

Get the Most Out of Google AdWords in 2015

From <https://www.tipsandtricks-hq.com/how-to-get-the-most-out-of-google-adwords-for-2015-7728>

What Should I Spend?

How successful do you want to be? Have you heard the phrase – you get more of what you focus on? The amount of money you are willing to invest in your AdWords campaign is a key factor of what you can expect to receive. I am going out on a limb here and will say that any campaign that is under \$100 per day is a waste of effort. I've seen people start campaigns on \$20 – even \$50 per day and not get sufficient clicks to provide actionable data or conversions.

With small budgets, one can quickly see their ROI decrease. And of course, if you aren't getting the results you think that you should be getting, who do ya blame? It's not the cheapskate who wanted to get big returns from a small budget. Having a small budget can be like having a beautiful Ferrari F4 and giving it only a quarter tank of gas. You won't go very far.

How Do I Build a Campaign?

Each campaign should have its own budget. When do you create a new campaign? A good rule of thumb is to separate AdWords campaigns by geography. If you have different cities or even states where you are promoting different local branches or retail outlets, etc. it makes sense to differentiate ads campaigns between each store.

You will also want to have a separate search only campaign and a display only campaign and if you want to perform re-marketing, then you guessed it; you will want a separate campaign for that as well. The reason for the separate campaigns is because each of these types of marketing behave differently.

How do I Build an Adgroup?

If you haven't figured this out yet, Google rewards relevant content. A best practice is to create Adgroups with tightly themed subjects just like you would organize your brick and mortar store. So for example: a campaign would be Shoes and the adgroups would be men's shoes, women shoes, children shoes, etc. Assess the spend of each individual ad group within each campaign.

Within each Adgroup have at least 3 ads; one using dynamic keyword insertion, another using a question and all of them using at least one keyword from your keyword list and with a strong call to action, other than call now or

click here. These calls to action are too obvious and Google doesn't like it and thus penalized advertisers who use these.

Get Dynamic

In September of 2014, AdWords launched the most impactful update for e-commerce advertisers since the release of Dynamic Remarketing. This update was the release of ad customizers, which allow advertisers to add dynamic content to their text ads. This dynamic content can be anything from inventory or price to a countdown until a specific event. This works very well if you have thousands of products that constantly change.

Give Google a datafeed of all your product information and set bids based upon information contained within that feed. With dynamic search ads, Google grabs the information it needs from your site and you target audiences based upon that information. Much like with Google Shopping, make sure you begin with an ad group targeting "All web pages" and set your bids low here.

A low bid is important because it stops DSAs from stealing traffic from existing search campaigns (something you really want to avoid). The last thing you want to do is compete against your own ads. Naturally it also makes sense to take every opportunity to use ad extensions such as call, call out, location, social, review and site extensions. These give your ads more creativity and differentiate your ads from the sea of sameness seen on the SERPs.

Get Shopping Campaigns

If you have products to sell, you NEED to take full advantage of Shopping Campaigns, formerly known as Product Listing Ads (PLA). These ads can outperform text search ads because they show the image of the exact product a shopper is looking for at the time they are ready to buy.

Simply create a data feed with every piece of product information to display with the product listing including a good quality image so shoppers see exactly what they will be buying. This is still an under utilized Google product and can make a positive impact for your overall campaigns in 2015.

Managing Keywords

I've written about keywords in another article so I won't go into as much detail here. As you develop your keywords and keep them tightly related to the adgroups you will quickly determine which terms are generating clicks and converting visitors to customers. As your campaign accumulates data, you will zero in on the keywords driving the strongest ROAS, or, Return on Ad Spend.

Using the keyword reports, you will be able to identify and expand upon these top performing keywords with like-terms. At the same time, you will pause or delete keywords that are under performing. You will also determine which keywords are driving traffic which are irrelevant and need to be added to the negative keyword list.

Since Google got rid of exact match types in 2014, you no longer need to build exhaustive lists of plurals and misspellings. AdWords now performs that with broad match automatically. Google points out that “close keyword variations receive an average of 7 percent more exact and phrase match clicks with comparable click-through and conversion rates.”

What About Bid Management?

Closely linked to your spend are your ad and keyword bids. Naturally you want to have your ad show within the first 3 ad placements available, on average. Ads showing up in the #4 spot or lower is a strong signal that the ads need to be changed or the bid needs to be increased. You can tell by looking at the 1st page suggested bid column.

If your ads or keywords are under performing due to constrained budget, Google will show that in the status column. I like to be in the 1 – 2 spot and bid accordingly. You can manage bids with the ads as well as keywords.

You can also add bid modifiers for location and device. You can increase the bids by a certain amount and Google will use that bid for the auction.

This is helpful to win placements for searches on mobile devices or for users close to your store and bring them in to buy. You can also decrease bids in the same fashion. Let’s say you want to decrease bids as people are further from your store so the ads only show for relevant audiences within a certain radius from your location, you would place a location bid modifier on the ad.

Testing

ABT – Always Be Testing. Marketing is about continuous testing. Give a campaign at least 3 months before calling it a failure. Create a campaign with at least 3 adgroups and 3 ads per adgroup and 7-8 keywords per adgroup.

This allows you to manage the campaign and test the separate components such as the headline and description lines as well as the keywords. Start small with changing one item at a time and tweaking as needed.

Google Adwords and Website hosting by HMI-Tech

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<http://hmi-tech.in>

7/2015

HMIT - Who are we.

- Located in Mumbai, Mangalore, US.
- Expertise in website design, SEO, Google Adwords, C, C++, Java, JS
- <http://hmi-tech.in>
- http://hmi-tech.net

Why use Adwords?



Why use Adwords?

- Targeted advertising to users who are searching for similar products.
- Target by Location, time, search keywords.
- Remarketing to users who have in the past looked for similar products
- Text ads, Image ads, Video ads.
- **Reach the right people at the right time**
- Your business gets found by people on Google precisely when they're searching for the things that you offer.

Adwords Examples

A screenshot of a Google search results page for the query "shoes". The search bar at the top shows the URL <https://www.google.co.in/search?q=pizza%20mumbai&rct=j#q=shoes>. Below the search bar, the Google logo is visible next to the search term "shoes". A red rectangular box highlights the first search result, which is an Ad from Amazon India. The result title is "Shoes @ Amazon - Get Up To 60% Off On Branded Shoes" and the URL is www.amazon.in/Shoes. The ad copy includes "Easy Returns & Pay COD!", "Amazon India has 37,567 followers on Google+", and links for "Men's Shoes", "Kids' Shoes", "Women's Shoes", and "40% Off* Or More". Below this, there are other search results: "Shoes: Buy Shoes Online at Low Prices in India - Amazon.in" with a link to www.amazon.in/Shoes/b?ie=UTF8&node=1983396031; "Shoes Online - Buy Shoes, Footwear for Men, Women, Kids ..." with a link to www.jabong.com/shoes/; and "Shoes On Sale | 6pm.com" with a link to www.6pm.com/shoes.

shoes - Google Search

https://www.google.co.in/search?q=pizza%20mumbai&rct=j#q=shoes

Google shoes

Web Images Maps Videos More ▾ Search tools

About 74,90,00,000 results (0.31 seconds)

Shoes @ Amazon - Get Up To 60% Off On Branded Shoes
Ad www.amazon.in/Shoes ▾
Easy Returns & Pay COD!
Amazon India has 37,567 followers on Google+
Men's Shoes Kids' Shoes
Women's Shoes 40% Off* Or More

Shoes: Buy Shoes Online at Low Prices in India - Amazon.in
www.amazon.in/Shoes/b?ie=UTF8&node=1983396031 ▾
Amazon.in: Buy shoes online at low prices in India. Browse Mens shoes, women & kids shoes online from leading brands like Crocs, Puma, Red Tape, Lee ...
Girls' Shoes - Zovi - Canvas - Sparx

Shoes Online - Buy Shoes, Footwear for Men, Women, Kids ...
www.jabong.com/shoes/ ▾
Buy shoes from leading online shoe store in India offering Footwear from various brands. ✓ Free Shipping ✓ 15 days Return ✓ Cash on Delivery (COD)
Men Shoes - Women Shoes - Men Sports Shoes - Women Shoes New Arrivals ...

Shoes On Sale | 6pm.com

Ads related to tent

Why these ads?

AdWords Text Ads

Tent at REI

Product Listing Ads

Web Search Listings (Free)

Shopping Search Listings (Free)

Exercise Gear at Sears®

```

graph TD
    A[Ads related to tent] --> B[Why these ads?]
    B --> C[AdWords Text Ads]
    C --> D[Tent at REI]
    D --> E[Product Listing Ads]
    E --> F[Web Search Listings (Free)]
    F --> G[Shopping Search Listings (Free)]
    G --> H[Exercise Gear at Sears®]
    
```

The diagram illustrates the search results for the term "tent". It starts with a general search result for "Back-packing Camping Tent | EddieBauer.com" followed by related searches for "Coleman Instant 14 X 10 Foot 8 Person..." and "Coleman Screened Instant Canopy, 10' x 14'". Below these are sections for "Related searches for tent" and "Shopping results for tent", which list various tent models with their prices and availability. To the right, there are four boxes representing different advertising formats: AdWords Text Ads, Product Listing Ads, Web Search Listings (Free), and Shopping Search Listings (Free). Red arrows point from the search results towards these boxes, indicating the types of ads shown for each stage of the search process.

How does it work?

- We create your Ads and upload them to Google.
- We generate lots of keywords that identify users who are searching for your products on Google.
- Google shows your ads to targeted users.
- If the users clicks on your ad, Google charges you per click.

YouTube Ads

- YouTube / Google AdWords for video uses a CPV (cost-per-view) model to charge for its advertising.
- **You pay only when someone decides to view your video.** What counts as a ‘view’? For *in-stream ad*, you will be charged when the user watches 30 seconds or sees the end of the ad.
- You pay nothing if they don’t initiate the video or drop off from the video before the minimum amount of time passes.
- For an *in-display ad*, you will be charged after users click — and begin watching your video.

Image Ads



Image ads



Cost - India SME

- Rs 10k/month to setup your adwords ads and make it live
- Rs 10k to Google for running your ads.

Optional, one time

- Rs 10k for SEO, optimizing your existing website for search.
- Rs 10k to fix your site for mobile users

Cost - USA SME

- \$1k/month to setup your adwords ads and make it live
- \$1k to Google for running your ads.

Optional, one time

- \$1k for SEO, optimizing your existing website for search.
- \$1k for fixing your site for mobile users

e-Marketing

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3/2015

Questions

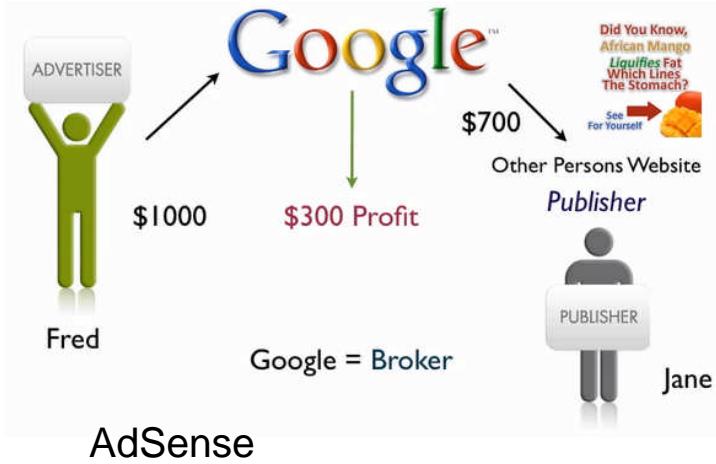
How do Google and Facebook make
money?

Answer

Question: How do Google and Facebook make money?

Answer: Over 90% of Google's revenue comes from **advertising**.

Google has two advertising programs called Google **AdWords** and Google **AdSense**. When you search something on Google, you see ads related to your search query. AdWords advertisers pay Google to show their ads to targeted viewers. Google charges Advertisers each time someone click on their ad.



