

Exploring Advertising Opportunities Using the Internet

By ALEXANDER KOGAN, EPHRAIM SUDIT AND MIKLOS VASARHELYI

It is difficult to compare the Internet advertising medium with other printed or TV media. A simple click on top of an ad can bring the visitor immediate reinforcement by providing extensive product information and / or the ability to order at the moment of the buying impulse. Eventually, advertising over the Internet will fulfill the promise that advertising can bring real information to the buying decision in addition to first blush awareness.

Enterprises increasingly are moving beyond the general delivery of information on the Internet and are creating a strong promotional presence through strategic marketing activities. Since the Internet is a low-cost, high-impact delivery vehicle, IS audit, control and security professionals are going to increasingly be involved in Internet related issues. Here are tips and helpful advice on the promises and pitfalls of advertising on the Net and details on Web site traffic measurement systems.

For Internet purposes it is useful to classify goods as "bitable" (soft goods that can be delivered through the Net such as software, information or money) and non-bitable (hard goods which require physical delivery, such as shoes or automobiles). Except for the physical delivery of the non-bitable good, the entire sales process for both can be completed over the Net. It also is useful to classify goods as commodity or non-commodity goods. For Internet purposes the first are the goods that the consumer does not need to see, try, touch, smell, or taste in order to buy. The

second category is less appropriate for electronic commerce as direct contact is necessary. With consumer experience, goods can evolve to commodity from non-commodity items. As a result, bitable commodity items are the best prospects for electronic commerce.

Electronic commerce can be divided in two areas: 1) selling items expressly for the Internet and 2) selling items via the Internet. Most opportunities in the second area will be through advertising, subscription services and transaction processing. *Subscription services* are technologically related to the concept of micro-payments, and, while the security and standards of payments over the Net are evolving, electronic commerce is slowly gaining momentum. *Subscription services* will allow the user to buy access to valuable information for his/her activities (e.g. stock prices, analyst reports and test results). *Transaction services*, which will progressively take care of the "back office" functions of many businesses, use the Internet as a virtual private network and allow for substantial buying and selling over the Internet.

"The Web allows organizations to directly target a user by a wide set of unique characteristics including location (distance) and buying preferences."

Internet Advertising Still in Early Stages

Advertising on the Internet is in its embryonic stages. According to the *Los Angeles Times* (10 June 1996, B7), out of a US \$125 billion advertising market, on-line advertisements accounted for about US \$80 million (or less than one percent). At the same time, the newspaper cites projections of on-line ads growing from about US \$340 million in 1996 to US \$5 billion in 2000. This rapid growth indicates a promising future for Web advertising. Some of largest US advertisers seem to be convinced. In April 1996, US-based Procter & Gamble, a personal care products company with a

large annual advertising budget, signed an advertising agreement with Yahoo (<http://www.yahoo.com>) — the most popular Internet directory.

The Internet offers unique advertising opportunities. The information content of a single ad is potentially unlimited: a small banner on a Web page can link a customer to a Web site with the wealth of detailed information about the advertised product and/or company. The Web site can be designed to elicit additional information from the customer about her/his preferences. By adjusting to a customer's choices, the advertising message becomes interactive. Interactivity can be creatively combined with new Web technologies such as virtual reality to showcase the product in a dialogue with the customer. Web sites can also collect detailed information about "visitor" on-line behavior. As a result, an advertiser on a Web site can be informed of important characteristics of potential customers, and use this information to improve its ads.

The focus of an advertising message on the Web can easily be broadened or narrowed for different audiences by selecting a proper Web site. Certain Web sites are visited by broad range of users, while other sites are targeted to specific groups.

Furthermore, what's unique about Web advertising is its personal targetability. While database marketing is now aiming at narrow cohort groups, to increase ad efficiency, the Web allows organizations to directly target a user by a wide set of unique characteristics including location (distance) and buying preferences. The Internet, by definition, does not necessarily identify "Web surfers" uniquely. Often the Web site only knows that the person is coming from say, a Rutgers computer. Consequently, organizations are creating incentives for users to identify themselves and provide data that facilitates narrow target marketing.

Internet search engines and directories are among the most popular advertising sites. Recently, Yahoo, Lycos (<http://www.lycos.com>), and Excite (<http://www.excite.com>) went public successfully, with sales from on-line advertising being projected as the main source of revenues. The unstructured nature of the Internet makes search engines and directories the single most popular category of Web sites visited constantly by almost every surfer. Therefore, search engines and directories can distribute ads to the broadest possible on-line audience. At the same time, advertisers on these sites can easily target special groups of visitors by displaying particular ads in response to certain search words and phrases.

Sophisticated search engines will recognize requests using synonyms and words with similar meanings and display an ad even when the conditions are only approximated. The number of search engines on the Net is growing rapidly, intensifying the competition for advertising revenues.

