browser Log</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A computer program that requests web pages and other associated applications over the internet and that can displayed these files using the right format</td>
<td>A storage area on the user computer’s hard disk where recently viewed web pages are stored</td>
<td>All requests for individual files ads are logged by a software program running on the client’s browser.</td>
</tr>
<tr>
<td>Proxy server [also called web cache]</td>
<td>This is server that lies in between the organizational network and the internet. It has its own disk storage and stores copies of recently requested objects.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Server</td>
<td>Web server</td>
<td>A computer that is addressable by a URL and that houses objects. Objects include web pages [HTML files], JPEG images, and other application or programs</td>
<td>Web server log</td>
</tr>
</tbody>
</table>
Fig. 4: Ad Delivery and Tracking System

In Fig. 4, when Visitor requests for ad page to Web Server, it receives request for ad and sends to Ad Server. Ad Server responds by inserting Ads and sends to Web Server. Page/Ad and Cookie are downloaded on Web Server. It maintains Server Side Log for having records of opportunities to see Ads, click status of Ads and time elapsed since page and ads were downloaded. After that, Page/Ad is displayed on Visitor Site. Visitor Computer maintains Client Side Log for having records of total time of displays of ad1 & ad2 respectively.

The nature of targeting itself is rapidly changing as technology enables real-time logic when deciding which ad to serve when. From an ROI perspective, eliminating wasted impressions, then making a good impression by serving up great advertising, is consistently the best option for advertisers.

4. Frequency of Ads:
Frequency plays a key role in Advancing Brand and Ad Awareness. Too much frequency, the advertising burns out quickly and too little frequency, the advertising never gets noticed. It should be explored that multitude of factors that go into getting frequency right, including actual results [6].

5. Research Issues for Effective Utilization of E-Advertisements
1. Online Advertising Eyetracking:
Ad Placement is a key variable in brand awareness, with a series of heatmaps showing how attention is gained and lost.

2. Challenges for Ad Messages:
Ads need to combine intellectually interesting messaging, usable design, intelligently networked digital marketing elements and data driven efficient media reach.

3. Tighter Targeting:
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CONCLUSION

E-Advertising eliminates the middlemen, providing brands with the unique opportunity to have a direct relationship with their customers [7]. A successful foundation for a e-marketing program can be established by gathering an intimate understanding of your audience, how they engage across the social landscape, what they are saying about your brand and how your competition is utilizing social marketing. This can be achieved by actively listening, watching, gathering and learning from the online landscape before diving in. The best strategy for brand can be devised by establishing clear objectives and success metrics, viewing all opportunities through your strategic lens and crafting a unifying concept and brand voice [8]. However, marketers are still learning how to use the medium most effectively.

REFERENCES