Ad Triangle

- There are three parties involved in creating a ad.
- They are User, Advertiser and Google itself.
- The user wants to see the most relevant ads related to the query typed.
- The advertiser wants to be seen and clicked maximum times and Google is the authority responsible for providing best experience for users and Advertisers.
- The User is the most important entity in this process as both parties need to provide a good experience to the user.



Adwords and AdSense

Google search enables two advertising revenue streams

The screenshot shows a Google search results page for the query "bicycle shop in mountain view". The results include a map, local business listings for Performance Bicycle Store and El Camino Bicycles, and an advertisement for REI Mountain View.

Advertising on Google's websites, e.g.

- google.com
- gmail.com
- orkut.com

+

Advertising on pages of Web Publishers, e.g.

- travelblog.org
- techcrunch.com

Adwords

AdSense

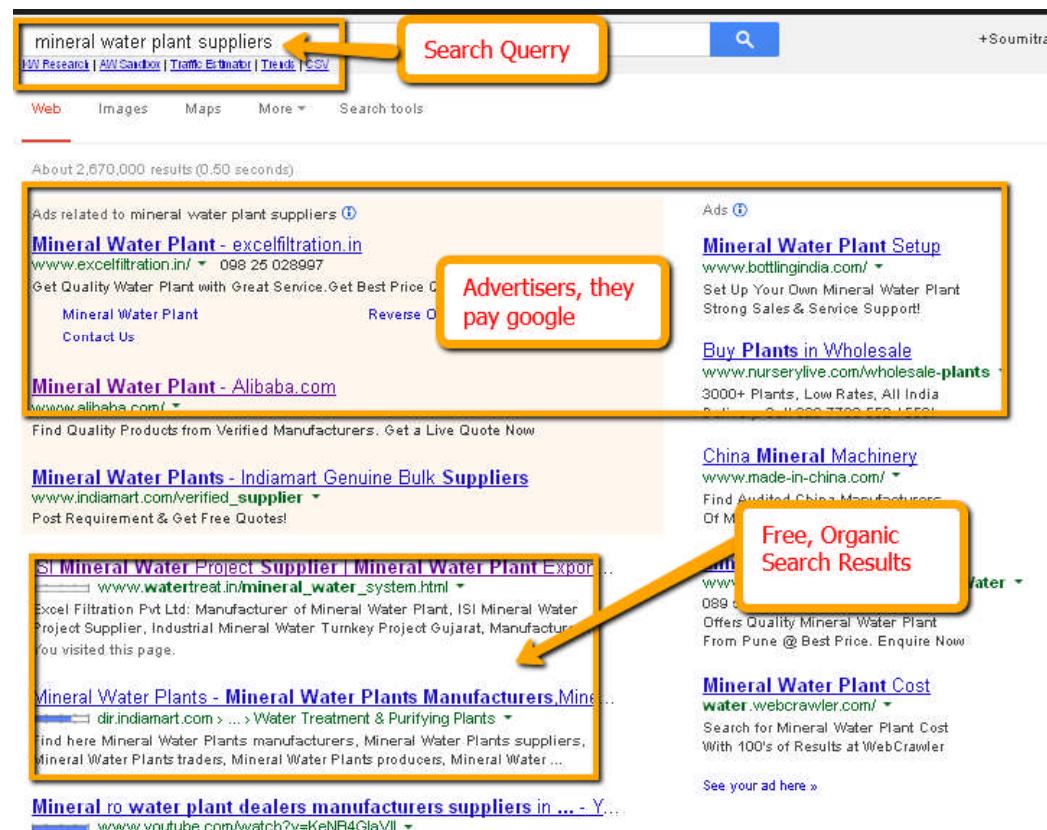
What is **Affiliate** marketing?

- Affiliate marketing is internet advertising that allows any online business to affiliate themselves with web site owners (known as affiliates or publishers) using affiliate programs.
- Affiliates make money by generating sales, leads and traffic for the Merchants business.

Remarketing with cookies

- *Remarketing* lets you show ads to people who have visited your website before.
- Google remembers their previous visit by storing a unique number (cookie) in their browser.

Paid Vs Organic search



Google Ads

Ads related to tent

[Back-packing Camping Tent | EddieBauer.com](#)
www.eddiebauer.com/Camping - ★★★★☆ 86 seller reviews
Shop Eddie Bauer Backpacking Tents. 100% Satisfaction Guaranteed.
[+ Show products from Eddie Bauer for tent](#)

Backpacks All Bedding
Camping Gear Luggage

[Coleman Instant 14 X 10 Foot 8 Person ...](#)
\$229.88 - eBay

[Coleman Screened Instant Canopy, 10' x](#)
\$88.32 - Walmart

Related searches for tent:

Stores: REI Walmart Amazon Overstock Backcountry
Brands: Coleman Eureka Kelty North Face Columbia

[Coleman - Tent | Tents | Family Tent | Camping Tent | Backpacking ...](#)
www.coleman.com/Products/11000
Results 1 - 7 of 7 – Looking for a family tent, backpacking tent or camping tent? Visit Coleman.com to find the ideal Coleman tent for any outdoor activity.
[↳ Instant Tents - Elite Tents - Backpacking Tents - Tent Accessories](#)

Shopping results for tent

[Coleman Instant 14- by 10- Foot 8- Person Two Room Tent](#)
\$178 - 15 stores

[Stearns 2000001594 Montana 8 Tent 16X7MODIFIED Dome](#)
★★★★☆ 18 reviews - \$107 - 104 stores - Nearby stores - In stock

[MSR Hubba Hubba 2-Person 3-Season Backpacking Tent](#)
★★★★☆ 120 reviews - \$240 - 46 stores - Nearby stores - In stock

[Tents and Shelters at REI - Free shipping on orders of \\$50 or more](#)
www.rei.com/category/4500001_Tents+and+Shelters
Tents and Shelters at REI - Free shipping on orders of \$50 or more. Top quality, great selection and expert advice you can trust on Tents and Shelters.

Why these ads?

Ads - Why these ads?

AdWords Text Ads

[Canopy Tent - 70% off](#)
www.excanopy.com/
Largest Selection, Fastest Shipping, Low Price Guarantee - Canopy Tent

Product Listing Ads

[Tent at REI](#)
www.rei.com/Tents
rei.com is rated ★★★★☆
Camping Tents, Screenhouses, See Customer Ratings, Read Reviews
[+ Show products from REI](#)

[Cheap Tents at Walmart](#)
www.walmart.com/Tents
walmart.com is rated ★★★★☆
Save on Cheap Tents at Walmart & Get Out There Today!
288 people +1'd Walmart
[+ Show products from Walmart](#)

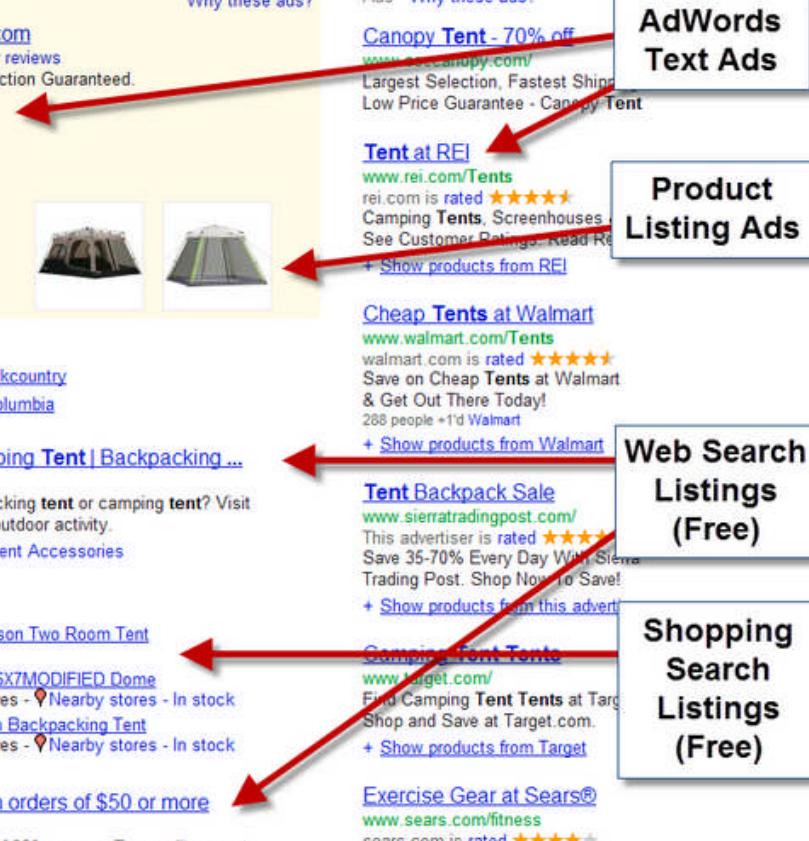
Web Search Listings (Free)

[Tent Backpack Sale](#)
www.sierratradingpost.com/
This advertiser is rated ★★★★☆
Save 35-70% Every Day With Sierra Trading Post. Shop Now To Save!
[+ Show products from this advertiser](#)

Shopping Search Listings (Free)

[Camping Tent Tents](#)
www.target.com/
Find Camping Tent Tents at Target. Shop and Save at Target.com.
[+ Show products from Target](#)

[Exercise Gear at Sears®](#)
www.sears.com/fitness
sears.com is rated ★★★★☆
Shape Up for the New Year at Sears with Great Savings on Fitness Gear!

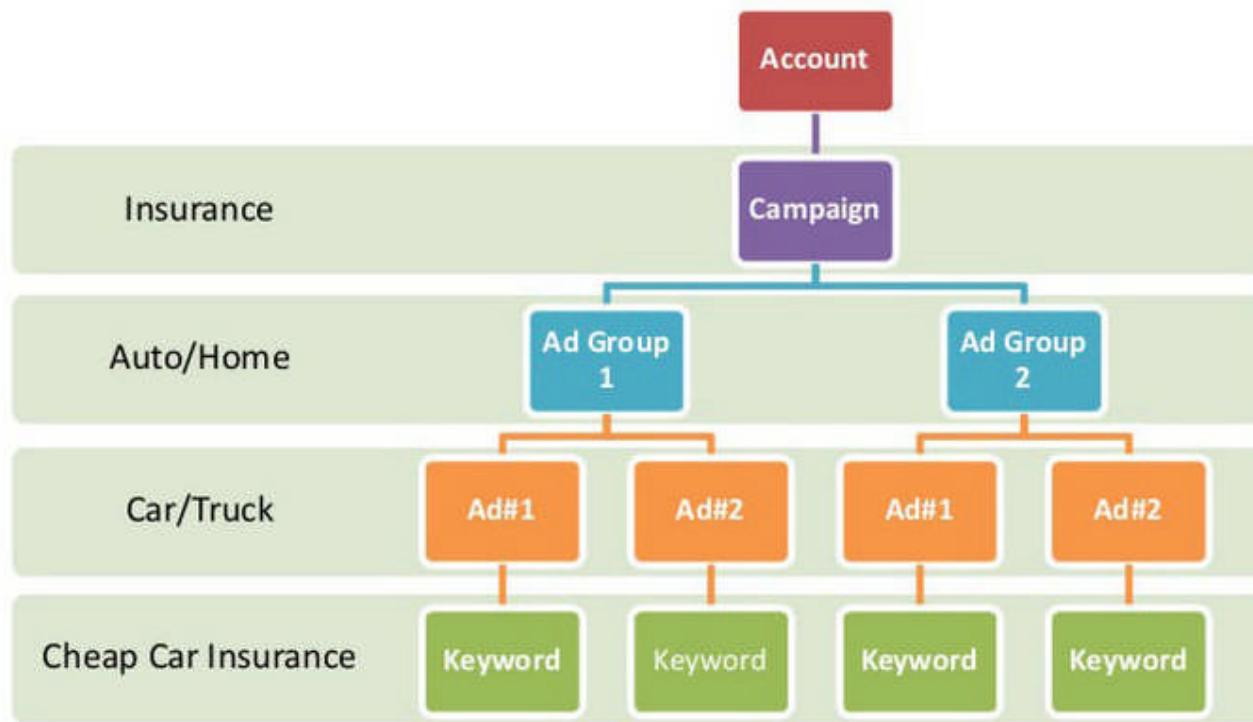


E Marketing



from <http://www.marketingdonut.co.uk/marketing/online-marketing/online-and-pay-per-click-advertising/a-guide-to-google-adwords>

Adword account



Terms

- ROI - return on investment
- Affiliate
- Remarketing
- Cookies
- Organic Search
- Paid results
- Adword: account > campaign > groups > ads

AdWords Terminology

Here are some basic terms that new AdWords users should know:

- **Campaign:** This refers to one or more ad groups; you can group your campaigns according to geography, devices or the types of products you are advertising.
- **Ad Groups:** These are the groups of ads shown in a campaign. They share a budget and each ad group targets the same set of keywords. You can set the maximum amount you want to pay for clicks on the ads in a group.
- **Ads:** This refers to the advertisement that will show up in Google's search results and on the sites of its partners.
- **Impressions:** how many times your ad is shown to users.
- **CPM - Cost per 1000 iMpressions.**
- **Ad Position:** This is refers to the placement of an ad on the page (1,2,3..)
- **CPC - Cost Per Click:** This is the amount that you will be charged for each click on your ad.
- **CTR - Click-Through Rate:** of an Ad is the number of impressions divided by the number of times it gets clicks. Measures the effectiveness of your ads. CTR of 5% is considered very good.

