

Measuring Success

Understanding Web Metrics and Advertising

Web Logs

Every time you visit a website your every move is being recorded.

Although generally no personally identifiable information is gathered during this process (your name, email address etc), your entry point, the paths you travel, the pages you browse, the duration of your stay, and your exit point are all saved in a web log file for later analysis.

Server Log Format

Web logs are usually saved in a 'raw' text form that is all but impossible to read without the aid of a log analyzer.

The job of a web analyzer is to demystify these logs and present the statistical information in meaningful ways. Logs present their information in a 'string' of text, one for each file you request.

Server Log Format

There are a number of different log file formats and it's crucial you use a log analyzer that can read the appropriate format delivered by your server. The most common formats are:

- Common Access Log Format
- W3C Extended
- Apache/NCSA Combined
- Microsoft IIS
- or a Custom format specific to a particular server

Server Log Entry

```
68.142.250.29 - - [19/Apr/  
2007:03:24:26 -0600] "GET /students/  
ultimate/ HTTP/1.0" 200 14692
```

What is Recorded?

- **Host** — the ip address of the computer making the request. (this is almost always the ip address instead of the host name because looking up the host name slows down server performance).
- **Date and Time** — when the request was made.

What is Recorded?

- **Request Line** — What the client told the server it wanted

Method: Get or Post

Protocol: HTTP

Resource: absolute URL of page, graphic or query requested

What is Recorded?

- **Status Code** — the code corresponding to the final status of the request. These are some that are common:

200s: request was successful.

300s: redirect to another address

400s: Error, file not found or unauthorized or forbidden

- **Size** — bytes Served

Server Log Entry

```
68.142.250.29 - - [19/Apr/  
2007:03:24:26 -0600] "GET /students/  
ultimate/ HTTP/1.0" 200 14692
```

What is Recorded?

- **Optional Parameters** — these are not required, but are tracked because they provide useful data for measuring your audience:

Referer: the site from which the browser says it came.

User-Agent: The browser kind (mozilla, safari, internet explorer,), language, operating system, and version

User Agent Entry

Mozilla/5.0 (Macintosh; U; PPC
Mac OS X; en) AppleWebKit/
418 (KHTML, like Gecko)
Safari/417.9.2

Log File Analyzers

- There are both free and commercial programs that will analyze your server logs.
- The better ones provide charts and graphs that make it easy to interpret the data.
- Some use cookies to track returning visitors and other statistics not found in the server log file.

Common Measurements of Traffic

- **“Hits”** are not an accurate measurement since each graphic counts as a hit on each web page.
- **“Page views”** are considered more accurate since they count individual pages served, which is more information than hits.
- **“Impressions”** represent each time an ad is served; one page can have many impressions

Common Measurements of People

- **“Unique visitors”** is one way to count how many people visited your site, but it is not fool proof. It represents requests from specific IP addresses. Multiple computers can use a single IP address and multiple people can use each computer. Still, it is the best metric we have for measuring how many “people” have visited your site.

Why use logs?

- Find out what the most popular pages on your site are.
- Find out where your visitors are coming from.
- Identify errors and fix them.
- Track promotions
- Improve content based on page views.

What you should know:

- The main types of information captured in server log files: host, date and time, request (method, protocol and resource), status code and size
- Optional parameters that can be captured: mainly referrer and user-agent
- A log analyzer is used to summarize an entire log file or multiple log files that cover a specified period of time.

What you should know:

- The difference between "hits" and "page views"
- What "unique visitors" represent

How Internet Advertising Is Sold

- TV, Radio and Newspapers are sold based on statistical data:
 - TV — Samples from Nielson
 - Radio — Samples from Arbitron
 - Newspapers — Audit Bureau of Circulation
- Internet Advertising is sold based on actual traffic numbers or performance, either through summaries of logs, services, such as Google Analytics or, if they host the images themselves, their own internal data.

Internet Ad Pricing

- Per 1,000 Impressions or CPM

Ranges from \$2 CPM to \$28 CPM (New York Times)

Facebook sells ads at roughly \$2 CPM though they don't call it that.

- Per Click

Industry average is that 2 percent of impressions are clicked on. At \$5 per CPM, that would be about 25 cents per click.

Internet Ad Pricing

- Performance Based (affiliate ads)

Site where ad appears receives a commission based on actual sales rather than possible sales through clicks or impressions; nothing if no sale.

- Contextual

Google sells words. I can buy, for instance, the word 'OSU' from Google and I only pay when someone searches for "osu" and it appears on a page. Prices for individual words vary by how many other people want to buy them.

