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Descriptive Study of Search - Based Online Advertising: A Theoretical Approach

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Abstract

Search-based advertising has attracted havoc attention in the advertising industry as it offers unprecedented ability to target potential customers with quantifiable returns. This paper basically aims to provide the basic understanding and background of the industry, the key players those are playing major roles and the current opportunities and the future potential of this concept as well as the various economic perspectives underlining its glory, success and limitations. The paper concludes by reviewing various emerging pricing strategies and mechanisms and the future market trends and potential as well. The concept behind search-based online advertising is fairly simple: advertisers bid on keywords and when a user types in that keyword as a query in a search engine, their advertisements show up along with the organic search results. The amount the advertisers bid determines the position and ranking of their ads; the higher the bid, the better their position. Advertisers pay fees only when their ads are clicked upon ('pay-per-click' model). The interesting aspects of this market are the auction system determining ad position as well as in predicting users' behaviour around search-engine and potential ad-clicks.

Keywords: Advertising, Online advertising, search based online advertising, search engine

Introduction & History of Search-based Online Advertising

The history of search-based online advertising began in 1995 when an early search-engine, InfoSeek, began to target banner-ads towards keywords entered into their system. In 1996, Proctor and Gamble, introduced the "pay-per-click" model of online advertising when they were able to convince Yahoo! that they would only pay for ads that users clicked on. At the same time, another search engine, Open Text, tried to target text-based ads to user search queries. However there was considerable backlash from their user community. It seemed users were not ready for their search engine to become commercialized. Other search engines observed this user response and decided to hold back on any similar initiatives they had planned.

In 1998, IdeaLab! developed GoTo.com which introduced clearly labeled text-ads which correlated to the keywords typed in by users. GoTo.com later changed their name to Overture. Yahoo! eventually acquired and incorporated Overture into their system. Google also introduced their system, AdWords, which also sells keyword targeted ads for their search-engine. Overture (now Yahoo Search Marketing) and AdWords control a vast majority of the market revenue for search-based advertising.

However, due to the complexity and vast potential of managing keyword advertising, many smaller and specialized search marketing firms have recently been formed and become players in this market. These firms address specialized needs for companies and their search-based advertising programs. One of the major firms in this area is DoubleClick with their Performics division and DART Search program which specialize in tracking and evaluating the ROI of advertising in various search sites.

Market Potential

Online advertising spending, in general, is the fastest growing sector among the different advertising media. Advertising on a whole, across media, is estimated to have grown from

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\$187 Bn in 2000 to \$197 Bn in 2004, as per conservative estimates, from Universal McCann. Of this amount, 2.3% of spending was internet-based in 2000 while in 2004 it was 3.6%. This represents an increase of nearly 53%, from \$4.3 billion to \$7.1 billion for online advertising. Other estimates, from PWC/IAB, see online advertising in 2004 as high as \$9.6 billion. Within this range of \$7.1-\$9.6 billion of online advertising, PWC/IAB estimate that 40% of it is spent on search-based advertising. This means anywhere from \$2.8 billion - \$3.8 billion was spent on search-based advertising in 2004. Experts predict that it will only increase rapidly from here on. The trend of increased spending on online advertising is predicted to continue in the coming years, from \$11.5 billion in 2005 all the way to \$17.6 billion in 2008. And even if search-based advertising spending looks to remain at 40% of this spending, it can be conservatively predicted that in 2008, search-based advertising will generate over \$7.0 billion, a nearly 85% increase from today's numbers. Forrester research estimates \$11.5 Billion in search engine marketing will be spent in 2010.

Major Players in Search-based Online Advertising

The huge market of search based advertising has become a battleground for the three main search engines, namely Google, Yahoo!, and MSN (with 36.5%, 30.5%, and 15.5% based on volume of search respectively in July 2005). The market share for search-based advertising is correlated to the popularity of each company's search engine. This difference in popularity and design of these companies' flagship websites and search engines has led to a different market and pricing strategies to generate revenue from search-based advertising.

According to The Economist, Google is the clear leader of Internet search as "the most technological existing and profitable end of business" (The Economist, 2005). It offers two main search-based advertising products, AdWords and AdSense; both of which depend heavily on their search engine data repository. The price of services is flexible in that it is determined by an auction system. Google essentially prices their services on "how much [the advertisers] are willing to pay and how well [they] know [their] audience" (Google, 2005.) The cost of the products is based on the concept of "pay-per-click", charging a fee for each user click on the advertisement (ranging from from \$0.01 - \$100) after a one-time activation fee is paid (\$5.00). While Google is the leading search engine, the Yahoo! portal is considered the most popular website visited in America (The Economist, 2005). It is often the first site people go to when surfing the World Wide Web. Yahoo! leverages a vast array of services ranging from web-hosting, web-based mail to personalized portal sites to promote their advertising potential. The company currently offers three products related to search based advertising called Sponsored Search, Local Sponsored Search and Search Submit Express. All of them basically apply a combination of cost-per-click and monthly payment scheme after an initial fee.

