An Investigation into Search Engines as a form of Targeted Advert Delivery

ABSTRACT

This paper is an investigation into Keyword Targeted Marketing as provided by most search engines. Issues that are discussed include the reasons for using this form of advertising, the media used in the advert presentation, the various levels of accuracy in matching keywords to banner advertisements, the metrics used to evaluate performance and challenges that have been discovered in its implementation. A company that wants to increase its exposure to potential clients via search engine usage, may do so by 'buying' certain keywords which describe their business. Usage of any of these keywords by a potential client of this search engine will result in a pop-up advertisement on the user's screen. Marketing and advertising on Internet websites have entered an exiting new era with many possibilities to be explored. However, some less invasive measures to explore these possibilities might have to be found.

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This paper is an investigation into Keyword Targeted Marketing as provided by most search engines. Issues that are discussed include the reasons for using this form of advertising, the media used in the advert presentation, the various levels of accuracy in matching keywords to banner advertisements, the metrics used to evaluate performance and challenges that have been discovered in its implementation. A company that wants to increase its exposure to potential clients via search engine usage, may do so by 'buying' certain keywords which describe their business. Usage of any of these keywords by a potential client of this search engine will result in a pop-up advertisement on the user's screen. Marketing and advertising on Internet websites have entered an exiting new era with many possibilities to be explored. However, some less invasive measures to explore these possibilities might have to be found.

1   BACKGROUND

1.1   MARKETING

The process of marketing encompasses three functions: to inform, remind and persuade. It is the ability of the Internet as a medium to facilitate these functions at reduced costs which has made it popular [Chatterjee et al. 1995].

1.2   MARKETING ON THE INTERNET

The Internet is a commercial medium with vast potential [Chatterjee et al. 1995]. Initially the commercial aspect of the Internet was solely for the purpose of marketing; with advances in technology the Internet now is able to facilitate both transactions and the distribution of products [Gurau et al. 2000, Kendal 2000].

1.3   TARGETED MARKETING

Advertising to a potential market segment such as 'People who are mostly male in a high-income bracket' is impossible to flesh out into an advertising campaign and is likely to fail [Aldridge et al 1997:165]. A more efficient strategy would be to collect relevant information about potential customers and, using this information, deliver advertising that is applicable to the person who receives it [Ashcroft & Hoey 2001:69, Meskauskas 2002].
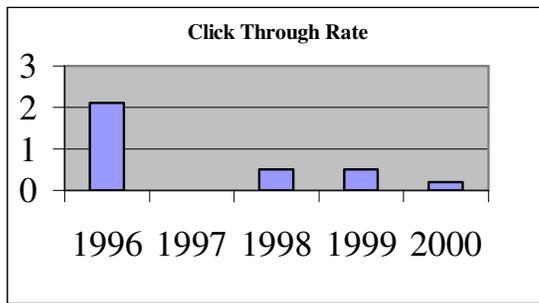
Figure 1

Banner adverts are generally considered boring and the average click-though rate of banners is declining - see Figure 1 [Pagendarm and Schaumburg 2001]. Advertisers have attempted to counter the decline in click-through rates by trying to improve the visual and interactive appeal of banners and to display targeted banners to more specific audience groups.

Arguably the most used form of targeted marketing using the Internet has been through e-mail [Gi & Thrumbo 2000]. Another method would be to use a web site such as a search engine with targeted advertising messages based on the content that the user is requesting [Chintagunta et al. 2002].

2   PROBLEM STATEMENT

The growth of the Internet signified a dawn of a new age of marketing; a low cost form of marketing that presented vast economies of scale [Gurau et al. 2000, Nêveda et al. 2001]. It can further be said that using the Internet provided a business advantage [Aldridge et al. 1997]. However, the Internet's business advantage is not as great anymore as most medium and large sized companies have a web site.

In the mid and late 1990's, e-commerce companies were willing to spend vast amounts of money on advertising, apparently without concern for the returns on the investment. Companies who were keen to harness the potential of the Internet soon became disillusioned with over-hyped expectations

[Aldridge et al. 1997]. E-commerce companies are now reducing expenses and investment in online marketing and technology [Aldridge et al. 1997:162, Bonanos 2001, Mollison 2002, Joseph & Poon 2001].

