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Introduction

Major commercial uses of the Web include providing customers with product information, promoting products, and conducting transactions (Balthazard and Koh, 1997a, 1997b; Ho, 1997; Koh and Balthazard, 1997a, 1997b). As a new communication medium, the Web requires a new mindset for its use in advertising and promotion. For example, Web marketers cannot rely upon previous research (Assael and Poltrack, 1994) or guidelines designed for choosing advertising placement in television based on using demographic profiles or purchase behavior. Today, although research has been done on Web advertising in general (Berthon, Pitt, and Watson, 1996a, 1996b; Briggs and Hollis, 1997; Ducoffe, 1996; Eighmey, 1997; Harvey, 1997; Kassaye, 1997; Maddox, Mehta, and Daubek, 1997), the issue of advertising placement on the Web has received scant attention from researchers.

Given the ease and low cost of the development of a Web site (Balthazard and Koh, 1997a, 1997b), commercial organizations are readily able to establish their own corporate Web sites. However, making customers aware of the presence of a corporate Web site and, subsequently visit the site, is a major challenge for marketers (Williamson and Johnson, 1995). This article contributes to the literature by describing an analytic framework and providing guidelines for advertising placement on the Web.

Prior Research in Web Advertising

As "the first truly new medium since television" (Ducoffe, 1996, p. 21), the Web has gained attention from advertising researchers (Berthon et al. 1996a, 1996b; Briggs and Hollis, 1997; Ducoffe, 1996; Eighmey, 1997; Harvey, 1997; Kassaye, 1997; Maddox et al. 1997) with respect to: (1) application of old models developed for traditional media to the Web; (2) effectiveness of the new medium as a commercial communication channel; and (3) new issues related to the new medium. However, the issue of advertising placement on the Web has received little attention, while the same issue in traditional channels has been well-researched (Assael and Poltrack, 1994).

At this time, there are two major ways that advertisers can measure the cost-efficiency of their Web advertising placement(Harvey, 1997): (1) adviews: "the number of times that the banner is presumably seen" (p. 12), and (2) clickthroughs: "the number of times that the banner is clicked upon" (p. 12). For the most part, Web advertisers rely upon the count of visits to Web sites, which is similar to the way firms decide which traditional advertising spots (radio, television, and print) to use, although the nature of the Web is different from that of TV (Raisch, 1997). While the approach for selecting advertising placement in traditional channels has been refined for Web use, the count of visits does not take into account the following aspects unique to the Web:

1. According to Salam et al. (1997), "[the] Web as advertising media demands a much stronger access motivation and/or involvement on the part of the consumer than traditional modes of advertising." (p. 192) In other words, "the customer generally has to find the marketer rather vice versa…" (Berthon et al. 1996a, p. 44). When customers are browsing cyberspace for products they need, in general, they are actively searching rather than passively receiving the message broadcast by manufacturers, in the case of TV commercials (Salam et al. 1997).
2. One unique feature of the Web is that there are various search engines with which consumers are able to search multiple Web sites for information, and/or which can even compare and contrast products for consumers, such as the "Shopping" engine in Yahoo!. However, because of the design of search engines, the third party's Web page in which a company has placed Web advertising and which has large number of visits may not be reflected in search results. Thus, an advertisement placed on such a page does not necessarily have great reach or exposure.
3. Another feature unique to the new medium is that it is an interactive multimedia many-to-many communication channel (Hoffman et al., 1995). This feature enables firms to convey messages to consumers and vice versa. It is this feature that differentiates the new medium from traditional broadcast communication channels and that makes two-way connections possible.

Because of the above aspects, we believe that there are other criteria, in addition to the count of visits, that can be used to decide Web information (advertising) placement. Also, before access to the Internet becomes ubiquitous, it is not feasible to use purchase behavior (Assael and Poltrack, 1994) as a criterion for Web advertising placement.

Therefore, the purpose of this article is to propose an analytic framework that provides guidelines for Web advertising placement. Because of the differences between the Web and traditional media, the definition of advertising in this article is extended to include the placement of graphic banners on Web pages and hyperlinks in Web traffic control sites (Hoffman, Novak, and Chatterjee, 1995).

An Analytic Framework for Web Advertising Placement

Rather than using the count of visits, we propose the concept of "exposure" of a corporate Web page, which is defined as the likelihood that consumers who are searching for products promoted on that page will be guided to or attracted to visit that Web page. Accordingly, in deciding where or on which page to place commercials, advertisers should select Web pages which potentially maximize the exposure of their corporate Web pages. The underlying assumption is that when consumers need a product, they will actively search for clues or evidence that will lead them to Web pages which have the product(s) that they need/want. The objective of Web advertising placement is to provide enough clues or evidence to guide consumers to the product(s) they need.