<https://clear-river.com/google-adwords-marketing/>

Affiliate Terminology

1. Cost Per Sale (CPA)

A visitor referred by the Affiliate purchases goods and services from the Merchant. This payment structure is referred to as - cost per sale or cost per acquisition (CPA).

2. Cost Per Lead (CPL)

A visitor referred by the Affiliate completes a form on the Merchants web site. This payment structure is referred to as - cost per lead (CPL).

3. Cost Per Click (CPC)

[Amazon Associates](#) is perhaps the single broadest online affiliate program.

Amazon has also moved into [offering a retargeting display network for publishers](#).

<https://www.clixgalore.com/affiliateprogramsintro.aspx>
<http://www.seobook.com/archives/001370.shtml>

Quality score

Quality Score depends on three factors:

- **Click through Ratio(CTR):** More the CTR, more will be Quality Score.
- **Landing Page:** Landing page should be optimized according to the chosen keyword.
- **Relevancy:** Your ad has to be relevant to your site and landing page for a good quality score.

Ad rank

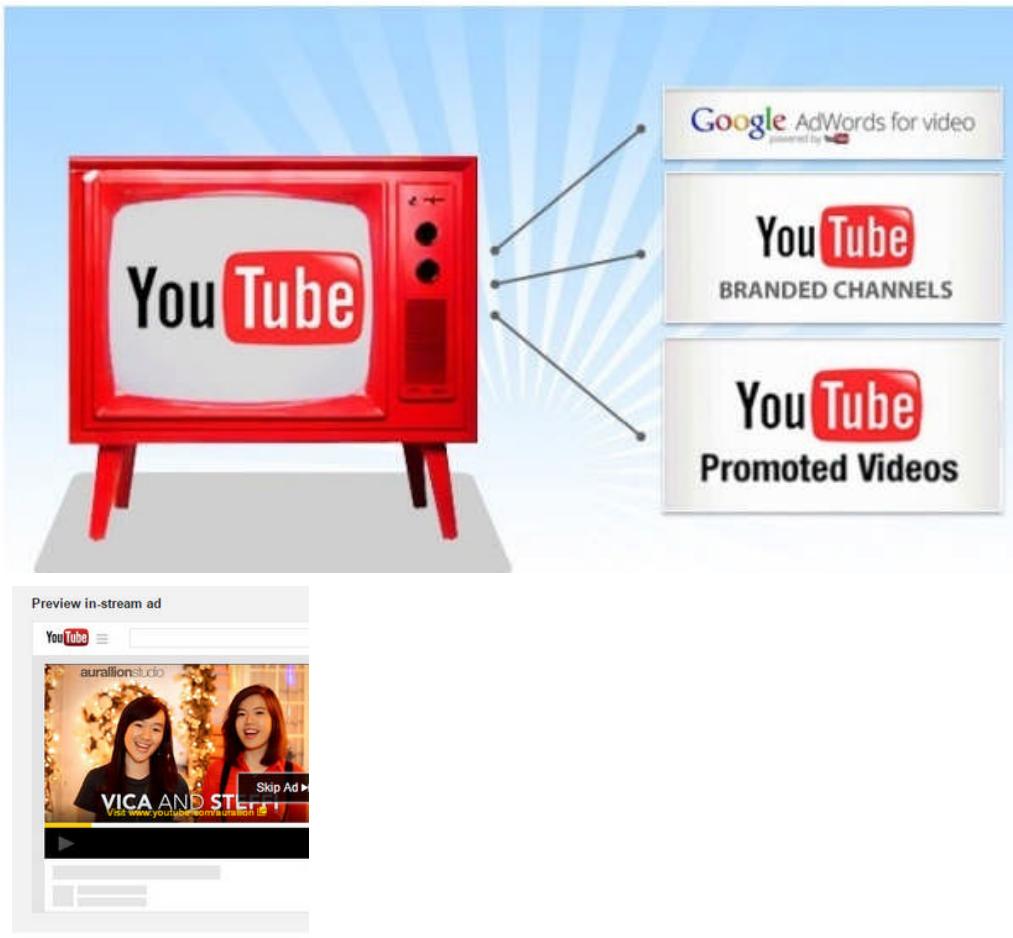
Ad Rank: It is a value for determining where your ad will be shown on a page. It is calculated using Max bid and Quality Score.

- Max. Bid * Quality Score = Ad Rank

Ad Rank and Quality score

- Where “Ad Rank” is how high your ad appears on the results page and “Max Bid” is your maximum pay-per-click bid.
- The “Quality Score” number is how Google views your overall ad, the web page that it links to and how it relates to the keyword for which you’re bidding.
- Google is giving you a “Quality Score” based on how RELEVANT your ad is and how positive the USER EXPERIENCE will be once they arrive to your website.

Youtube Ads



<http://hanscs.com/digital-marketing/promote-youtube-video-google-adwords/>

Youtube Ads

- How Does YouTube Charge for Advertising?
- YouTube / Google AdWords for video uses a CPV (cost-per-view) model to charge for its advertising.
- **You pay only when someone decides to view your video.** What counts as a ‘view’? For *in-stream ad*, you will be charged when the user watches 30 seconds or sees the end of the ad.
- You pay nothing if they don’t initiate the video or drop off from the video before the minimum amount of time passes.
- For an *in-display ad*, you will be charged after users click — and begin watching your video.

<http://hanscs.com/digital-marketing/promote-youtube-video-google-adwords/>

Raters



Quality Rating Guidelines

<http://www.thesempost.com/google-rewrites-quality-rating-guide-seos-need-know/>

Rating

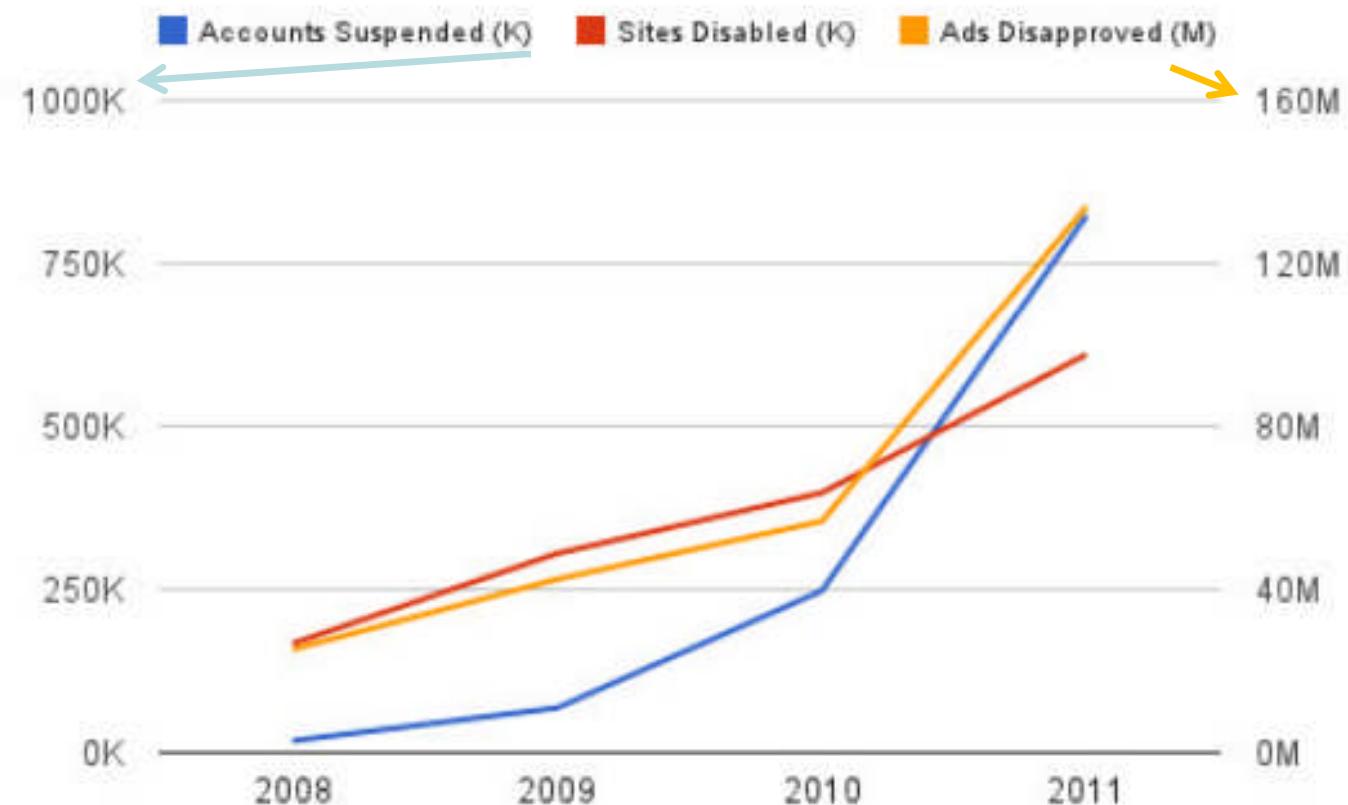
- E-A-T of a website is
 - Expertise
 - Authoritativeness
 - Trustworthiness

<http://www.thesempost.com/google-rewrites-quality-rating-guide-seos-need-know/>

Google Remote Ad-Rater Guidelines

- Ads and should be arranged so as not to distract from the MC - Ads are there should the user want them, but Ads should be easily “ignorable” if the user is not interested.
- It should be clear what parts of the page are Ads, either by explicit labeling or simply by page organization or design.
- Many Ads or highly distracting Ads on the visible part of the page when it first loads in the browser (before you do any scrolling), making it difficult to read the page.
- Popover ads (the words that are double underlined in blue) can make the main content difficult to read, resulting in a poor user experience.

Bad-Ads



Yahoo Ads Failed (2005-2010)

- Yahoo Ads were primarily driven by max CPC rather than relevancy matching, which caused many publishers to complain about Vonage ads everywhere
- Yahoo did not use smart pricing to optimize ad click costs as well as Google did
- Yahoo Ad network was not quite as deep.

Yahoo Search - Click Baits,

There is no free lunch - if you fool the users too many times they will go away.

The screenshot shows a Yahoo search results page with the query "credit cards". The results are heavily skewed by advertisements for various credit cards. The top result is an ad for Capital One® Credit Cards, followed by ads for Discover it® Credit Card, 10 Best Credit Cards 2014, Top Credit Cards, and Credit Card Offers. The organic search results include links for American Express® Cards, 10 Best - 0% Credit Cards, Bank of America® Cards, and Credit Cards News. The sidebar on the left includes links for Web, Images, Video, News, Local, Answers, Shopping, and More, along with filters for Anytime, Past day, Past week, and Past month.

YAHOO! credit cards

Web Ads related to credit cards

[Capital One® Credit Cards](#)
www.CapitalOne.com/CreditCards Ad
Compare Rewards & Rates. Find the Best Card for You.

