

7.4 CASE STUDY

Instant Ads: Real-Time Marketing on Exchanges

The holy grail of advertising and marketing is to deliver the right message to the right person at the right time. If this were possible, no one would receive ads they did not want to see, and then no advertising dollars would be wasted, reducing the costs to end users and increasing the efficiency of each ad dollar. In the physical world, only a very rough approximation of this ideal is possible. Advertisers can buy television and radio spots, newspaper ads, and billboards based on broad demographics and interests of likely potential customers. The Internet promised to change this. On the Internet, ads supposedly could be targeted to individual consumers based on their personal characteristics, interests, and recent clickstream behavior. One early vision of e-commerce was a trade-off between privacy and efficiency: let us know a little more about you, and we will show you only the advertising and products you are interested in seeing, and even offer free content. E-commerce was supposed to end the mass advertising that exploded in the television era.

But contrary to popular impressions and the fears of privacy advocates, most of the display ads shown to site visitors are marvelously irrelevant to visitors' interests, both short term and long term. For this reason, the click-through rate for banner advertising is a stunningly low 0.06%, and the price of display ads has fallen to a few cents because of their poor performance. Check this out: point your browser at Yahoo (the largest display advertiser on earth), look at the prominent ads shown on the right, and ask yourself if you are really interested in the ad content at this moment in time? How about ever? Chances are slim you are interested at this moment even if the ad is somewhat appropriate to your demographics. Often it's an ad for something you are totally not interested in and never have been. In 2011, only 20% of Internet users find display ads on Web sites are relevant to their interests, up only slightly from previous years.

A part of the problem is that online display ad publishers like Yahoo, and the advertising networks they ended up owning, did not know very much about you (until recently), and what they did know was quite general: female, zip code, age, and perhaps some prior purchases. They could build a "profile" of you, but it was very imprecise. The resulting ads displayed were frequently far off the mark of what you were interested in at the moment. And even if they knew everything about you, the advertising networks did not have the mechanism to sell that information instantly to a potential advertiser. For this reason, banner ads displayed on the Web sites you visited in the past rarely had anything to do with your interests at the time. Rather than achieve the holy grail of advertising, much of Web-based display advertising was extraordinarily ignorant

of who you were or what you were looking for. Search engine advertising was typically better, since it would be responding to search terms you yourself had entered.

In the last two years, behavioral targeting and tracking of online behavior have begun to improve the situation for display advertisers by expanding the scope, breadth, and depth of personal information, making it possible for advertisers to fine-tune their display ads and to develop a much finer-grained, digital image of individual customers—real people not just profiles. Using beacons, Web bugs, cookies, and Flash cookies, almost all the top Web sites now install tracking software onto visitor computers. A *Wall Street Journal* study of the 50 top Web sites in the United States, accounting for 40% of U.S. page views, found these sites installed 3,180 tracking files on a test computer that visited each site. Only one top-50 site installed no tracking files: Wikipedia. Over two-thirds of the tracking files were installed by 131 companies. Guess who the biggest trackers were? Google, Microsoft, and Yahoo. The vast majority of these tracking files are third-party cookies and beacons. (They are not installed by the Web site you are visiting, but through a commercial arrangement with the Web site you are visiting, tracking firms are allowed to place cookies and beacons.) What the *Journal* stumbled onto was an entire ecosystem of firms ranging from Internet giants like Yahoo, Google, and Microsoft, to smaller data aggregators, and finally to huge advertising firms that pay for the data their clients want to use in targeting ads.

Today, when a user visits a site, a tracking number or cookie is assigned to the user. Often a "beacon" or Web bug is installed, which captures what people are typing on a Web site. For instance, a beacon will record your comments on automobiles, illness, or favorite movies, as well as the fact you like *American Idol*, do crossword puzzles, bought a Kindle, purchased romantic titles, have an iPad, and installed the *New York Times* reader. When the user visits other sites where the tracking firm has installed its software, the user is recognized, more behavior is observed, and this information is added to the original cookie file on the user's computer, or sent to the firm's tracking server using the installed beacon. The file keeps growing the more the user visits Web sites. Facebook has three tools in 2011 for targeting ads: it sells advertisers the topics you are interested in, the sites you follow as a fan, and profile information such as newlyweds, moving, college, as well as personal education and other data.

So what happens to all this information about you and others? The cookie and beacon owners collect all this information and sell it to advertisers. On the basis of all this personal and clickstream information, a profile of the individual user is developed by data exchange firms such as BlueKai Inc. and eXelate Media as well as the three big players. EXelate claims to have anonymous data on more than 200 million unique users who visit more than 200 of the most popular Web sites.