In addition to search engines and directories, other Web sites are popular conduits for advertising. These sites include home pages of companies (Netscape at <http://home.netscape.com>), popular electronic journals and news sites (HotWired at

<http://hotwired.com> and Pathfinder at <http://pathfinder.com>). Interestingly, Netscape is among both top buyers and top sellers of on-line ads.

Measuring Net-vertising

It is difficult to evaluate the impact of Web advertising. The standard measure is the number of impressions a certain ad gets. An impression is a single request of a Web page with an ad. This should not be confused with the number of "hits" a Web page receives because a hit is simply a retrieval of a single file. If, for example, a Web page contains several images, each image will produce an additional hit when this page is requested. Consequently, one request can lead to several hits in the site's log file.

Web sites usually charge advertising clients per thousand impressions. As a result, charges vary greatly. Popular search engines currently charge between US \$20 and US \$50 per thousand impressions. One notable exception to charging per impression is the agreement Yahoo has with Procter & Gamble, which is charged on a "per click-through" basis. A "click-through" represents a visitor who "follows" the link of the ad's banner. The "click-through" criterion does not take into account customers who saw the ad's banner but didn't click it.

The need for measurement and audit of Web site traffic spawned companies that specialize in producing tools for and providing these services. One of the current leaders in this area is the Internet Profiles Corporation (<http://www.ipro.com>) who in cooperation with Nielsen Media Research (<http://www.nielsenmedia.com/>) developed the broadest production line of Web site traffic measurement systems.

Potential Hazards with Web Advertising

It should be noted that advertising on the Web is risky. Two cases in point are the Web Review (<http://www.webreview.com>), an on-line magazine targeting Web professionals, and Time Warner's Pathfinder site. The former stopped publication because its advertising revenues did not cover its costs, but it plans to reopen on a subscription basis (*New York Times*, 28 May 1996, C2). The latter chose to de-emphasize free ad-supported content in favor of subscription-based offerings (*Web Week*, 29 April 1996).

Roles of the IS Audit Professional

As mentioned earlier, advertising fees are mainly contingent on the number of "impressions" that are delivered of a particular ad. As a result, IS auditors will have to develop products (or attestation) that verify traffic claims in many dimensions: number of impressions, nature of clientele, timing of impressions and frequency of visits by specific visitors. This is technically complicated because the sites often only know the Internet provider address of the visitors, not their identity. For example, if hundreds of users have an account in Rutgers University Pegasus computer, their specific identification will

IS auditors will have to develop products (or attestation) that verify traffic claims in many dimensions: number of impressions, nature of clientele, timing of impressions and frequency of visits by specific visitors.

A WINDOWS OR DOS SOLUTION.

Developed by Canadian Institute of
Chartered Accountants. Distributed
by Audimation Services, Inc.,
One Greenway Plaza, Suite 550,

**“An auditor’s answer to
doing more with less.”**

Houston, Texas 77046. Request
a demo package by fax: (713)
623-0009 or call (713) 623-0008.

Interactive
Data
Extraction and
Analysis

Visit IDEA on the WEB. <http://ourworld.compuserve.com/homepages/idea/>

only be displayed if the site requires user identification and confirmation of the identity (i.e. through e-mail return of the site password).

With bitable products, the entire economic process is completed through electronic means. Consequently, signatures, original documents, visual confirmation, and face-to-face contact lose much of their value. This also is aggravated by the internationalization of the process and the heavy reliance on automation over many legal jurisdictions. These problems are going to require expertise and planning from IS professionals over the next few years. Standards must be developed, new and better control processes put in place, and new technology derived just to make things possible from the audit and control standpoint.

Internet commerce is evolving into a major force in the world's economic endeavors. Part of this phenomenon is the advent of an entire new world of advertising with a different feeling and different economics. Individual targeting and distance-sensitive ads combine with the tremendous power of immediate reinforcement and material information to make the Web an important element of product information dissemination. With these prospects, an entire new domain of claim auditing opens up for the auditing profession and a series of new concerns arise for the control professional.

'Behal, B., Menachen, L. & Nymberg, H. (1996). "Advertising on the Internet." Unpublished manuscript.

Alexander Kogan, Ph.D.

is assistant professor of accounting and IS for Rutgers University and Webmaster of the RAW.

Ephraim F. Sudit, Ph.D., M.B.A.

is professor of accounting and IS at Rutgers Graduate School of Management, director of Rutgers MBA program in professional accounting and associate director of the Rutgers Accounting Research Center.

Miklos A. Vasarhelyi, Ph.D.

is KPMG Peat Marwick professor of accounting at Rutgers Graduate School of Accounting, director of the Rutgers Accounting Research Center and consulting technical manager for the advanced computing group at AT&T Bell Laboratories.