0% Intro Rates [Find Special Offers](#)
Popular Cards [Rewards Cards](#)
[See If You Pre-Qualify](#)

American Express® Cards - Compare Credit Cards & Apply Now!
www.americanexpress.com Ad
Explore our Credit Cards & Rewards.

American Express® Gold Hotel Rewards

10 Best - 0% Credit Cards - Interest Free Payments until 2016.
www.CompareCards.com/CreditCards Ad
★★★★★ 300 reviews for comparecards.com
Get 0% for 18 Months & Great Rewards

Best Credit Cards for 2014 Get 0% APR for 18 Months
0% Balance Transfers for 18 Mon... 10 Best - Reward Credit Card Of...
0% Interest for 18 Months [Best Cash Back Credit Cards](#)

Bank of America® Cards - Credit Cards With No Annual Fee.
www.BankofAmerica.com/CreditCards Ad
Visit And Apply Online In Minutes.

\$100 Online Bonus Offer 0% Intro APR Offer
Transfer Your Balance 10,000 Bonus Points Offer
Cash Rewards Card Travel Rewards Card

Credit Cards News

What Happens When the Government Doesn't Pay its Credit Cards?
Credit.com via Yahoo Finance 2 hours ago

Best credit cards for Christmas
lovemoney.com via Yahoo UK & Ireland Finance 3 hours ago

Credit cards compromised at El Paso bowling alley
KFOX 14 El Paso 10 hours ago

[More Credit Cards Headlines](#)

Yahoo Ads versus Search

	Yahoo Ads	Yahoo Organic Results
Placement	top of the page	below the ads
Background color	none / totally blended	none
Ad label	small gray text to right of advertiser URL	n/a
Sitelinks	often 5 or 6	usually none, unless branded query
Extensions	star ratings, etc.	typically none
Keyword bolding	on for title, description, URL & sitelinks	off
Underlines	ad title & sitelinks, URL on scroll over	off
Click target	entire background of ad area is clickable	only the listing title is clickable

Cloaking - website cheating

- Cloaking refers to the practice of showing different content for same url to human users versus search engines.
- Cloaking is considered a violation of Google's Webmaster Guidelines because it provides users with different results than they expect.

References

1. <http://www.wordstream.com/articles/what-is-google-adwords>
2. <http://hanscs.com/digital-marketing/promote-youtube-video-google-adwords>
3. <http://infolab.stanford.edu/~backrub/google.html>
Search Engine by Sergey and Page.
4. <http://www.seobook.com/blog/aaron-wall>

Google AdWords Glossary

Advertising with Google AdWords can be extremely user-friendly and beneficial when you understand the full capabilities of the tool, and part of that is being familiar with the terminology. To help we have put together a glossary of related terms and definitions.

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#)
[P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

<http://www.epower.com/google-adwords-glossary>
2016-01-01

A

Actual Cost Per Click: Also known as actual CPC, is the amount you are charged for a single click on your ad. This amount is typically less than your max. CPC bid. See –*Maximum Cost Per Click*

Accelerated Ad Delivery: An ad serving method that displays your ads as often as possible until the daily budget is reached - See *Ad Delivery*

Ad Auction: Occurs every time a search is performed to determine which ads will show for the query and in what order.

Ad Delivery: How quickly your ads will show in a single day. Google AdWords offers two choices for ad delivery – Standard (default) and Accelerated.

Ad Extensions: An ad format that allows you to display additional business information with your ad such as a phone number, customer review or special offer. By adding these extra elements to your ad, you're giving customers more reasons to click. There are many types of ad extensions to choose from including Location, Call, Sitelinks, App and Review Extensions as well as Social Annotations and Seller Ratings.

Ad Formats: The different types of ads available in an AdWords account. These include Text Ads, Ad Extensions, Image Ads, WAP Mobile Ads, App Promotion Ads, Video Ads and Product Listing Ads.

Ad Group: Contains one or more ads with a targeted set of keywords and/or placements. Ad Group Default Bid: The most you are willing to pay for a click on your keywords or placements that do not have individual bids set.

Ad Placement: Locations on the Google Display Network where your ad can appear based upon target keywords and relevancy to your ad. This could be across an entire website or on a single page of a site. You can specifically choose where you'd like your ads to show (Managed Placements) or you can let Google choose relevant placements for your ads (Automatic Placements).

Ad Position: The order in which your ad appears on the search results page. Your ad position is determined by your Ad Rank. See *Ad Rank*

Ad Preview and Diagnosis Tool: A feature in Google AdWords that allows you to see if your ad is being shown for your keyword without acquiring more impressions. This tool can also help you to troubleshoot why your ad might not be showing.

Ad Rank: A value that's based on a combination of your bid amount, Quality Score and the expected impact from your ad extensions. Your Ad Rank determines your ad position.

Ad Relevance: Status of a keyword that tells advertisers how related the keyword is to the ads in the ad group. There are three possible statuses: above average, average and below average.

Ad Rotation Settings: A preference you set to tell Google which ad they should show when there is more than one ad in your ad group. Google offers four ad rotation settings. 1) Optimize for clicks (default) delivers those ads that are expected to receive the most clicks based on your past Clickthrough Rates (CTRs).2) Optimize for conversions delivers those ads that are expected to receive the most conversions based on your past conversion data. 3) Rotate evenly delivers ads equally regardless of their performance. After 90 days, ads that have not changed will automatically begin to optimize for clicks or conversions. 4) Rotate indefinitely delivers ads evenly for an indefinite amount of time.

Ad Scheduling: A feature that allows an advertiser to control the specific days of the week and/or hours of the day when their ads can show. Advertisers can also adjust their bids by a percentage for certain days and times. For example if you only want your ads to show during business hours and your most profitable time is between 11:00am and 2:00pm, you can schedule your ads to show between 9:00am and 5:00pm on Monday through Friday and set a bid adjustment to increase your bids between 11:00am and 2:00pm.

Ad Variations: Multiple versions of an ad for a single product or service in the same ad group targeting the same keywords. Ad variations let you test different ad copy to see what is attracting your target audience.

AdWords API (Application Programming Interface): A tool that allows developers to create applications that can help them manage larger AdWords accounts more effectively.

AdWords Discounter: An automated tool that monitors and adjusts the actual CPC so that the lowest possible bid is paid for an ad placement. This means that you pay the minimum possible CPC needed to exceed the next ranking ad.

AdWords Editor: A free desktop application used for managing an AdWords account, including making bid adjustments, creating new ads, changing ad delivery and much more.

App Extensions: A type of ad extension that allows you to display a link to your mobile app from your text ads to help drive downloads.

App Promotion Ads: A type of ad format that links directly to the Google Play Store or Apple App Store.

Auto-tagging: Google automatically creates custom destination URLs to help you measure how well your ads perform using Google Analytics or another website tracking program.

Automated Rules: A feature in Google AdWords that allows you to create rules for your campaigns, ad groups, keywords and ads that will help minimize the amount of time you spend manually monitoring and optimizing your campaigns. For example, you can create a rule to adjust your keyword max. CPC bids during certain hours of the day. Automatic Bidding: Google AdWords will automatically manage your Cost Per Click bids based on the daily budget you set.
– See *Cost Per Click*

Automatic Offer Extensions: A type of ad extension that will automatically add a link, labeled "View this ad's deal," below your ad text as long as your ad text, destination URL and landing page meet their requirements. The link will take searchers to the same landing page used for the destination URL.

Automatic Placements: Locations on the Display Network that Google finds automatically based upon keywords in your ad group. – See *Ad Placement*

Average Cost Per Click (Avg. CPC): The average amount paid each time an ad is clicked. Cost of all clicks / # of clicks = Avg. CPC.

Average Position (Avg. Pos.): Tells the average position an ad appears in search results when that keyword is searched. For example, an average position of 2.4 means that an ad usually appears between the 2nd and 3rd positions.

B

Broad Match: The default keyword matching option typically used to reach a larger audience. With broad match, your ads can appear for searches that include your keyword or close variations of your keyword as well as related searches. For example, if the broad match keyword was "yellow shoes" your ad would show for searches like "yellow running sneakers" or "shoes with yellow laces" or "yellow and blue shoes". See *-Keyword Matching Options*

Broad Match Modifier: A keyword matching option that allows you to better control which searches can trigger your ads to help increase relevancy. By adding a plus sign (+) in front of certain keyword(s) in your broad match key phrase, your ads will only show if the user's search contains those modified terms or close variations. For example, if the broad match modifier keyword was "+yellow +shoes" your ad could show for searches like "yellow shoes" or "buy yellow shoes" or "shoes with yellow". – See *Keyword Matching Options*

Budget: The most you are willing to spend on average per day over a month on a single campaign. You will never be charged more than 30.4 times your daily budget amount.

Bulk Editing: Making edits to more than one part of your account at a time. To make bulk edits, you need to select the items you want to edit on the campaign, keyword, ad group or ad tab and then click "Edit." From there you can edit the bid, match type, destination URL, etc. for each of the selected items. You can also use tools such as AdWords Editor or AdWords API to make bulk edits.

C

Call Extensions: A type of ad extension that will include a clickable "Call" button with your ads on mobile devices and display your phone number next to the ad when viewed on a desktop.

Campaign: The first level of the AdWords structure. A campaign consists of one or more ad groups and each ad group has a set of ads and keywords. A campaign can represent a broad spectrum of products or services, where an ad group is focused on a single product or service. For example you could have a 'Headphone' campaign and within the campaign you could have a 'wireless headphone' ad group, an 'in-ear headphone' ad group and a 'clip on headphone' ad group, each of which have keywords specific to that product category.

Change History: An AdWords tool that gives users a history of changes made to campaigns, ad groups and keywords, such as bid increases, ad text edits and more.

Click: Occurs whenever a user sees your ad and clicks on it, also known as a Clickthrough.

Clickthrough Rate (CTR): Is the number of clicks an ad receives divided by the number of times that ad has appeared in a given time. This gives a good indicator of ad performance. A high CTR means an ad is performing well, a low CTR means poor performance. $CTR = \# \text{ of Clicks} / \# \text{ of Impressions}$

Contextual Targeting: An ad targeting system that matches ads that use keyword targeting to relevant and related sites on the Display Network.

Conversion Action: When a visitor, after clicking on an ad and arriving at your site, completes a specified action. This could be completing a purchase, signing up for an e-mail, subscribing to an RSS feed and so on. Google AdWords counts conversion actions as either converted clicks and/or conversions.

Conversion Optimizer: A tool in Google AdWords that uses your campaign's historical performance to predict which clicks will be profitable and then adjusts your bids to help maximize your conversions, rather than focusing on clicks (CPC) or impressions (CPM).

Conversion Page: The web page a visitor is taken to after completing the desired action to be counted as a

conversion, such as a thank you page or order confirmation page.

Conversion Rate: The rate at which visitors or prospects take a desired action on your site. Desired action steps can involve purchases, leads, contact form completions, newsletters or email sign ups, registration for White Papers, etc. For example if 100 visitors come to your site and 3 signup for your monthly newsletter then your conversion rate would be 3%.

Conversion Tracking: Allows you to track various actions or goals on your website like leads, purchases, signups, contacts, etc. Conversion tracking is usually coupled with an analytics system like Google Analytics.

Conversion Window: A period of time from which a visitor clicks on your ad to when they actually perform the desired action, in which a conversion will be recorded. Google allows you to customize your conversion window from 7 to 90 days after a click.

Conversions: *Previously known as Conversions (1-per-click.)* The number of ad clicks that convert within your designated conversion window. For example, if a visitor completes two lead forms on your website after click an ad, they will register as one Converted Click.

Converted Clicks: *Previously known as Conversions (1-per-click.)* The number of ad clicks that convert within your designated conversion window. For example, if a visitor completes two lead forms on your website after click an ad, they will register as one Converted Click.

Cost/Conversion: A ratio that shows how much a single conversion (purchase, e-mail signup, subscription, page view, etc) costs. Total Cost / # of Conversions

Cost Per Action (CPA): Also known as Cost Per Acquisition, CPA is a bidding option that charges every time a visitor completes a specific action (purchase, e-mail sign up, subscription and so on).