It stands to reason that a more targeted approach would be more efficient and cost effective. Customizing of advertising messages to be appropriate for individuals receiving the information would reduce resources required to generate revenue. The main benefit of this marketing technique is that advertisers are able to target individuals with advertising that is related to their interests or needs. However, a major issue with Targeted Marketing is privacy. The reason is that a collection of information is required about individuals in order to make it effective. The more detailed the information, the more accurate the targeting. The use of targeted marketing does not guarantee commercial success as many other factors are involved; there are numerous examples, which prove this to be the case [Bonanos 2001].

Search engines currently play a significant role in targeted online marketing. It is even claimed to be highly successful for advertisers. Although this may be a general belief, little investigative research has been done on this topic. Related areas, which this paper will attempt to investigate, include search engines and their ability and effectiveness of delivering targeted advertising. In summary, the problem addressed here is value of Internet marketing. It would appear that marketing via search engines is not a straightforward process.

3   OTHER RESEARCH

Online customers want advertisements customized to them as an individual, focusing on what their needs are at that moment. Unfortunately they also want total control of the exchange of information

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[Aldridge et al. 1997:163]. This results in a deadlock situation, as the advertiser has no information to work with, until such time as the customer is willing to supply it.

3.1 SEARCH ENGINES

Search engines are different to most other web sites in that the main result after visiting a search engine web site is that the search engine points the user somewhere else. Trustworthiness is a key factor in data collection. Factors that increase the perception of trustworthiness are:

— an appropriate interface and information about the organisation,
— informal method of communication,
— free services,
— security assurances,
— honesty,
— design quality,
— up-front disclosure,
— connectivity, and
— comprehensive, correct and current content.

Many of these features are found in the most popular search engines [McCole 2002]. This is possibly why search engine users are willing to give out more information to a search engine in order to find what they are looking for. The information can then be used to determine which advert would be the most appropriate for their search and hopefully their interests [Nielsen 2001].

3.2 MEDIA USED IN ONLINE ADVERTISING

3.2.1 BANNERS

Banner advertising is the most prominent form of Internet advertising [Cho et. al. 2001]. Banner adverts are usually placed on high traffic sites such as search engines, which allow visitors to visit other sites by clicking on a hyperlinked banner. The performance of banners can be measured [Chang et

al. 2001:264]. However, the initial novelty of banners has worn off as can be seen from decreased click-through rates - see Figure 1 [Pagendarm & Schaumburg 2001].

3.2.2 TEXT LINKS

Text links provide the same functionality as banners in that they also allow a user to click on a hyperlink to visit another web site. The major benefit of the text link is the low amount of data that is required to display them, compared with banner links. The trade off is that they are less graphically appealing than banner adverts [Chatterjee et al. 1995].

3.2.3 INTERSTITIALS

An interstitial is a new window that is opened after a specified event is fired. For example: when a visitor leaves a website, a new window pops up, which usually contains an advertising message and a hyperlinked banner. Interstitials are commonly referred to as 'pop ups'. Some users regard interstitials as annoying and an interruption to their migration through various web pages [Chandon & Chtourou 2001].

According to some authors, there are two degrees of forced exposure: voluntary and involuntary exposure [Cho et al. 2001]. Media that would be grouped into the voluntary section could include banners and text links. Even though a banner and text links are actually involuntary forms of advertising, they may be simply be ignored as the person viewing the web page is able to focus on other areas of the site. Interstitials could be regarded as forced exposure media as the person viewing the screen will in some cases only be able to see the interstitial advert.

3.3 METRICS OF ONLINE ADVERTISING

In order to compare the performance of any potential venture, metrics need to be agreed upon.

There are many metrics used in online advertising to determine performance - due to their relevance to this paper, only *impressions* and *click-through rate* will be discussed.

3.3.1 IMPRESSIONS

Impressions are the number of times adverts (such as banners) have been downloaded and presented to a visitor [Hoffman & Norvak 2000]. The number of impressions from a web server, however, is not a reliable measure of the amount of resultant action taken by the user. It also does not give any indication of whether or not the user noticed the banners or other advertisements.

3.3.2 CLICK-THROUGH RATE

A click-though refers to a visit to a web site that resulted from the visitor clicking on a link from another web site. Other authors consider click-through rates to be the most popular indicator of advertising effectiveness [Chandon and Chtourou 2001]. The click-through rate is the number of clicks leading to a website related to the number of the advertising impressions that have been served.

According to Chandon and Chtourou [2001], the advantages of using this indicator include:
— it measures a voluntary action of a potential customer who is requesting information,
— it is relatively accurate, and
— it is easy to collect as the process is automated.

