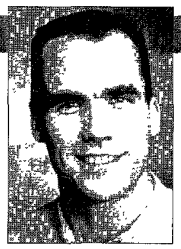

Web advertising

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Advertising on the Web has arrived. The ads we see now mark the beginning of a rapidly growing business. According to the Internet Advertising Bureau, $906.5 million was spent on Internet advertising in the US in 1997, and according to Jupiter Communications LLC, Internet advertising will rise to $7.7 billion by 2002.

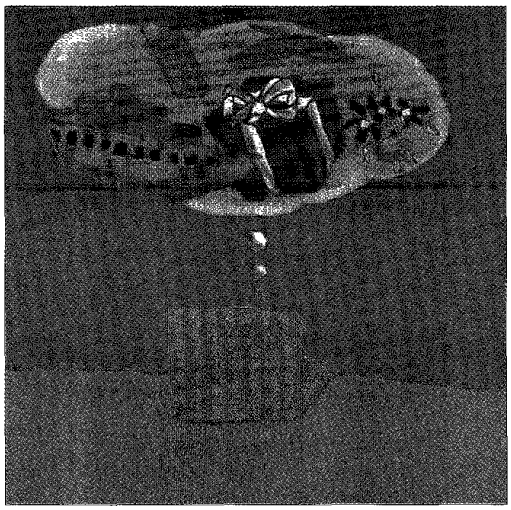
The recent success of online advertising companies provides further evidence. DoubleClick, the current leader in online advertising, maintains a banner-ad network of heavy traffic sites, including AltaVista, Travelocity, and Dilbert. Wall Street has taken notice. On February 20, 1998, demonstrating an explosive initial public offering, DoubleClick's stock price closed 57% higher on its first day of trading. Similarly, on April 8, 1998, Yahoo, one of the primary Internet portals, announced incredible results for the past quarter, and their stock soared 15%. Advertising revenue almost completely initiated this rise, even though Yahoo was selling only 14% of their available advertising space.

Despite these inspiring figures, skeptics insist that in the long run, advertising will not be a viable model for the Web. It's clear that the Internet portals, including Netscape, Yahoo, Excite, AltaVista, and Lycos, can derive advertising dollars from tremendous traffic. For example, Yahoo averaged an amazing 95 million page views per day in March 1998. But, advertising on other sites whose primary lure is content might not garner the same success. For example, America Online recently decided to raise subscription rates by $2 per month, in part because their advertising revenue cannot cover increasing costs.

A new advertising medium

The Web differs fundamentally from the traditional advertising media of television, radio, and print in at least three important ways:

- Every ad served on the Web goes to an individual who can be characterized personally, rather than to a group that must be characterized statistically. Advertisers can therefore carefully target or even custom-generate ads, according to their degree of knowledge about an individual.
- A Web ad receives direct feedback concerning its effectiveness. If a user clicks on an ad, then advertisers consider it an effective ad.
- The real-time nature of the Internet lets ad campaigns adapt to nearly instantaneous feedback. Each ad run can measure exactly how many times an ad has been shown and clicked, allowing for a quick change of strategy. If a particular ad is not effective on a certain site, an advertiser can show it elsewhere or change the image in a matter of hours. Traditional media, in contrast, have advertising lead times measured in weeks and months.



The individually targeted, interactive, highly measurable, and real-time nature of the Web makes it an entirely new medium about which the advertising industry will have to learn. It's not unlike direct marketing pushed to an extreme. Combining these unique elements with the appealing demographics of Internet users and exponentially growing Internet use provides an explosive potential for Web advertising.

In other respects, the Web shares similarities with existing advertising, requiring ads to grab the viewer's attention. Brand-name recognition remains crucial. For example, Amazon is working hard to establish its name, through traditional and Web-based advertising. The lessons learned in marketing departments about what makes an image appealing and attractive still apply when designing Web images. However, advertisers can apply these lessons more effectively on the Web, because they know much more about those to whom they are advertising and can alter an ad campaign in response to real-time feedback.

Web advertising models

The Web has now evolved its own collection of advertising terminology, policies, distribution, and pricing models. The most common ad is the rectangular-shaped banner ad, appearing on the side, top, or bottom

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of a page as a distinct, clickable image. The ad image can be quite diverse, from progressive JPEG or interlaced and animated GIF images, to complex user-interactive JavaScript. Banner ads come in various standardized sizes to facilitate interchangeability. A site, which might have several slots for banner ads, can sell ad space either directly to one or more sponsors, or indirectly through an advertising company such as DoubleClick. In either case, different ads rotate through the same banner-ad slot. When a user loads a certain page, an appropriate banner ad is selected and presented.