Cost Per Click (CPC): A bidding option in which one pays only when someone clicks on an ad. Google AdWords offers two choices for CPC bidding: Manual Bidding and Automatic Bidding.

Cost Per Thousand Impressions (CPM): A bidding option that charges for every set of 1,000 impressions an ad receives rather than by click as in CPC bidding. This bidding option is only available for the Display Network.

Cost Per View (CPV): A bidding option that charges for every time your video is played. This bidding option is only available if you run TrueView video ads.

Customer ID: A unique 10 digit number given to each AdWords account. The Customer ID is located in the upper right hand corner of the AdWords account interface.

D

Daily Budget: The amount you are willing to spend in a single day for a single campaign.

Day Parting: See *Ad Scheduling*

Destination URL: The URL of the page a visitor will be directed to after clicking an ad.

Display Ad: Graphical ad format that includes Static Image ads, Flash ads, and animated .gif ads.

Display Planner: An AdWords tool that assists you in planning a Display campaign by offering targeting ideas and estimates.

Display URL: The URL displayed in an ad. This is not necessarily the URL of the page a visitor will arrive at after clicking an ad.

Double Serving: An AdWords policy that prevents more than one ad for the same company from showing at the same time on the search results page.

Dynamic Search Ads: A campaign type that will automatically display your ad based on your website content, not a list of keywords. Dynamic Search Ads are automatically generated using words from the search phrase and content from the landing page chosen for the ad.

E

End Date: The date at which you would like your ad campaign to end. An indefinite date can be set too.

Enhanced CPC (ECPC): An optional bidding feature that will raise or lower your bids based on the probability that an ad click will result in a conversion.

Error Sites: Websites on the Display Network that show relevant ads to people who would have otherwise received a blank page or error message because they may have entered an address for a website incorrectly or tried to search in the browser's address bar.

Exact Match: A keyword matching option that allows you to target your keywords more precisely to reach a niche audience. By surrounding your key phrase with brackets, your ad will only show for that exact phrase or close variations of that exact phase. For example if your exact match keyword was "[yellow shoes]" your ad would only show when that phrase or a close variation of that phrase was searched. Your ads would not show for phrases like "blue and yellow shoes" or "yellow shoes for running." - See *Keyword Matching Options*

Exception Request: A process that allows advertisers to request a further review by the AdWords team for disapproved items. For example, if AdWords informs you that your ad doesn't meet one of their advertising policies, you can file an exception request if you think the policy doesn't apply to you.

Expected Clickthrough Rate: Status of a keyword that tells advertisers how likely it is that people will click your ad when shown for that keyword. There are three possible statuses: above average, average or below average.

F

First Page Bid Estimate: A metric in which approximates the CPC bid needed for your ad to appear on the first page of search results.

Frequency: The minimum number of times an ad was seen by a unique user over a given time period.

Frequency Capping: The action of limiting the number of times your ad is seen by a unique user over a given time period on the Google Display Network. You can set a limit for the number of impressions allowed for an individual user per day, week or month.

G

Google Forwarding Phone Number: Similar to call extensions, however Google provides you a unique number to feature in your ads to help track and better measure the effectiveness of calls received as a result of your ads.

Google Merchant Center: The place where you manage your product information used for your Product Listing Ads (PLAs) and Google Shopping. You must link your Google AdWords and Merchant Center accounts in order to display PLAs. –

See *Product Listing Ads*.

Google Network: All places in which your ad can appear. The Google Network is divided into two groups: Display Network and Search Network.

Google Display Network: Includes a collection of sites that partner with Google, and Google sites such as YouTube and Gmail.

Google Search Network: Includes a collection of sites that display Google search results including Google Search, Images, Maps, Shopping, Groups, and sites that partner with Google as search partners.

I

Image Ads: Ads that use an image or graphic. These ads can only appear on sites in the Google Display Network.

Impression: The number of times an ad has been shown.

Interaction Rate: The percentage of time users spent interacting with a display ad. For example, a video ad could have an interaction rate for the percentage of times a visitor actually clicks on your ad to watch the video. Number of times people interact with your ad / impressions

Invalid Clicks: Ad clicks that Google considers illegitimate such as unintentional clicks or clicks resulting from automated clicking tools or other malicious software.

K

Keyword: Words or phrases that you want to trigger your ad to show on the Google Network.

Keyword Insertion: A feature that will dynamically insert one of your keywords or phrases either into the headline, description lines, display URL or destination URL of your ad text. This will prominently bold the keyword allowing for greater visibility and higher Clickthrough Rates.

Keyword Matching Options: A keyword setting that allows you to control how closely your keyword must match the search term in order for your ad to be triggered. The keyword matching options are Broad Match, Broad Match Modifier, Phrase Match, Exact Match and Negative Match.

Keyword Planner: A free Google tool that provides relevant key phrase ideas and traffic estimates.

L

Landing Page: A web page a searcher arrives at as a result of clicking an advertisement. The more tailored the landing page is to a specific query, the better results you will see.

Limited by Budget: A status given to campaigns that have a daily budget that is lower than the recommended amount.

Location Extensions: A type of ad extension that allows you to include your business address and phone number with your ad to help customers that are close by locate or call your nearest storefront. – See *Ad Extensions*

Location Targeting: A Google AdWords setting that allows you to display ads to people in a specific geographic area.

Low Search Volume: A keyword status that indicates a key phrase has little to no search traffic on Google. A keyword with low search volume will not trigger your ads until its search traffic increases.

M

Managed Placements: Specific locations on the Display Network that you choose as places where you'd like your ads to show. - See *Ad Placement*

Manual Bidding: Unlike automatic bidding which sets your bids for you, manual bidding enables you to control the max. CPC on your ad by setting your own bid amounts. – See *Cost Per Click*

Maximum Cost Per Click: Or max. CPC is a term used by Google AdWords to denote the most you are willing to pay for one click on your ad. However, this does not mean you will actually pay this amount. Other factors such as Quality Score and competition will play a factor. – See *Actual Cost Per Click*

Maximum Cost Per Thousand Impressions: Or Max. CPM, refers to a bid that you set to determine the most you're willing to pay for 1,000 impressions.

Mobile-Optimized Ads: A type of ad that enables you to reach customers on-the-go. These ads can appear on mobile devices in Google search results, on the Display Network, in apps and in video. There are two types of mobile ads: WAP mobile ads and Ads for high-end mobile devices.

Mouseover Rate: The percentage of users who hover over a display ad for 1 second or longer.

Multivariate Testing: A *split testing* method that lets advertisers test multiple ad texts at once. You could test all of your ad headlines, descriptions and display URLs by mixing and matching each of them. For

example if you want to perform a multivariate test on three ads: A, B, and C, you could take the headline from B, description from A and display URL from C and test against other varieties to find the perfect ad.

N

Negative Match: By adding a minus sign (-) in front of a keyword, you can prevent your ads from showing for that specific search term. For example if you sell only red widgets, you would want to add -blue, -green, -black, etc. as negative match keywords to ensure that your ad will not be shown for searches of products you do not sell. – See *Keyword Matching Options*

O

Optimization: An ongoing process in which you make changes to elements in your account in an effort to improve performance. This can involve making improvements to your ad text, changing the match type of your keywords, adjusting your keyword bids, revising your ad targeting options, etc.

Overdelivery: This occurs when your ads receive more clicks in one day than what the average daily budget allotted for. This can help make up for days when your ads don't receive as much engagement. Note that you will never be charged more than what your budget allows in a month (your average daily budget times 30.4).

Overdelivery Credit: A credit that is applied automatically to your account if Google over delivers your ads too much and you are charged more than what your budget allows in the monthly billing period.

P

Phrase Match: A keyword matching option that allows you to reach a more targeted audience. By surrounding your key phrase with quotation marks, your ad will only show for a search of that exact key phrase or that exact phrase with additional words before or after it. For example if your phrase match keyword was "yellow shoes", your ad would appear for searches like "leather yellow shoes" or "yellow shoes on sale", but not for searches like "yellow leather shoes" or "shoes with yellow laces" because the phrase was broken. – See *Keyword Matching Options*

Play Rate: Is the number of times your ad's video was played divided by the number of times that ad was shown. Play rate can be a good indicator of your video ad's performance and how engaging it is. Video ad plays / video ad impressions = play rate

Previous Visit Annotations: A type of ad extension that can show visitors how many times they've visited your site and/or when they last visited your site from Google Search.

Product Listing Ads (PLAs): A type of ad format used to promote your products on Google Search and on Google Shopping. They appear in their own box, separate from text ads, on the results pages and include specific product information such as an image,

price and promotional message. To use PLAs, your AdWords and Google Merchant Center accounts need to be linked. Google provides you with two options to manage your PLAs in AdWords: Shopping campaigns and Regular Product Listing Ads campaigns.

Product Feed: A data file containing product information that Google uses to display the most relevant products on Google Search and on Google Shopping. These data files are used to show both your Dynamic Search Ads and Product Listing Ads.

Product Filters: An optional feature that allows you to exclude certain products in your Google Merchant Center account from appearing in your Product Listing Ads.

Product Groups: A way to organize your products inventory in a Shopping campaign within AdWords. Shopping campaigns use product groups (instead of product targets like regular PLAs campaigns use) to identify which products to bid on to appear in your PLA.

Product Targets: A way to tell Google AdWords which items from your Google Merchant Center account should trigger Product Listing Ads to show for relevant searches.

Q

Quality Score: A numerical value that indicates how relevant your ads, keywords and landing pages are to a user. A Quality Score is calculated each time your ads are triggered by a search. The more relevant your keywords, ads and landing pages are, the higher your Quality Score. The Quality Score is determined by an ad's expected Clickthrough Rate, ad relevance, and landing page experience.

R

Recommended Daily Budget: A budget that is determined by Google AdWords to have your ad show as many times as possible for your keywords.

Regular Product Listing Ads Campaigns: A campaign type used to promote your Google Merchant Center product inventory. With Regular PLAs campaigns, you'll need to set up product targets in order to select which products are shown with your ads.

Relevance: How useful the ad or keyword is to the searcher or audience.

Remarketing: A feature in AdWords that allows you to reconnect with people who have previously visited your website by showing them relevant ads as they browse other websites or search on Google. The goal of remarketing is to encourage visitors who left your website to return to your site and complete a desired action.

Return on Investment (ROI): Measured by how much return you receive from your online marketing investment. For example if you spend \$1000 on Pay Per Click ads and you make \$2000 in profit from sales,

then your Return on Investment would be 100%. Calculated: $(\$2000 - \$1000) / 1000 = 100\%$

Review Extensions: A type of ad extension that allows you to feature positive reviews from a third-party source below your text ad.

S

Search Partners: Sites within the Google Search Network that display Google AdWords ads.

Search Terms Report: A report in AdWords that lists every search term that has triggered your ad to be shown and clicked on. Use this report to identify new keyword opportunities as well as phrases that should be added as negative keywords.

Seller Ratings: A type of ad extension that shows reviews and ratings that reflect customers overall satisfaction of their experience with the business, rather than specific products.

Shopping Campaigns: A campaign type that allows you to better manage and optimize your PLAs. With Shopping campaigns, you can access your product data directly within AdWords, giving you more control over which products are displayed with your ads. This campaign type is recommended over Regular Product Listing Ads campaigns – See *Product Listing Ads*

Site Suspended: A status provided to keywords or ads that direct users to a landing page that violates one or more of AdWords' advertising policies. These ads and keywords will remain inactive until the issue is resolved.

Sitelinks Extensions: A type of ad extension that allows you to promote pages on your website beyond your main landing page by showing additional links beneath the text of your ad.

Social Annotations: A type of ad extension that will display the number of followers your Google+ Page has. You must link your Google+ Page with your ads in order to use this ad extension.

Split Testing: A method used to determine the best ad. By showing multiple ads over a course of time, split testing helps determine which combination of ad headlines, ad text, images, and more are most effective.

Standard Ad Delivery: An ad serving method that shows ads across a day to make sure you don't accrue all of your clicks early on.

T

Targeting Group: A selection of targeting methods that you choose to use for all ads in your video campaign.

Targeting Method: A way to better control where your ads show on the Display Network. You can set one or more targeting methods in an ad group, such as keywords, placements or demographics.