Internet Advertising Bureau (IAB)

IAB is the closest thing to a standard for internet advertising standards:

Sets standards so that ads designed for one web site can be used on most sites

Attempts to set standards for measuring traffic and rates for advertising

IAB Banner Universal Ad Sizes

Rectangles

300 x 250 IMU – (Medium Rectangle)

180 x 150 IMU – (Rectangle)

Banners

728 x 90 IMU – (Leaderboard)

160 x 600 IMU – (Skyscraper)

* All sizes measured in pixels

The screenshot shows a web browser displaying a news article titled "Environmental sciences company hires OSU grads" on the website "The O'College". The article is dated Friday, October 19, 2007, and is written by Graham Towell. The article text discusses the hiring of OSU graduates by Apes Co. and includes quotes from company managers and graduates. A sponsored ad for "Sillwater's Little Black Book Orange Pages" is visible on the left side of the article. Below the article, there is a table of local businesses and a "United Way" banner. At the bottom of the page, there is a comment section and a "CAN WE COUNT ON YOU?" banner. The right sidebar contains several vertical banners, including "MADY MAKER", "THE MICHIGAN STATE UNIVERSITY", "OSU MUSIC EVENTS", "Maple 600", "Apple Creek Apartments", "United Way", "IS", "THE WAY CARING COUNTS", and "CAN WE COUNT ON YOU?".

Leaderboard Banners

728 pixels x 90 pixels



\$5-\$28 per 1K impressions

Medium Rectangle Banner

300 pixels x 250 pixels

Sponsored Ad



Text Ads

Google AdSense

Ads by Google

Seattle HD Video

High Definition-SD-PAL
Broadcast Camera Crew
www.componentvideo.net

Sony Pro Video Sale

Honest People with Low Prices
Get our Big 400 Page Catalog, Free
www.fullcompass.com

Sony Dcrvx2000

Visit PriceHead.com to Search and
Compare Products and Seller Prices.
www.pricehead.com

Orange Pages



Orange Pages

**Church of Christ, East 6th
Street**

2417 E 6th Ave

orange.ocolly.com/church-of-christ-e6th/

Maple 400 Apartments

416 W. Maple, Stillwater, OK
405-377-2787

orange.ocolly.com/maple400/

Wesley Foundation

823 W University Ave

orange.ocolly.com/wesley-foundation/

First United Methodist

400 W 7th

orange.ocolly.com/first-united-methodist/

OColly.com Rate: \$25 per month



A Case Study

More than Search

A brief history

- Google began as a research project by Larry Page and Sergey Brin in January 1996, who hypothesized that a search engine that analyzed the relationships between websites would produce better results than existing techniques
- google.com registered September 15, 1997
- A googol, from which Google's name is based, is, "the digit 1 followed by 100 zeros"

Search

- Before Google was made public, search engines such as Alta Vista based their results on how many times a particular search term appeared on a given page.
- Google's algorithm was based on how many times a page was linked to by other web sites so a site containing the search term once and linked to by 100,000 pages ranked higher than a page with the term 10 times, but only linked to by one other page.

Search

- When an organization such as OSU wanted to use a particular search engine, such as InfoSeek, they had to pay as much as \$50,000 for that engine to index all their pages and make them available to the public.
- Google offered this service for free.
- OSU first began using Google as its search engine in December 2000, one of the first major universities in the country to adopt them; before that, we did our own on a Macintosh.

The Business of Google

- Google went from practically nothing to a \$23 billion company when it went public in August 2004 based on its search technology.
- Most people think of Google as a search engine company and its true that's how they made their name:

Now, roughly 68% of all web searches go through Google, compared to 17 percent for Yahoo! and 9 percent for Microsoft;

Google collects 23.7% of all online advertising revenue.

The Business of Google is Advertising

- While most of Google's money is search-related, their real business is advertising.
- **AdWords** offers pay-per-click (PPC) advertising, and site-targeted advertising for both text and banner ads.
- **AdSense** shares revenue from AdWords with web publishers, who feature ads shown from AdWords buyers, depending on which ads are relevant to a given page.
- The really cool new "free" products that Google rolls out, such as *Gmail*, *Google Earth*, *Google Apps*, *Google News*, *Blogger*, and *Froogle* are all designed to put eyeballs in front of advertising sold by Google.

Google Profits

- Google announced last week that it had revenue of about \$4.83 billion and a net income of \$1.21 billion
- Google's revenue was up 51 percent and net profit was up nearly 33 percent year over year
- In comparison, Yahoo! saw its net profit fall 11 percent from last year to \$161 million on revenue of \$1.24 billion.
- In addition to offering great new services, Google is expanding into newspaper, radio and television advertising via programs where it auctions off run of schedule ads to the highest bidder.
- Google is worth \$130 billion, behind only to Microsoft, IBM and Cisco among technology companies.

Google Services

- Gmail is a free e-mail service, not unlike Hotmail or Yahoo! mail. As part of Google Apps, one can have their domain e-mail hosted there.
- Google Maps is a way of finding physical objects and locations, like towns, businesses, etc.
- Google Earth combines Google's search engine with Satellite imagery to display maps, terrain and 3D buildings
- Google Docs and Spreadsheets is a direct competitor to Microsoft Office and, as of this week, is adding a Powerpoint competitor.
- AdSense is a way to generate revenue from your site.

What you should know...

- AdWords are ads that appear based on search terms that are purchased.
- AdSense is a system where AdWords appear on other peoples web sites and the owner of the site is paid a commission based on clicks to those ads
- The amount of traffic your site attracts definitely impacts how much revenue you can generate from AdSense ads.
- Placement of ads impacts clicks so ads at the top of the page tend to draw more attention than those at the bottom
- AdWords ads consist of four lines, a title, description and a link
- Affiliate advertising is actually an agreement to sell something with a third party