Various metrics measure Web advertising. A *unique impression* is a single ad served to one browser in a fixed time window. Ads are priced by the thousand impressions—measured in cost per thousand (CPM) impressions—typically with a certain minimum order. The CPM varies greatly, depending on the site and subject matter. Large Internet portals typically charge a CPM between $20 and $70, depending on whether the ad is activated by keywords used in a search. Some ambitious ad companies, such as *http://www.aaddzz.com*, adopt an auction model, whereby they sell each impression to the advertiser that bids the highest price.

The *click-through rate* is the percentage of impressions activated by user clicking. Typical CTRs range from 2% to 4%, but can be higher for targeted ads. Certain aspects of the Web's design, such as uncertain degrees of caching, cookie support, and user and IP correlation, complicate the measurement of unique impressions and CTRs. So, companies are providing tools to help manage collections of ads across sites and analyze detailed log files to understand each ad's performance.

Not all advertising involves exchanging money. Most of the for-pay advertising networks require substantial minimum traffic. For example, DoubleClick requires a minimum of a million hits per month. For those sites that don't meet the minimum, the simpler banner-exchange networks are extremely popular. Among the many banner exchanges, the largest is LinkExchange. When a site joins LinkExchange, it provides its own banner ad, which will be shown on other member sites in a two-for-one proportion, according to how much traffic the site generates. LinkExchange makes money by selling advertising for the extra impressions on each of its members' sites. Such a model allows smaller sites to advertise in proportion to their own traffic. You can also submit a URL to many search engines and get tips for increasing traffic through numerous do-it-yourself services, including *http://www.submitit.com*, *http://www.webpromote.com*, and *http://www.wprc.com*.

Related links

Aaddzz—http://www.aaddzz.com
AltaVista—http://altavista.digital.com
DoubleClick—http://www.doubleclick.com
Firefly—http://www.firefly.com
Internet Advertising Bureau—http://www.iab.net
LinkExchange—http://www.linkexchange.com
Narrowline—http://www.narrowline.com
Submit It!—http://www.submitit.com
Web Site Banner Advertising—http://www.markwelch.com/bannerad/
The Website Promoters Resource Center—http://www.wprc.com
Yahoo!—http://www.yahoo.com

What the future holds

Web advertising is growing rapidly, but it still has not realized much of its potential. Most advertising dollars are spent on mammoth sites such as AltaVista and CNN. Although this supports the traditional "bigger is better" view in advertising, it's not clear that this view is valid on the Internet. There are many highly specialized sites spanning all subject matters, from health information and digital cameras to cooking recipes and PalmPilot software. These sites might not have tremendous traffic, but they address specific audiences, forming potential targets for advertisers. Unfortunately, because existing for-pay ad networks do not cater to small and medium sites, these sites can only sell their precious real estate through sponsorship arrangements, which consumes time and seems inefficient compared to belonging to an ad network. By selling advertising, the resulting revenue stream would allow the sites to be self-sufficient, furthering the Web's power to enable anyone to become his or her own publisher. In the future, online ad companies will realize that these smaller, specialized sites offer substantial value, maybe even more value than mainstream sites offer.

Beyond targeting, the Web enables highly personalized advertising. However, I find only a small percentage of the ads that I see to be interesting, which suggests that advertisers have not yet taken advantage of this potential. In the future, you could link advertising directly to a self-maintained, online personal profile. The profile would record accurate and highly personal information, including relatively static information such as your interests or hobbies, but also dynamic information, such as whether you are in the market for a new car or microwave oven. The information would be cryptographically protected so that only certified companies, with your permission, could access it. You would want to keep your profile up to date so that you receive pertinent advertisements. For example, I'm in the market for a new laptop, and I would appreciate sales and specials advertisements from laptop vendors. Firefly, recently purchased by Microsoft, offers the beginnings of such a profile through the Firefly passport.

Naturally, the software that makes such personal profiles possible must come with an assurance that it will protect our privacy. Direct opportunities for abuse already exist. For example, DoubleClick has probably delivered a great many ads to you through numerous sites. These details have all been recorded in their records, including the time you saw the ad, which ad was shown, and whether you clicked on it. DoubleClick's privacy policy, available through their home page, assures you that the information will not be used against you. By maintaining our profiles directly and accurately, instead of allowing diverse companies to gather information without our knowledge, we will be able to take control over the management of our private information.

The Web's unique properties will present excellent advertising opportunities, not only for the advertisers and publishers, but also for those of us browsing the Web. These opportunities are being explored through numerous channels for Web advertising: from do-it-yourself shops, to banner exchanges, to for-pay advertising networks. Nevertheless, the Web offers many more opportunities. With progress, we might one day find ourselves appreciating ads that are carefully selected according to our preferences. ■

Illustration by Sally Lee; sally@sls.lcs.mit.edu; http://www.sls.lcs.mit.edu/sally.

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