Text Ad: An ad format that uses only text to convey the message and includes a link to your landing page. This is the primary type of ad for Google AdWords

and can appear on Google search results pages and across the Google Network.

Text Overlay Ad: If you enable your regular text ad to show with videos across the Display Network, your text ad will then be considered a Text Overlay Ad.

V

Video Publisher: Websites that are focused on video content sharing and are partner sites with the Display Network, such as [YouTube](#).

W

WAP Mobile Ad: An ad format that is created specifically to show on WAP-enabled mobile devices, also known as "feature phones." WAP mobile ads can be text or image ads.

keywords

mosh@hmi-tech.in
3/2015

Keyword matching

“keyword +Match Types”

Werewolf novels

Broad Match

- ✓ werewolf costume
- ✓ travel novels
- ✓ Prince concert tickets
- ✓ werewolf novels 
- ✓ scuba equipment

+Werewolf +novels

Modified Broad Match

- ✓ Rwandan werewolf novels
- ✓ novels on werewolves
- ✓ werewolf cheap novels
- ✓ werewolf novels 
- ✗ travel novels

“Werewolf novels”

Phrase Match

- ✓ werewolf novels 
- ✓ werewolf novels on sale
- ✓ Steamy werewolf novels
- ✗ werewolf cheap novels
- ✗ werewolf dime novels

[Werewolf novels]

Exact Match

- ✓ werewolf novels 
- ✓ werewolf novels 
- ✗ werewolf novels on sale
- ✗ Steamy werewolf novels
- ✗ homemade lasagna

Keyword matching

- Broad Match : Is no-no for the search network (display network is okay as it does not distinguish between match types)
- **+ Modified +Broad +Match** : Means that every keyword with a + sign in front of it is required to be in the search query, but order doesn't matter.
- “Phrase Match” : Means that you can have words before the quotation marks and after the quotation marks. But what is inside of the quotation marks cannot be changed or altered.
- [Exact Match] : As exact as it gets. This keyword will only trigger your ads when someone types in exactly what's inside the brackets. Nothing more, nothing less.

Keyword matching

Pay Per Click Keyword Match Types

Broad Match (aka Expanded Broad Match). Keyword: mens formal shoes

Matches: womens shoe, formal dresses, mans flip flops, horse shoes

Initial Bids: 20%

Anchor Modified Broad Match (BMM). Keyword: mens formal +shoes

Matches: womens shoe, formal shoes, cheap boys shoe, horse shoes

Initial Bids: 40%

Dual Anchor Modified (BMM). Keyword: +mens formal +shoes

Matches: mens shoe, mans shoe formal, horse shoes for men

Initial Bids: 60%

Fully Modified (BMM). Keyword: +mens +formal +shoes

Matches: formal man shoe, formal mens horse shoes

Initial Bids: 80%

Phrase Match. Keyword: "mens formal shoes"

Matches: cheap mens formal shoes in miami

Initial Bids: 80%

Exact Match.

Keyword: [mens formal shoes]

Matches: mens formal shoes

Initial Bids: 100%

Most expensive keywords



Ad Pricing / Auction

mosh@hmi-tech.in
3/2015

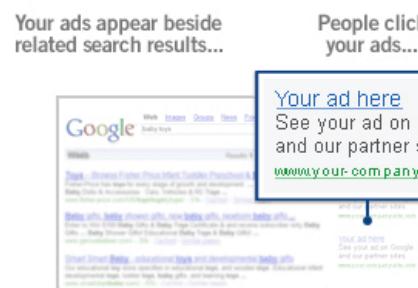
Questions

How much are Ads worth?

How much should google charge for Ads?

Answer

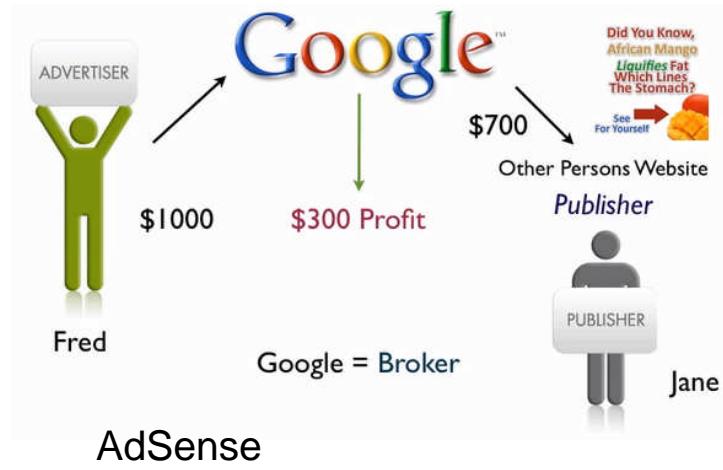
Answer: 2nd price auction for each individual search result page.