The information and the profile are sold to advertisers usually for 10 cents a piece. Advertisers specify the profiles they are looking for: male, 24-35, urban, drives a sports sedan, sports fan, high income, and likes books (think possible BMW customer). Once individuals fitting this profile appear at a Web site, the advertiser pays to have a pre-fabricated ad displayed to that person. Voilà! Targeting, personalization! A more efficient market communications process, happier Internet users who see what they are interested in looking at, and users who click more often.

Not quite yet. One thing is missing from this heady mix of behavioral tracking and targeting: immediacy. When you click on a search engine result, it's because you

are interested in that product or service right now, this moment, this instant. Google, which is currently used by 75% of global Internet users, or approximately 1.5 billion people, is believed to be the largest and best repository of immediate user interests. For display ads, even targeted ones, this has not been possible until recently. Previously, online advertisers reserved slots (available pages, location on page, time of day/week) based on their best guesstimates of the types of people (i.e., profiles) who would show up to see those pages and be exposed to the ad. They really were clueless when it came to who you are and what you were interested in at the moment of opening a Web page. Advertisers could not make on-the-fly, instant decisions about ads to show Web site visitors based on what they were doing just before this instant, and just before they landed on a page.

In 2011, this situation is changing, and for the first time display advertisers, portals, and ad networks they own are building the capability to display banner ads that are based on the granular behavior of individuals just prior to displaying the ad. There are two players here: the often small-fry data collection firms (the third-party owners of cookies and beacons) and the large players. Both are developing data exchanges where advertisers can purchase all the individual-level data available. There's a lot of data looking for a use and a market. The second part of the change is the really large Web advertisers like Google, Microsoft, and Yahoo who have each developed real-time advertising auctions and exchanges that permit advertisers to buy ads in the few milliseconds between a user entering a Web address (or clicking on a search query) and the page appearing, based on the data purchased from data exchanges.

For instance, Google has developed a real-time bidding (RTB) system or exchange for selling and buying display ads. Ad sellers (Web publishers) provide the inventory of slots available on the Internet. Ad buyers bid on these slots based on the likelihood their ads will be seen by the kinds of people they are targeting. Google calls this the DoubleClick Ad Exchange; Yahoo calls its exchange Right Media. Currently, over 50 advertising networks buy display ads through Google's network. With ad exchanges, advertisers buy ads in milliseconds between the time you enter a URL on your keyboard and the time the Web page loads. In that interval, advertisers can decide, based on your cookies and beacon data they have acquired, what ad to show you.

According to Forrester, advertisers spent \$353 million in the United States on RTB advertising in 2010, and this will more than double in 2011 to \$823 million—roughly 8% of total display spending. These ad exchanges have moved closer to the ideal Web advertising environment by allowing advertisers to decide where to place their ads on the fly, based on fairly solid data on the people most likely to see the ad. This is far different from the traditional ad placement process, which placed ads weeks and months in advance of the ad being displayed.

Taking it a step further, start-up firms like AppNexus have fine-tuned the tracking process to individual-level behavior, and then display ads to individuals based not on their profile membership but on what they clicked on somewhere on the Web just seconds ago. For instance, eBay has been working with AppNexus to develop "instant ads" based on immediate prior behavior. Suppose a man searched for running shoes on eBay. eBay can follow this person across the Web in real time and display ads that are highly personalized to his interest in exercise, including socks, shorts, and

shirts. Exercise-related vacations can be offered, along with muscle-building pills and exercise machines. How about a heart monitor? These new capabilities allow advertisers to evaluate each individual on a granular, personal basis, in real time. Matthew Ackley, eBay Vice President of Internet Marketing and Advertising, commented, "We have found that we can get 'search quality' results from display advertising and that's a new world for us."

One problem that has arisen with instant real-time auctions of access to customers is that there are no agreed-on audience measures to assure advertisers that the ads were really delivered to the target audience. For instance, when advertisers buy a 6 p.m. local news slot for a 60-second ad, a variety of audience measuring firms from Nielsen to comScore will verify the ads were actually delivered. But with instant ad selection and delivery, there is no direct way to ensure the target audience actually received the ads. Several firms have stepped into this market in 2011 with tools for proving the intended audience really did receive the ads.

