Online search and ads

DSC340
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Online ads POA

Market overview
Google search ads
Page Rank vs. Ad Rank
Google AdWords ads
Google AdSense ads
Fraud types
Customer profiling

Advertising growth: online

Advertising growth: online

Online ads market share

How do online-ads companies make $?

- Companies like Yahoo! that serve out ads into your browser window get paid by the client companies featured in those ads
- How is online advertising paid for?
  - Cost per click (CPC), or
  - Cost per thousand impressions (CPM), or
  - Affiliate programs (typically, % of consumer’s purchase on the linked-to site)
  - Negotiated price for fixed time period
    - E.g., I’ll pay you $2,000 per week for having my company’s banner ad at the top of your website home page

Some online advertising options

- paid search ads
- Image (or “display”) ads, such as horizontally oriented banners, smaller rectangular buttons, and vertically oriented “skyscraper” ads
- Interstitial ads, ads that run before a user arrives at a Web site’s contents
- Ads in games

How do online-ads companies make $?
How important is the online ads market?

Google’s market cap is greater than that of...
- News Corp
- which includes Fox, MySpace, and the Wall Street Journal.
- Disney
- includes ABC, ESPN, theme parks, and Pixar.
- Time Warner
- includes Fortune, Time, Sports Illustrated, CNN, and Warner Bros.
- Viacom (MTV, VH1, and Nickelodeon).
- CBS.
- and the New York Times — combined!

Where organic results come from?

- Will your new blog or personal page show up in Google’s organic search results?
- Google’s indexes content of over one trillion URLs
- Uses “software robots / spiders / Web crawlers” (i.e., software) to sporadically traverse links on the WWW
- Depending on the time/day of the last spider visit, Google’s index of a page can differ from the current page
- You can sometimes pull up the old page by clicking on a “show Cached page” link in Google
- To have your page *not* be indexed, put this in <head> <META NAME=”ROBOTS” CONTENT=”NOINDEX, NOFOLLOW, NOARCHIVE”> <head>

Aside: Google intranet search

- Your organization can set up an internal Google search page behind its firewall that indexes the pages on the company’s intranet.
- Requires purchase of Google’s “Search Appliance”
- This may be extremely useful, as Google.com’s organic index spans only public WWW pages
- Private pages (such as your Facebook page and other pages that are password-protected) cannot be crawled to by the search spiders

Order of organic search results

- from http://www.google.com/technology/index.html :

- “PR [Page Rank] relies on the uniquely democratic nature of the web by using its vast link structure as an indicator of an individual page’s value. In essence, Google interprets a link from page A to page B as a vote, by page A, for page B…
- But, Google looks at more than the sheer volume of votes, or links a page receives; it also analyzes the page that casts the vote. Votes cast by pages that are themselves “important” weigh more heavily and help to make other pages “important.”

Paid vs. Organic (natural) search

- Paid search ads

- Google (Facebook too) constantly runs auctions to determine who is the current highest-bidder for paid search ads
- Much like “PageRank” for organic search results, sponsored links are ordered according to their:
  - Ad Rank = Maximum CPC × Quality Score
- The “Quality Score” for a sponsored link depends on:
  - How closely the ad seller’s keywords match the user’s search keywords.
  - How good the page is that the sponsored link points to.
  - The prior CTR (click-through rate) performance of that sponsored link.
For advertisers: Google AdWords paid search ads

CPC rates can be expensive!

Google AdSense: small Google served ads on your site, not in Google searches

Google AdSense ads on site (lower left)

Fraud risks (learn these from the text!)

Online ads POA

- Enriching click fraud
- Enriching impression fraud
- Depleting click fraud
- Depleting impression fraud
- Rank-based impression fraud
- Disbarring fraud
- Link fraud
- Keyword stuffing

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Why are firms willing to pay high CPC rates?

- Ads can be:
  - Keyword targeted
  - User’s system targeted (e.g., Apple vs. Windows)
  - Geo-targeted
    - Example: IBM has used IP targeting to tailor its college recruiting banner ads to specific schools.
      - “There is life after Boston College. Click here to see why.”
      - CTR was around 15%, vs. the typical <1%

Consider:
http://privacy.net/analyze-your-internet-connection/

Customer profiling: Cookies

- A web-server can store information about your interaction with its website and ask your web-browser (e.g., Firefox) to store that information in a text file on your computer’s hard-disk.
- That way, when you return to the site, the site recognizes you (e.g., your username, site history, even password).
- Normally, a web-server is specific to a particular site, e.g., REI.com, so the web-server’s “REI cookie profile” about you only can know about what you did at REI.com

Tracking cookies

- BUT what if the same web-server handled all the websites you visit?
  - The Google AdSense network ads appear on many sites you visit.
  - Each of those ads is actually served to you by Google.
  - That means Google can potentially use a “Google cookie” to store your history of clicking across many sites you visit.
  - The objective: to “figure you out” as a customer type.

Managing your cookies

- Every browser has some security/privacy configuration that enables you to manage how cookies are dealt with by your browser.
- You can turn-off cookies completely, but some sites won’t function properly without them.
  - For example, some retail sites use cookies to store the contents of your “shopping cart.”