Microsoft, traditionally a major player in the software industry, is the latest, of the three, into this market. Their main commercial website, MSN, is considered the last in the rankings of these three companies, in terms of search-based advertising. Their products, MSN AdCenter and MSN Paid Search Solution, are late competitors to Google

and Yahoo!'s products. Microsoft used to rely on the Overture service owned by Yahoo! to place text advertisements on the result pages of the MSN search service. But with the release of MSN AdCenter, the MSN search engine has become independent. Microsoft/MSN, along with AOL/TimeWarner, have begun to enter the realm of general online advertising, leveraging their dominance in other markets, to gain a foothold in this one. AOL/TimeWarner is known for its dominance in the media (cable television, magazine, etc.) while Microsoft/MSN has dominance in the desktop applications. Because of this they can be considered competitors to Yahoo! and Google in terms of general online advertising. The enthusiastic response to their recent release of search-based advertising application which rely on user demographics and contextual characteristics such as time and day the queries are made serves as an indication of their formidable presence in this market.

Network Effects and Its Influence on Search-based Advertising

Much like the other exploits based on the Internet explosion, search-based online advertising's value hinges on the critical mass of users brought about by network effects. The more popular a search site becomes, the higher the interest of advertisers in investing their marketing dollars in the search site. This in turn leads to more relevant search results to users who are looking for some commercial solution to a problem or need. This self-reinforcing positive feedback loop explains the recent heightened interest to channel marketing investment into the online arena instead of more conventional means of media such as print and television.

Despite the recent impressive expansion, the growth path of search-based online advertising does not follow an exponential pattern. Instead, it resembles the S-shaped growth path common to most industries that experience positive feedback effects. One of the field's pioneers, GoTo.com which eventually changed its name to Overture and was acquired by Yahoo!, had a tough time selling this model of mixing paid-search into a routine search result. Online search is often perceived as a free public good and users resisted the idea of a for-profit model. Furthermore, the online shopping experience requires a paradigm shift in mindset for customers to become comfortable with spending money online. Security issues, privacy invasion, lack of broadband connectivity and the necessary online payment infrastructure all led to the early lackluster response for consumers and thus paid advertisers. However, once sufficient volume of online purchase was achieved, the industry pushed beyond the tipping point of the S-shaped growth path and now shows remarkable expansion at the expense of spending of advertising dollars in other media

While search sites do not face the kind of negative feedback faced by other traditional economies-of-scale based manufacturing, their ability to continue expanding is limited by competition. Indeed, one might argue that the entry cost for a new search company is not as high as a conventional manufacturing company which requires a substantial fixed cost. While Google is gaining all the limelight in this arena, it faces strong competition from Yahoo!, MSN and other specialty-search sites. There is also the possibility of search sites of 'foreign' origins such as

baidu.com from China to gain entry into the market just as Google has done with its Chinese site. In addition, the limited supply of online advertising space provided by these few major players may not meet the growing demand from advertisers. This could potentially drive up bidding prices and hence create additional market room for new search sites to meet this demand or spread the demand to other forms of online advertising.

Complements to Search Based Advertising

To overcome the competition, various search companies have attempted to differentiate their product by throwing in complementary add-ons to entice and keep users. Yahoo! was the first to expand from a simple search site into a diverse portal and now boasts over 150 million email users. While Google only has about 5 million Gmail subscribers, they are following along a very similar site diversification strategy of email accounts, online messenger software, and mapping services. Recently, they have branched out in a different direction in their bid to build a city-wide Wi-Fi network in San Francisco. Each of these tactics are part of the larger growth strategy that search sites are attempting to draw more users and eventually more advertising revenue.

One service, complementary to Google and Yahoo!, that is being performed externally is search engine optimization (SEO). These firms serve as guides to offline players that want to take maximum advantage of search's ability to reach customers. Their services fall into two main buckets: website optimization and keyword bidding. Website site optimizers review website construction and give advice on how to alter its structure in order to make it easier for Yahoo! and Google's web crawlers to document the relevant information on their site. Since this can increase the page rank in the free, unsponsored listings, this is the biggest "low hanging fruit" for many new advertisers.