Adwords

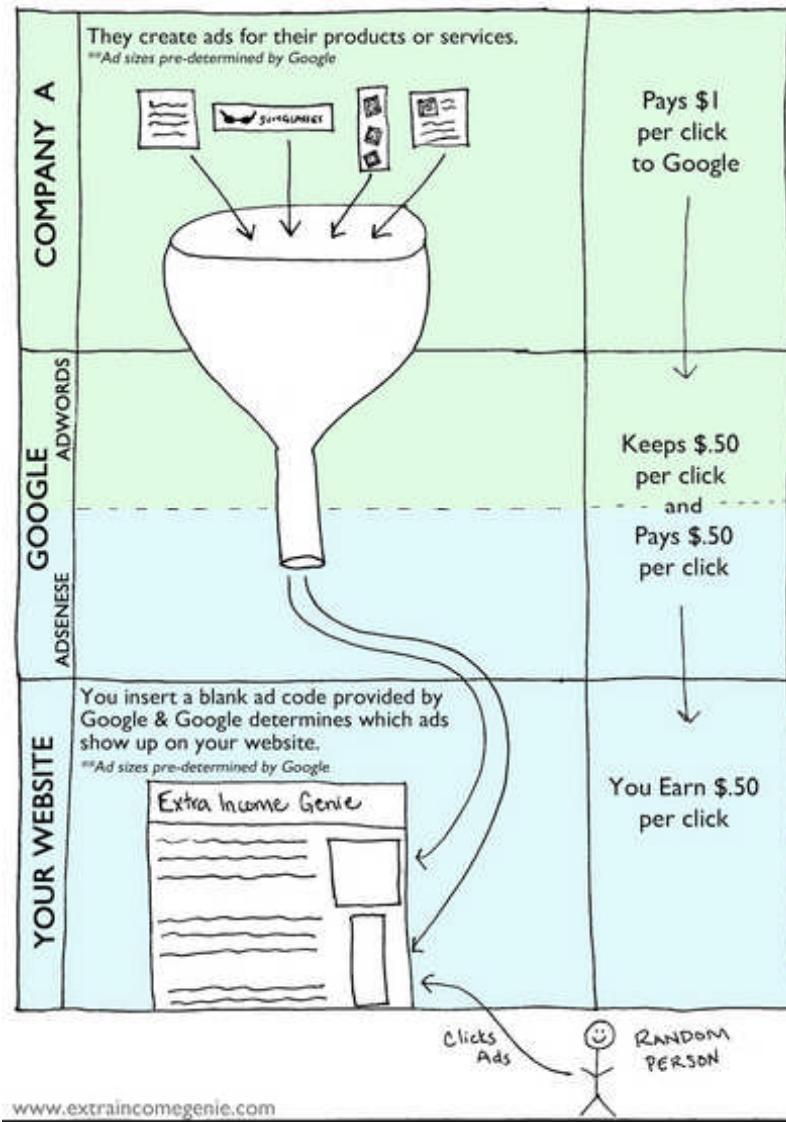


...And connect
to your business

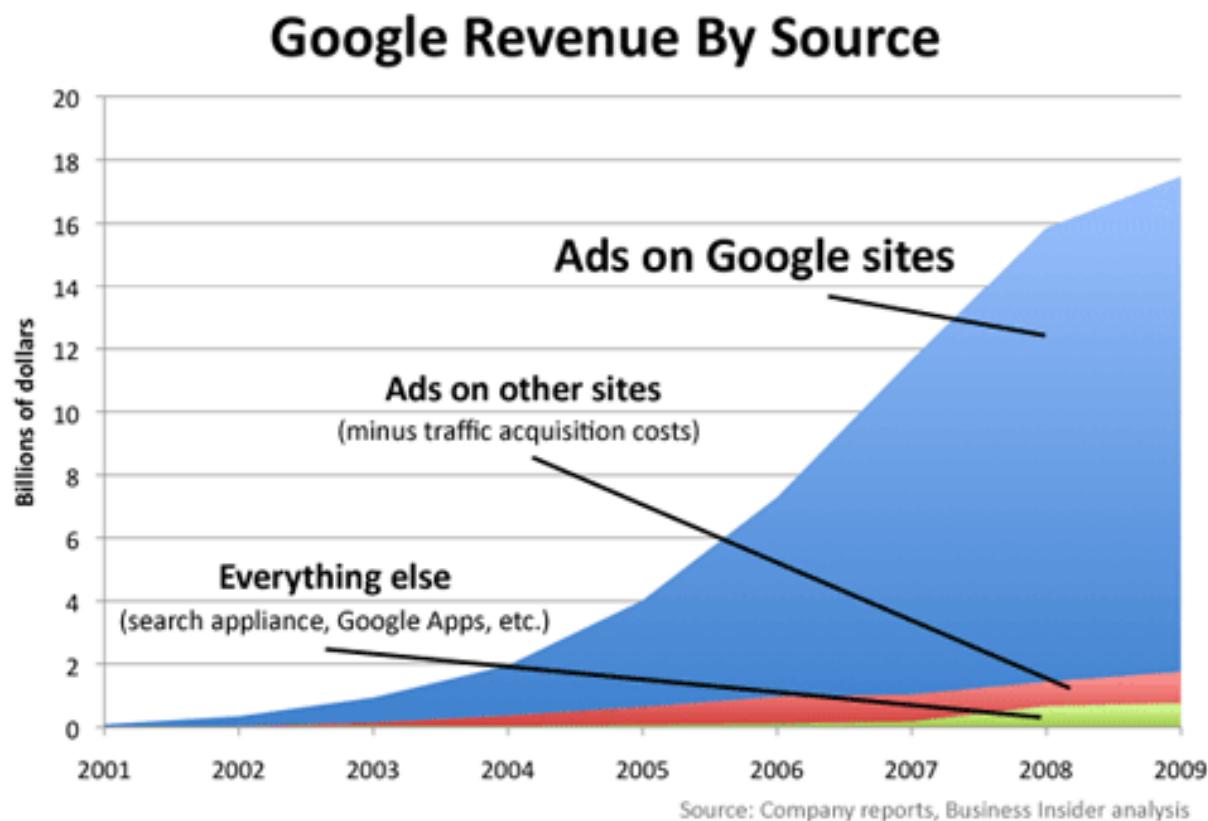


Cash flow in Ads

How Google Adsense & Adwords Work



Revenue Source of Google



Revenue Share by Company

Net Digital Ad Revenue Share Worldwide, by Company, 2012-2014

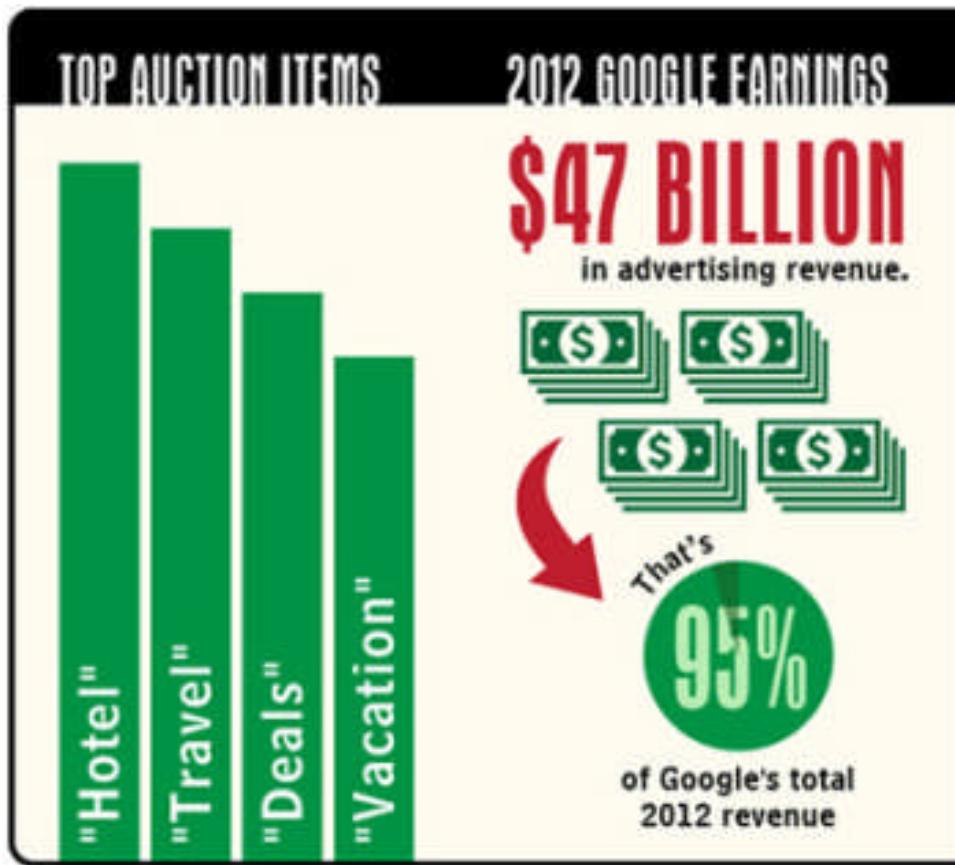
% of total digital ad revenues

	2012	2013	2014
Google	31.30%	31.92%	31.45%
Facebook	4.09%	5.82%	7.79%
Microsoft	2.44%	2.45%	2.54%
Yahoo	3.36%	2.86%	2.52%
IAC	1.34%	1.27%	1.04%
AOL	1.02%	0.94%	0.88%
Twitter	0.26%	0.50%	0.79%
Amazon	0.53%	0.63%	0.75%
LinkedIn	0.37%	0.47%	0.54%
Pandora	0.34%	0.43%	0.52%
Yelp	0.12%	0.18%	0.25%
Millennial Media	0.07%	0.09%	0.09%
Other	54.76%	52.44%	50.82%
Total digital (billions)	\$104.57	\$120.05	\$140.15

Note: Includes advertising that appears on desktop and laptop computers as well as mobile phones and tablets, and includes all the various formats of advertising on those platforms; net ad revenues after companies pay traffic acquisition costs (TAC) to partner sites; numbers may not add up to 100% due to rounding

Source: company reports; eMarketer, June 2014

How Does the AdWords Auction Work?



<http://www.mgrblog.com/google-adwords-do-you-know-how-it-works/>

Sources:

- <http://www.google.com/adwords/how-it-works/ads-on-google.html>
- <http://certifiedknowledge.org/adwords-seminars/>
- http://www.amazon.com/Advanced-Google-AdWords-Brad-Geddes/dp/0470500239#_
- <http://www.wordstream.com/articles/most-expensive-keywords>
- <http://www.seomoz.org/learn-seo>

Ad Auctions

WHAT GETS ENTERED INTO THESE AUCTIONS?

Advertisers **identify keywords they want to bid on**, how much they want to spend, and create groupings of these keywords that are paired with ads.

Google then enters the keyword from your account it deems **most relevant** into the auction with the maximum bid you've specified as well as the associated ad.

NOTE: You can only have one entry into any query auction from your account.



Read <http://www.wordstream.com/articles/what-is-google-adwords>

How Does the AdWords Auction Work?

A WEB VISITOR ENTERS A SEARCH QUERY

When someone searches for something on Google, Google looks at the AdWords advertisers pool and determines whether there will be an auction.

1

search!

2

Bid!
advertisers
pool

3



If one or more advertisers are bidding on keywords that Google deems relevant to the search query, an auction is triggered.

NOTE: Keywords are not search queries! Specific keywords (such as "pet medicine") may be entered into auctions for a wide range of search queries (such as "medicine for dogs" or "pet supplies"), depending on your match type.

How Does the AdWords Auction Work?

WHAT GETS ENTERED INTO THESE AUCTIONS?



Advertisers **identify keywords they want to bid on**, how much they want to spend, and create groupings of these keywords that are paired with ads.

Google then enters the keyword from your account it deems **most relevant** into the auction with the maximum bid you've specified as well as the associated ad.

NOTE: You can only have one entry into any query auction from your account.

How Does the AdWords Auction Work?



2nd price auction

Actual Bid: There is a difference between your maximum bid and actual bid.

Google will not necessarily charge your set maximum bid, it will only charge you a slightly greater amount than your competitors.

Actual Bid = Ad rank of just lower competitor/Quality score of selected keywords.

So Good quality ads have to pay less for same keywords than bad quality ads.

How Does the AdWords Auction Work?



How Does the AdWords Auction Work?

HOW DOES GOOGLE CALCULATE THE PRICE YOU PAY?

You pay the minimum amount you can pay for the position you win if your ad is clicked on.

YOUR PRICE =
THE AD RANK OF THE PERSON BELOW YOU

YOUR QUALITY SCORE + \$0.01

	Max Bid	X	Quality Score	=	Ad Rank	→	Actual CPC
Advertiser 1	\$2.00	X	10	=	20	→	$16/10 + \$0.01 = \1.61
Advertiser 2	\$4.00	X	4	=	16	→	$12/4 + \$0.01 = \3.01
Advertiser 3	\$6.00	X	2	=	12	→	$8/2 + \$0.01 = \4.01
Advertiser 4	\$8.00	X	1	=	8	→	Highest CPC

Notice how Advertiser 1 can pay less for a higher position due to his high quality score.

How Does the AdWords Auction Work?

MORE ADWORDS FACTS

THE AD AUCTION & THE DISPLAY NETWORK

The ad auction works very similarly, but is triggered by "placements" or pages on Google AdSense where publishers make advertising space available for AdWords advertisers.

The core ranking components here are largely similar, with differences being:



Relevance is determined by **placement** rather than the query.



Bids are set at the **ad group level**, not the keyword level.



You may also specify **CPM bids** (by impression) which then compete with both CPM bids and CPC bids.

The Auction gets run billions of times each month. The results are such that:

- Users find ads that are **relevant** to what they're looking for
- Advertisers **connect** with potential customers at lowest possible prices
- Google rakes in billions of dollars in **revenue**

ALTERNATIVES FOR BIDDING

Google also allows other bidding methods other than CPC such as CPM or CPA:



CPM Bids – If a CPM bid is entered into an auction with CPM bids and CPC bids, eCPM is used to determine bid (the effective cost per 1,000 impressions for both the CPM bid and the CPC bid).



CPA Bids – When you use Conversion Optimizer and bid to a CPA, Google is determining your max CPC bids for you based on historical conversion data, and is attempting to hit either the average or max CPC you've set.

How to pay less for Ads

- if your Quality Score is very low, you're going to pay a lot for each click to achieve a certain Ad Rank, whereas another advertiser that has a much higher Quality Score will pay much less cost per click for the same keyword.
- If you have a website or landing page that contains authoritative and fresh content, optimized for your visitors and relevant for the keywords and ads that you're bidding for, even if your competition bids higher than you (spending more per click) you can still achieve a higher ad rank at a lower price.
- Work on their organic rankings also.

Click Fraud

- You click on competitors ads and finish off their budget, Google tries to detect multiple clicks from same browser/ip.
- You click on your ads to increase their quality and CTR.
- Botnets and click-farms

Advertising on the web and GOMC

(GOMC is google online marketing contest)

Prof. MAhmed@ashesi.edu.gh

Ecommerce Course at Ashesi University,
Accra, Ghana, 2/2011

Ads

- How is web different from physical ads?
- Targeted ads
- Search Ads
- Partner ads

Ads for search

A screenshot of a Google search results page for the query "flowers". The search bar at the top contains the word "flowers". Below it, a message says "About 332,000,000 results (0.30 seconds)" and a "Search" button. To the right is a link to "Advanced search". On the left, there's a sidebar with categories: Everything (selected), Images, Videos, News, Books, Places, Blogs, Realtime, and Discussions. Below that is a location section for "Accra" with a "Change location" link. At the bottom, there's a "Any time" section with links for "Latest", "Past 24 hours", "Past 2 days", and "Past week".

The main content area shows search results. The first two results are highlighted with purple ovals and labeled "Ads". The first ad is for "Flowers to USA for \$19.99 - Send Flowers to Your Loved Ones." from www.proflowers.com. The second ad is for "Send Flowers to the USA" from www.fromyouflowers.com. A third result, "Flower - Wikipedia, the free encyclopedia", is also highlighted with a purple oval.

Below the ads, there's a section titled "Free Pictures of Flowers and Flower Wallpaper Photos" with a link to www.flowers.vg/. At the very bottom, there's a "Images for flowers" section showing five small thumbnail images.

Side ads

Google

seeds

About 113,000,000 results (0.40 seconds)

Advanced search

[Souvenir Seeds Store](#)
Super Strains From Only \$19 £10 €12 Discrete, Secure Worldwide Delivery
www.theseedsstore.com

[Seed - Wikipedia, the free encyclopedia](#)
A **seed** is a small embryonic plant enclosed in a covering called the **seed coat**, usually with some stored food. It is the product of the ripened ovule of ...
en.wikipedia.org/w/index.php?title=Seed&oldid=51081111 - Cached - Similar
Seed (disambiguation) | Seed testing
List of edible seeds | Seedbed
Seedling | Seed saving
Granivore | Seed orchard
[More results from wikipedia.org »](#)

[The Seeds - Wikipedia, the free encyclopedia](#)
The **Seeds** were an American rock band. The group which repertoire spread ...
en.wikipedia.org/w/index.php?title=The_Seeds&oldid=51081111 - Cached - Similar

[Burpee Seeds and Plants - Vegetable, Flower, Home Gardening ...](#)
Seeds, plants and gardening supplies for home gardens - Large, exclusive selection: Heirloom and organic **seeds** and plants. Vegetable, flower, herb, fruit, ...
www.burpee.com/ - United States - Cached - Similar

Ads

[Garden Starts Nursery](#)
Selling vegetable, flower **seeds**
Visit us for Garden **seeds**
www.gardenstarts.com

[See your ad here »](#)

Google Adwords

Learn about AdWords

How it works	You create your ads You create ads and choose keywords, which are words or phrases related to your business. Get keyword ideas
Why it works	Your ads appear on Google When people search on Google using one of your keywords, your ad may appear next to the search results. Now you're advertising to an audience that's already interested in you.
Costs and payment	You attract customers People can simply click your ad to make a purchase or learn more about you.
For local businesses	Sign up now Next topic »

Keywords are what people search for on Google:



Your ad appears beside relevant search results.



You create your ads

- You create ads and choose keywords, which are words or phrases related to your business. [Get keyword ideas](#)
- **Your ads appear on Google**
- When people search on Google using one of your keywords, your ad may appear next to the search results. Now you're advertising to an audience that's already interested in you.
- **You attract customers**
- People can simply click your ad to make a purchase or learn more about you.

Google AdWords offers you

Targeted reach

- Now you can advertise to people searching on Google. Even if you already appear in Google's search results, AdWords can help you target new audiences on Google and our advertising network.

Greater control

- You can edit your ads and adjust your budget until you get the results you want. You can also display a variety of ad formats and even target your ads to specific languages and geographic locations.

Measurable value

- There's no minimum spending requirement or time commitment. And with the cost-per-click option, you're only charged if people click your ads. This means every dollar of your budget goes toward bringing new prospects to you.

Ad costs

- **Set your budget**
- There's no minimum spending requirement – the amount you pay for AdWords is up to you. You can, for instance, set a daily budget of five dollars and a maximum cost of ten cents for each click on your ad.
- **Avoid guesswork**
- We provide keyword traffic and cost estimates so you can make informed decisions about choosing keywords and maximizing your budget. ([Estimate keyword costs](#))
- **Pay only for results**
- You're charged only if someone clicks your ad, not when your ad is displayed.
- Payment options vary by country and currency. [Learn more](#)

Local and regional targeting!