What's next? Currently, the individual information located in private data exchanges is not shared to a single large data exchange, and the future will likely involve industry consolidation and the large players like Google, Yahoo, and Microsoft purchasing the smaller data exchanges and combining their in-house data with newly purchased data. Some, but not all, of the large players have held back merging data from their separate services for fear of alienating their customers. For instance, Google has chosen not to merge its Google Checkout data with Gmail, or its location services. It is unclear if Yahoo merges the contents of user mail with display advertising, but it certainly could. Google's stance will change as Google is pressured by competitors to develop larger tracking databases. Google, through its ad exchange, is seeking to become the clearinghouse for as many ad transactions on the Internet as possible, even if these transactions are using data from other sources. Yahoo and Microsoft are close behind, hoping to develop their own encompassing ad and data exchanges. Self-restraint and self-regulation is unlikely to work in this marketplace, and many of the firms involved are working with Congress to develop guidelines for protecting consumer privacy, and protecting their future revenues from congressional meddling. One question faced by all parties to these debates: what is the meaning of privacy in a commercial world where advertisers know more about you than your family members and friends?

SOURCES: "ComScore, eXelate Cleaning Up 'Garbage In, Garbage Out,'" by Erin Griffith, *Ad Week*, August 16, 2011; "Tracking the Trackers: Early Results," by Jonathon River, Stanford Center for Internet and Society, July 12, 2011; "Real-Time Bidding Becomes a \$632 Million Market in 2011," by Michael Barrett, *AdAgeDigital*, February 8, 2011; "Google Agonizes on Privacy as Ad World Vaults Ahead," by Jessica Vascelaro, *Wall Street Journal*, August 10, 2010; "Sites Feed Personal Details to New Tracking Industry," by Julia Angwin and Tom McGinty, *Wall Street Journal*, July 30, 2010; "Yahoo Finally Allows Real-Time Bidding on Network and Exchange," Kate Kaye, *ClickZ.com*, March 15, 2010; "Instant Ads Set the Pace on the Web," by Stephanie Clifford, *New York Times*, March 10, 2010; "Online Ad Auctions," by Hal Varian, Draft, University of California and Google, February 16, 2009.

Case Study Questions

1. Pay a visit to your favorite portal and count the total ads on the opening page. Count how many of these ads are (a) immediately of interest and relevant to you, (b) sort of interesting or relevant but not now, and (c) not interesting or relevant. Do this 10 times and calculate the percentage of the three kinds of situations. Describe what you find and explain the results using this case.
2. Advertisers use different kinds of "profiles" in the decision to display ads to customers. Identify the different kinds of profiles described in this case, and explain why they are relevant to online display advertising.

3. How can display ads achieve search-engine–like results?
4. Do you think instant display ads based on your immediately prior clickstream will be as effective as search engine marketing techniques? Why or why not?

7.5 REVIEW

KEY CONCEPTS

- Identify the major forms of online marketing communications.

Marketing communications include promotional sales communications that encourage immediate purchases and branding communications that focus on extolling the differentiable benefits of consuming a product or service. There are a number of different forms of marketing communications:

- *Banner and rich media/video ads* are promotional messages that users can respond to by clicking on the banner and following the link to a product description or offering. Variations include different size banners, buttons, skyscrapers, pop-ups, and pop-unders. Rich media ads use Flash, DHTML, Java, JavaScript, and streaming audio and/or video, and typically seek to involve users more deeply than static banner ads.
- *Interstitial ads* are a way of placing full-page messages between the current and destination pages of a user. They are usually inserted within a single site, and are displayed as the user moves from one page to the next; they can also be made to appear as users move among sites.
- *Superstitials* are rich media ads that pre-load into a browser's cache and do not play until fully loaded and the user clicks to another page.
- *Paid search engine inclusion and placement* is a relatively recent phenomenon. Firms now pay search engines for inclusion in the search engine index (formerly free and based on "objective" criteria), receiving a guarantee that their firm will appear in the results of relevant searches.
- *Sponsorships* are paid efforts to tie an advertiser's name to particular information, an event, or a venue in a way that reinforces its brand in a positive yet not overtly commercial manner. Advertorials are a common form of online sponsorship.
- *Affiliate relationships* permit a firm to put its logo or banner ad on another firm's Web site from which users of that site can click through to the affiliate's site.
- *Direct e-mail marketing* sends e-mail directly to interested users, and has proven to be one of the most effective forms of marketing communications. The key to effective direct e-mail marketing is "interested users"—Internet users who, at one time or another, have expressed an interest in receiving messages from the advertiser (people who have "opted in").
- *Online catalogs* are the online equivalent of paper-based catalogs. Their basic function is to display an e-commerce merchant's wares.