

THE USE OF TREE MODELS IN REDUCING WASTED PAID PLACEMENT CLICKS FROM NAVIGATIONAL SEARCHERS

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ABSTRACT

Search engines play a major role in modern Internet users' browsing habits. According to internetworldstats.com (2008) there are approximately 1.46 billion Internet users in the world. With 85 percent of web users being also search engine users (Sweeney, 2006), it is no wonder that search engine companies such as Google or Yahoo! are household names for most Internet surfers. In the past decade, search engines have realized the commercial potential in their vast user base, and have taken full advantage of it in their advertising programs.

One form of search advertising is paid placement (PP) where companies' advertisements are visible among search engines' result pages for a given keyword. Keywords are usually auction-based and charged on a cost-per-click basis. This paper presents the results of a study where the negative impact of so-called navigational searchers on companies' PP campaigns is reduced by classification and regression trees.

NAVIGATIONAL SEARCHERS

Broder (2002) has defined a navigational query as follows: "The purpose of such queries is to reach a particular site that the user has in mind, either because they visited it in the past or because they assume that such a site exists."

Navigational searchers usually have only one suitable page in mind (Moran & Hunt, 2006), and therefore it may be hypothesized that they would go through some extra trouble in finding their desired site. Typically, this means that they would also click the lower ranked results if the desired page is not visible at the top of the results page. Supporting this hypothesis, Browne et al. (2007) state that for well-structured tasks, such as finding a specific web site, people tend to have a mental list of the necessary pieces of information, and will continue searching until the necessary information need is fulfilled.

If navigational searchers will go through some extra trouble in finding their desired site, paid placement might not be the most beneficial form of search

advertising for a company. In fact, if a navigational searcher clicks a PP advertisement for a web site he/she would eventually find from the lower ranked results, the company is losing money by every click.

To address the problem mentioned above, research to classify the search characteristics of navigational searchers was conducted. The aim of the research was to discover variables that, (1) increase low navigational search tendencies, and (2) decrease high navigational tendencies.

RESEARCH METHODS

The research data were acquired through a web-based survey that was delivered to the target audience by posting a link to the questionnaire in different Finnish online communities. No incentives were offered and answering the questionnaire was strictly voluntary and anonymous. The research instrument was administered via a web-based survey tool provider, SurveyMonkey.

The data were analyzed by running a series of classification and regression (CART) trees. The tree models allow for an automatic classification of the independent variable (navigational search behavior) according to a number of dependent variables (search behavior).

RESULTS

The tree models used in the study were able to increase the amount of low navigational searchers in the sample by 22.3 percent and decrease the amount of high navigational searchers in the sample by 9.3 percent.

The results can have a profound impact on ROI on web sites that have thousands of monthly visitors. The exact cost savings are dependent on multiple things (e.g., exact number of visitors, number and cost of PP keywords, etc.), but the framework can easily be utilized and refined in any company that has a web traffic monitoring system installed.

References Available on Request