Chandon and Chtourou [2001] have also considered the disadvantages of using click-through rates. Click-through rates are unable to indicate all aspects of advertising effectiveness and are only a short-term indicator of advertising effects. One example is visits generated at a later time because the visitor remembered a banner on a web site. Chintagunta et al. [2002] confirms this when it was found that typical click-through rates were very low. Click-through rates only indicate visits to a websites and do not guarantee purchases during that visit - in fact, only a small portion of those visits translates into sales.

3.4 KEYWORD TARGETED ADVERTISING

Keyword targeted advertising can be used with both banner impressions and text links to target potential customers. This form of advertising has become increasingly popular, especially with the increased dependence of Internet users on search engines. All the major search engines support this form of advertising [Dou et al. 2001:41].

3.4.1 KEYWORD TARGETED BANNERS

The principle behind this type of marketing is as follows: when a user does a search on a particular topic, specific banners (sometimes referred to as Smart Banners) are displayed based on the keywords used in the search. This would only apply to keywords that have been bought from the search engine company. Thus a particular advertiser's banner will only show when a specific keyword or key phrases are used [Dou et al, 2001:33].

3.4.2 TEXT AND SPONSORED LINKS

This is similar to keyword targeted banner advertising, except that only a hyperlink with a description is shown. This form of advertising can be quite unobtrusive and can even be done is such a way that the person viewing the advertising may think that it is one of the search links produced by the search engine program [Pagendarm and Schaumburg 2001].

These authors believe that text links have a greater chance of being seen as opposed to a banner, which they would possibly ignore due to banner blindness [Pagendarm and Schaumburg 2001]. This is in contrast to Chandon and Chtourou, who found that the presence of images as opposed to text links did

not affect the click-through rate [Chandon and Chtourou 2001].

Some search engines (Google, for example) has a policy of not using banners or pop-ups. Instead, for keyword advertising, they only have text links and sponsored links. Sponsored links are in essence the same as the text links, except for the fact that the search results take up a larger and more dominant area on the search engine web page [Google 2002].

3.4.3   EXPENSES OF THE ADVERTISER

Targeted keyword advertising is in high demand. The down side of this is that the costs for this service are at a premium, especially if the site receives high volumes of traffic. Sometimes the cost per thousand impressions can be double that of untargeted impressions. The benefits however are possibly a higher click through rate than conventional non-discriminating advert impressions [Dou et al. 2001:32].

There are various pricing strategies in existence - some sites work on a cost per impression or cost per click basis. Other sites calculate the cost to the advertisers based on a combination of these two as well as other factors such as time of the day or peak traffic periods. Some search engines indicate the cost to the advertiser if the visitor clicks on the link [iBoost 2001]. This is possibly more for the benefit of causing a bidding war between advertisers than for the search engine's visitor.

3.5   TYPES OF MATCHES

Dou et al. [2001] state that there are five possible levels of banners being matched to the keywords used for a search engine search.

3.5.1   *Exact matches*. This when an appropriate banner is displayed in relation to the keyword entered.

3.5.2   *Upward partial match*. This match is when the banner is related to a broader subject than the narrow subject of the keywords used.

3.5.3   *Downward partial match*. This match is when the banner is related to a narrower subject that the broader keyword.

3.5.4   *Related match*. This type of match is when there is some tangible although not direct connection between the keyword and the banner.

3.5.5   *Irrelevant match*. This is worst possible scenario where there is absolutely no connection between the search keywords and the displayed banner.

Research done some by authors proved that all search engines in the study were unable to prevent irrelevant matches [Dou et al. 2001]. The lowest percentage of irrelevant matches was 35%, while the highest percentage of relevant matches was 26%. Possible reasons for this difference might be that there were no keywords that have been associated with the banners or that there were no banners to be displayed for the purchased keywords. Both reasons are impossible to prove without information provided by the search engines themselves.

4   CONCLUSION

As more keywords are purchased, the rate of irrelevant matches should decrease and as this form of marketing matures, companies will be able to discover and purchase more appropriate keywords. Banner advertising, in its original form, has lost its appeal and has been largely replaced by more sophisticated forms of banner advertising. No fool-proof method exists to measure the exposure or the number of visits by users to a website. Since there is much debating about the effectiveness of

interstitials, another form of less invasive marketing will have to be found.

5 FURTHER RESEARCH

Future research could include a comprehensive study on problematic keywords that can be related to multiple subjects, and how previous search keywords can be used to narrow subject of the targeted banner.

It would also be worthwhile doing a follow-up study of the research done by Dou et al. [2001] to determine if this form of advertising is maturing in that the rate of irrelevant matches is decreasing.

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