In order to achieve this objective, the aspects of the Web identified above should be taken into account in formulating advertising placement strategies. The many-to-many communication model suggests that not only can connections be established between firms and consumers, but also among firms. Thus, a company can increase clues or evidence by establishing connections between its Web page and other companies' Web pages. The more connections a company has, the more likely consumers are guided to its Web page. However, because of the nature of the Internet, a traffic control site can guide consumers to a company's Web Site or its competitor's. Furthermore, a company's connections might provide inadvertently consumers with clues to its competitors. Consequently, in order to increase the exposure of a corporate Web page and, subsequently, the exposure of products on that page, and avoid adverse effects, an advertiser should consider two factors when making placement decisions: (1) the relationship between his corporate Web site and the third party's Web site, and (2) the relationship between his products and other products advertised on the third party's Web site. We define three types of product relationship: assorted, supplementary, and complementary. An assorted relationship between products means that the features or functions of products to be advertised do not relate to those of other products on the third party's Web page. This type of relationship is very common on current Web pages. This is because popularity, which generates high visitor count, has been used as the major criterion for selecting advertising placement.

A supplementary relationship between products means that the features or functions of the products on the third party's Web page can be substituted by those of the product(s) to be advertised, or vice versa. In other words, those products have similar features or functions from the point of view of consumers. Typical examples of this type of relationship include various Web site indices, such as http://www.yahoo.com (Yahoo, 1998), software/shareware collection sites, such as http://www.windows95.com, and online storefront and mall (Hoffman et al. 1995).

A complementary relationship means that the features or functions of products on the third party's Web page help or support the features or functions of the product to be advertised. Examples include bread and butter, a tennis racket and tennis shoes, and cereal and milk. This type of relationship may occur on Web sites of specialty shops, for example, a tennis shop, in which customers may be able to purchase not only tennis rackets, but also tennis clothing, tennis ball and even tennis vacation. This type of relationship is not as common as supplementary or assorted relationships. This type of relationship has potential for creating strategic partnerships by combining the two-way Web page relationship, as defined below.

A relationship between Web pages refers to the linking direction from one page to another. There are two types of relationship between Web pages: one-way and two-way. A one-way relationship means that consumers cannot directly link from page A to page B, after they directly link from page B to page A. In other words, page B has a link connecting to page A, while page A does not have a link directly leading to page B. This type of relationship usually occurs between destination sites and traffic control sites (Hoffman et al. 1995). That is, when consumers are guided to a destination site via a Web traffic control site, they cannot go back to the Web traffic control site without clicking on the back button on browser or through other paths. A two-way relationship between two pages means there are direct links on the two pages which allow surfers to jump back and forth from one page to the other. A two-way relationship is similar to multiple way medium (Hoffman et al. 1995; Berthon et al. 1996a).

With these two factors, we provide an analytic framework as shown in the following table. This framework indicates that Web pages on which information about products is displayed not only could be destination sites (Hoffman et al. 1995), but also could function like Web traffic control sites. As a destination site, a Web page provides visiting consumers with information about products interesting to them, while as a Web traffic control site, a Web page works as a vehicle to guide visiting consumers to other products possibly interesting to them.

In the following paragraphs, we list several propositions which, when empirically tested, could provide a set of guidelines for advertisers or marketers to formulate Web advertising placement.

Consumers who are introduced to a Web page through a Web traffic control page on which products of assorted relationship are advertised should not have an opportunity to go back to the Web traffic control page because going back may distract consumers and/or may guide consumers to a competitor's Web page. The authors acknowledge that this barrier is quite low because the "back" button or "go" command (in Netscape) gives another path. Consequently, the first proposition is stated as:

Relationship b/w Web pages			
Two-way	Not currently in use	Not currently in use	*Not currently in use
One-way	*Businessweek (http://www.businessweek.com); China Times (http://www.chinatimes.com.tw)	*Yahoo! Classifieds (http://www.yahoo.com) Infoseek Classifieds (http://www.classifieds.com)	Not currently in use
	Assorted	Supplementary	Compementary

Proposition A: A one-way page relationship will generate better results than a two-way page relationship for an assorted product relationship.

Similarly, for supplementary products, consumers should not be given an opportunity to go back to the traffic control Web site, because going back will give them an opportunity to visit competitor's Web pages. Consequently, the second proposition is:

Proposition B: A one-way page relationship will generate better results than a two-way page relationship for a supplementary product relationship.

A two-way page relationship helps establish a partnership between companies which have complementary products. A two-way relationship may introduce consumers of one product to the other product so that producers of the two products can share their customers. Furthermore, a two-way page relationship potentially doubles the exposure of complementary products. Consequently, the third proposition states:

Proposition C: A two-way page relationship will generate better results than a one-way page relationship for a complementary product relationship.

Conclusion and Future Research

While research on the selection of TV spots for advertising has been conducted (Assael and Poltrack, 1994), little research has been done for this issue in the context of the Web. In this article, we have proposed an analytic framework consisting of two dimensions: a relationship between Web pages and a relationship between products.

Future research can be done in several directions: it is necessary to empirically examine those propositions (i.e., validate these guidelines) and the framework can be used to analyze and further classify current Web sites. Advertisers can use this framework to investigate the advertising placement of their products. Those products which are complementary to products from another firm provide an opportunity to create strategic partnerships. Thus, another research direction is the role and effect of Web advertising in strategic partnerships.

References

References available upon request from first author (ttchuang@acm.org).