

Appendix 2: Google in depth: AdWords and AdSense

(continue from Chapter 3: Traffic alert: Baidu)

PageRank brought the traffic to Google; AdWords and AdSense brought the money.

The source of all AdSense income is the AdWords program, which in turn has a complex pricing model based on a Vickrey second price auction—it requires an advertiser to submit a sealed bid without knowing the bids from the other people in the auction. The highest bidder wins, but the price paid is the second-highest bid.

AdWords analyzes every Google search to determine which advertisers get one of up to 11 “sponsored links” on every results page. Hal Varian, a Berkeley professor and Google's chief economist, called it, “the world's biggest, fastest auction, a never-ending, automated, self-service version of Tokyo's boisterous Tsukiji fish market.”

Although the idea was not original, Google perfected the concept of “cost-per-click” advertisements that appear alongside the search results, where the advertiser pays only when someone clicks on the ad.

There would not be nearly the amount of interest in Google's core capabilities—PageRank indexing and search—were it not for the commercial potential of such capabilities. The main revenue spinners at Google today are AdWords and AdSense, which truly benefit from that old Web chestnut “competition for eyeballs.”

AdWords is Google's flagship advertising product and main source of revenue. It offers pay-per-click (PPC) advertising and site-targeted advertising for both text and banner ads. The AdWords program includes local, national, and international distribution. Google's text advertisements are short, consisting of one title line and two content lines. Image ads can be one of several different Interactive Advertising Bureau¹ (IAB) standard sizes. AdWords enables advertisers to create simple text advertisements that will appear on relevant Google search results, which are triggered by particular keywords that are entered in the search. Google's search responses attract potential customers to the AdWord's advertisements; these customers may view the AdWords advertisement, and may click on it to find out more.

Pay-Per-Click advertising is designed to allow advertisers to specify the words that should trigger their ads and the maximum amount they are willing to pay per click. When a user searches Google, ads (also known as “creatives” by Google) for relevant sites are shown as “sponsored links” on the right-hand side of the screen, and sometimes above the main search results. The ordering of the paid listings depends on other advertisers' PPC bids and the “quality score” of all ads shown for a given search. The quality score is calculated by historical click-through rates and the relevance of an advertiser's ad text and keywords, as determined by Google. The quality score is also used by Google to set the minimum bids for an advertiser's keywords. The precise formula and meaning of relevance and its definition is in part secret to Google, and parameters can be dynamically changed.

The AdWords product was launched in 2000. At first, advertisers would pay a monthly amount, and Google would set up and manage their campaign. To accommodate small businesses and those who wanted to manage their own campaigns, Google soon introduced the AdWords self-

¹The Interactive Advertising Bureau, founded in 1996 and based in New York City, is an advertising business organization that develops industry standards, conducts research, and provides legal support for the online advertising industry.

service portal. As of 2005, Google provides a campaign management service called Jumpstart to assist advertisers in setting up their campaigns.

In 2005, Google launched the Google Advertising Professional (GAP) program to certify individuals and companies who have completed AdWords training and passed an exam. Due to the complexity of AdWords and the amount of money at stake, some advertisers hire a consultant to manage their campaigns. Google's AdWords division is based in Ann Arbor, Michigan, home of the University of Michigan, with one of the leading Information Science programs in the world.

In 2003, Google introduced site-targeted advertising. Using the AdWords control panel, advertisers can enter keywords of interest, and Google offers to place ads on what they claim are relevant sites within their content network. Advertisers then bid on a cost per impression (CPM) basis for placement. Advertisers can also enter domain names directly. Google will provide a list of related sites that you can select along with your entered site. Site-targeting campaigns are mainly designed for branding purposes, as the return on investment will almost always be considerably lower than a traditional content-targeted campaign.

The “content network”² shows AdWords ads on sites that are not search engines. These content network sites are those that use AdSense, the other side of the Google advertising model. AdSense is used by website publishers who wish to bring traffic to their sites. Click through rates on the content network are typically much lower than those on the search network, and are therefore ignored when calculating an advertiser's quality score.

Google automatically determines the subject of pages and displays relevant ads based on the advertisers' keyword lists. AdSense publishers may select channels to help direct Google's ad placements on their pages, to better track performance of their ad units. There are many different types of ad you can run across Google's network, including text ads, image ads (banner ads), local business ads, mobile text ads, and in-page video ads.

To help clients with the complexity of building and managing AdWords accounts, search engine marketing agencies and consultants offer account management as a business service. This has allowed organizations without advertising expertise to reach a global, online audience.

As mentioned above, Google has started the Google Advertising Professionals program to certify agencies and consultants who have met specific qualifications. Google also provides various analysis, search engine optimization, and account management software online.

Google's AdSense essentially provides the flip side of AdWords—it is an ad serving program run by Google. Whereas with AdWords, Google's search pages attract potential customers who may also view the advertisement, with AdSense it is the sponsoring website's own content (not Google's) that attracts viewers. In both programs, value is generated by attracting “eyeballs.” Website owners can enroll in this program to enable text, image, and, more recently, video advertisements on their sites. These ads are administered by Google and generate revenue on either a per-click or per-thousand-impressions basis. Google is also currently beta-testing a cost-per-action based service.

The underlying technology behind AdSense was derived originally from WordNet, Simpli (a company started by the founder of Wordnet, psychologist George A. Miller), and a number of psychology professors and graduate students from Brown University, including James A. Anderson, Jeff Stibel, and Steve Reiss. A variation of this technology utilizing Wordnet was developed by Oingo, a small search engine company based in Santa Monica and founded in 1998. Oingo changed its name to Applied Semantics in 2001, and was later bought by Google for \$102 million in April 2003.

Google uses its search technology to place ads based on website content, the user's geographical location, and other factors. Those wanting to advertise with Google's targeted ad system may sign

² The set of sites that provide the content on which Google determines (dynamically) its ad placement.

up through AdWords. AdSense has become a popular method of placing advertising on a website because the ads are less intrusive than most banners, and the content of the ads is often relevant to the website.

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