After opportunities to improve free advertising are depleted, companies typically turn their attention to sponsored links. SEO often serves the role as the guide to this new type of advertising and advise firms on their key word bidding strategy. Thus, by making web information easier to crawl and advertisers more comfortable that they are investing smartly in search advertising, SEO pave the path for future growth of search-based advertisers.

Lock-In Effects in Search-based Advertising

Unlike most software products, the switching cost of search site is minimal. Firstly, it does not take much training for the user to learn how to navigate or do his search in a new search site. In addition, it is extremely easy for an Internet user to open several browser windows and do the same search on different search sites. Similarly, the switching cost for advertisers who decide how much to bid for their keywords for which search sites is also minimal. Hence, search sites provide many free add-on services to increase this switching cost.

Yahoo! has recently taken on a novel approach by entering the world of social networking in order to increase the lock-in effects of their search engine. In their MyWeb product currently in Beta, they encourage you to log in with your Yahoo! ID when you are using Yahoo! products or search feature. Because of this tracking capability, you can go over your search history of past websites you found regardless of what computer you are on. In addition, they encourage you to share your good results with your friends.

Their Friendster-like networking site, Yahoo360, allows you to recommend good sites to anyone in your circle of connected friends. Thus, when you input a key word into the search box, you will get a few extra "personalized" results that are favorites of your friends. Although this service is not widely used at this point, if it becomes popular, it could dramatically increase the switching cost of moving over to a new search engine.

In addition, an email account serves as a vital connection between the Internet user and the search site. At the same time, the email account provides the search site with important personal information that is valuable to advertisers who may be looking for better targeted advertising based on certain demographics. While these added features help garner customer loyalty, the switching cost involved is not a significant competitive advantage that any search site can claim to. Rather, management of customers' expectations might be a more crucial factor. Google has done extremely well based on its reputation to generate the fastest and most relevant search results. A continued effort either through technological advancement or marketing strategy to maintain this perception would be crucial for a search company like Google to continue to stay ahead of the game.

Future of Search-based Online Advertising

Pay-per-click' model has driven efficiency and lowered the customer acquisition cost of advertisers but it is far from perfect. There is "click fraud"- bogus clicks generated by software-powered websites set for just this purpose. Furthermore, people who search and click often stop short of buying. Hence, the next step: 'pay-per-call' advertising. Most people first heard this term last month, when eBay, the world's largest online auction site, bought Skype, which makes free software that lets people, make free computer-to-computer phone calls. Meg Whitman, eBay's CEO, explained that one rationale for the deal was to "monetise" Skype's internet telephony by placing little Skype buttons on the web pages instead of sponsored text links. A potential customer might actually click on such a button and talk live to the advertiser's salesperson, at which point eBay would charge the advertiser.

A San Francisco company called 'Ingenio' pioneered this approach in 1999 by placing toll-free numbers of local businesses on the result pages of search engines. This April, AOL, one of the big four internet portals, signed up as Ingenio's largest partner. The other three-Google, Yahoo! and MSN- will also launch pay-per-call programs sooner or later, according to Greg Sterling at The Kelsey Group, a market research company, because small businesses and service providers like lawyers or plumbers find it much easier to close deals on phone (many do not even have a website) as faking calls is harder than faking clicks. Mr. Sterling reckons that pay-per-call will be worth between \$1.4Bn and \$4Bn by 2009, on top of pay-per-click revenues.

But even the pay-per-call model may turn out to be only an intermediate step to the ultimate in advertising efficiency - the 'pay-per-sale' model. This is what Bill Gross has recently started offering at SNAP, a search engine that he founded. United Airlines, for example, places text links on SNAP's search pages, but it pays (about \$10) not when somebody clicks or calls, but only when somebody buys a ticket. Eventually, argues Mr.Gross, 100% of the

advertising will follow such a pay-per-sale approach-although he won't guess how soon-because this is the "holy grail of advertising."

Conclusion

A bold claim, but credible, since it was Mr. Gross who incorporated the pay-per-click model in 1997, by launching the company that would become Overture, now a part of Yahoo!, and whose business model Google imitated with spectacular success. According to Mr. Gross, his first innovation, merely liberated advertisers from the old "cost per thousand" model, in which they targeted audiences and then blindly threw their money in their general direction. In the future, with the 'pay per sale' model advertisers would be liberated off all wasteful spending, by tying their costs directly to real sales

This paper has provided an overview of the background, limitations and potentials in the search-based advertising industry. Basic economics concepts such as network effects, complements and lock-in effects are used to explain the mechanisms involved in the industry. Finally, the paper has been ended with a look into the future trends of this dynamic market.

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