- Set your ads to appear only to people searching in a particular region. Now it's easy to target online customers within, say, 25 miles of your front door.



Define a custom area to target around your business.

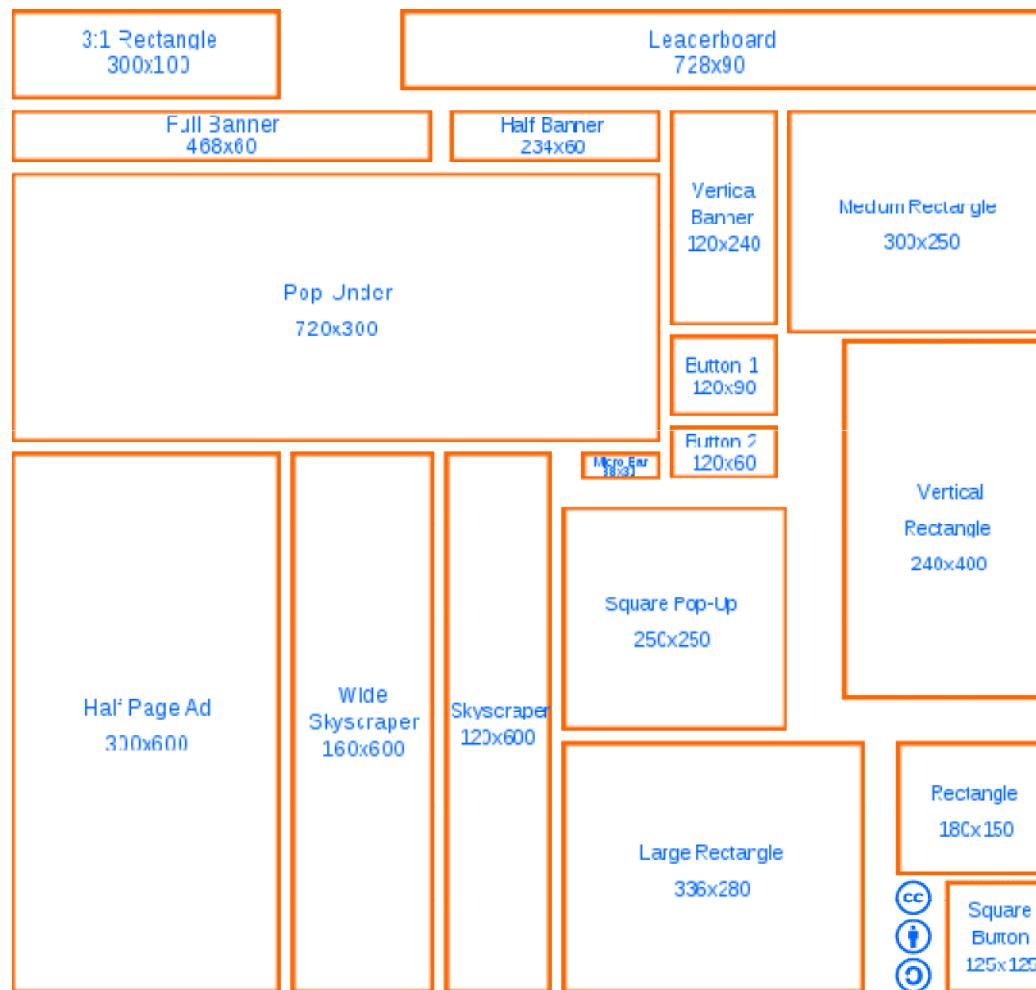


Promote your location with local business ads.

Acronyms

- **CTR - Clickthrough.**
- CPA - Cost per action
- CPC - Cost per **click**
- CPM - Cost per thousand
- CPI - Cost Per impression
- PPC - Pay per **click**
- Short click
- Click fraud.
- http://en.wikipedia.org/wiki/Clickthrough_rate

Banner ads - sizes



Ad Types

- **Interstitial ads** (**interstitial** means "in between") are a way of placing full page messages between the current and destination page.
- Pop up ads
- Flash ads
- Text ads

from http://en.wikipedia.org/wiki/Online_advertising

GOMC - Marketing contest

Timeline for GOMC 2011

- You can run your campaign over any three consecutive weeks between
- the 28th of January and 4th of June, 2010.
- Teams must submit their final report before June 11, 2010.
- Global and regional winners are announced July 2010.

Your Learning Objectives are:

- Given the opportunity, choose to discuss online marketing and media planning.
- Using examples, share the learning experience of group work and business consulting.
- Using examples, explain the following terms: banner advertisement, click-through-rate, conversion, landing page, optimization techniques, ROI and text advertisements.

Your Learning Objectives are:

- Using examples, contrast mass advertising and context-sensitive advertising.
- Using examples, illustrate technical and cultural factors affecting the success of online advertising campaigns.
- Using examples, illustrate the difficulties of developing a web-based marketing campaign that will stand out among the billions of web pages available.

Team

- Nominate a team captain. Your professor will receive instructions from Google and let you know the next steps.
- You'll need a team captain as part of this process. Your team captain will need to have a Google Account.
- See www.google.com/accounts/NewAccount.

Starting GOMC: Find a Business

- Select a business. Your team must agree with your professor on who you will work with.
- You must present the business with a copy of the 'Letter to Businesses' (included with this guide) and have them verbally agree to work with you.

Understand the Business

- Meet with your business and write your Pre-Campaign Strategy.
- To be successful in the Challenge, you will need to understand what the business does and what it hopes to achieve from online marketing.
- Allocate time to meet with them, write your Pre-Campaign Strategy and submit it to your professor and Google before you start your campaign. (Your professor will provide instructions on how to submit your reports to Google).

Setup Adwords

- Set up your AdWords account and begin your campaign.
- Once you receive your US\$200 account access, you should review the section in this guide titled ‘Making the Most of Your Campaigns’ for details on how to structure your account.
- Your campaign must run for three consecutive weeks between January 28 and June 4, 2010.
- Over these three weeks your team will check the results, run reports and optimize your campaign.

Reports

- Write your Post-Campaign Summary. Within no more than three weeks after your campaign ends and no later than June 11, 2010.
- Your team must write and submit the Summary to your professor and Google to be considered for regional and global judging. (Instructions on how to submit your reports to Google will be provided to your professor).
- Remember: Google MUST receive both your Pre-Campaign Strategy and Post-Campaign Summary on time!

Avoid

- Web Hosting
- Web Design Agencies
- Insurance Companies
- Mortgage Agencies
- Debt Consolidation Companies
- Multi-level Marketers -
http://en.wikipedia.org/wiki/Multi-level_marketing
- Distributors
- Affiliate Companies -
http://en.wikipedia.org/wiki/Affiliate_marketing

Landing page

- Finally, please note that the ‘landing page quality score’ of the website can affect your account performance.
- When selecting your business, ensure its website is suitable by reading the **landing page/website guidelines** at
<http://adwords.google.com/support/bin/answer.py?answer=46675&topic=9356>
- For further information on websites that typically have poor landing page quality, please see
<http://adwords.google.com/support/bin/answer.py?answer=66238>

Judging

- The contest has two components, Campaign Statistics that Google will assess and two written reports that academics will assess.

Campaign Statistics

1. Account Structure
2. Optimization Techniques
3. Account Activity and Reporting
4. Performance and Budget
5. Relevance

Account structure

- An Excellent account structure mirrors your client's website structure where possible. Your campaign(s) should be grouped according to product lines/themes or geography, and contain multiple Ad Groups specific to relevant subcategories.
- For example, a campaign for 'accessories' could have separate Ad Groups for 'bags' and 'jewelry'. Each Ad Group would then contain ad texts/variations specific to these subsections, and a targeted and specific keyword list.

B) Optimization techniques

- We will monitor how well you implement the suggested optimization techniques and best practices.
- In particular, we will monitor which of these techniques you implemented (e.g. keyword matching options) and how you optimized the Google network to your advantage, e.g. how effectively you used the content network.

E) Relevance

- Achieving a strong click-through rate is a key measure of how relevant your ads are and we will consider your click-through-rate when judging your account.
- To create relevant and effective advertising often means revisiting your campaigns and tweaking where necessary.

Written reports

- Pre-Campaign Strategy (30 points total, maximum four pages)... Communication and Readability (5 points)
- Client Overview (12 points) that describes your client business and
- Proposed AdWords Strategy (13 points) that helps your team craft and defend your draft AdWords Strategy. Combined, both components should be a maximum of four pages.. submit the Pre-Campaign Strategy to their professor and to Google.

Client profile

1. (2 points), a few sentences including some of the following. Please note that clients may not want to share some information.
2. Name, location
3. Sales and number of employees
4. Goods and services offered
5. Key online marketing personnel
6. Age of the company
7. url, website age, website management
8. Company presence and sales via online and offline channels
9. Other relevant information

Market Analysis

1. (4 points, a couple of paragraphs including some of the following)
2. Current and potential customers
3. Current and potential competitors
4. Overview of the industry (key characteristics, competitive/saturated/mature)
5. Projected and historical online spend for the industry
6. Market position/specialties
7. Unique selling points of the goods/services offered
8. Seasonality of their goods/services or seasonality that the company has identified
9. Other relevant market information

Current marketing

1. Current marketing (4 points, a couple of paragraphs including some of the following)
2. Website uses, e.g. sales, customer service
3. Website strengths and weaknesses
4. Website visibility, such as Google PageRank, incoming links, a few keyword search results, online advertising, and offline promotion of the url.
5. If available, summary information from Google Analytics or other third party web tracking software
6. Email campaigns
7. Offline advertising
8. Other online or offline marketing

Strategy

- Conclusion on how the AdWords campaign should align with the client's business (2 points, a few sentences) ..
- Proposed AdWords Strategy (13 points, about two pages including sample AdWords and keywords)

Proposed AdWords Strategy

- Number of Ad Groups and the focus for each Ad Group.
- Keywords and negative keywords
- Text for at least two AdWords versions for some Ad Groups
- Daily and weekly plans for spending their campaign budget
- Network(s) for their AdWords ads

Proposed AdWords Strategy

- Target audience settings
- Ad Serving options
- Keyword Bidding
- Geo-targeting
- Goals for impressions, clicks, CPC and CTR
- Proposed success metrics
- Other relevant information

Communication & Readability (5 points)

- The Pre-Campaign Strategy should have a logical flow, be easy to follow, and avoid grammatical mistakes.
- Post-Campaign Summary (70 points total, maximum eight pages).
- Post-Campaign Summary has five components: an Executive Summary (8 points), Industry Component (28 points) and Learning Component (14 points), Communication and Readability (10 points), and relevant use of Tables, Figures and Charts (10 points).

Industry Component (28 points, max five pages)

- This is the team's chance to share the results with their client and expand upon the Executive Summary.
- The ideal approach is to write the Industry Component first and then summarize this content for the Executive Summary.
- As a rule, you would include most if not all of your Charts, Tables and Figures in your Industry.

Campaign overview

1. Review the major campaign goals (strategic goals as well as metrics: CTR, CPC, and Impressions, etc.) set prior to the project and discuss your general strategies for approaching each goal.
2. Operational details (campaign dates, money spent, ad groups used). Review the basic schedule and cost structure you followed, your methods for monitoring the account, etc.

Evolution of Your Campaign Strategy:

- What were the major changes you made during the campaign and what led to these changes?
- How did these changes affect your campaign?

Key Results

Summarize your results based on three weeks of data, such as:

1. Overall performance of the campaign and individual ad groups.
2. Performance of the initial campaign and changes in performance following your optimization efforts.
3. Keyword combinations that were effective and ineffective.
4. Your success stories and quick, but clear references to failures you experienced.

Discussing performance

Refer to metrics such as:

1. Impressions
2. Clicks
3. Click Through Rate
4. Average Cost per Keyword
5. Total Cost of Campaign
6. Other metrics provided by the client, such as conversions

Conclusion

1. Synthesize the Industry Component, tie together the entire package and focus your client's attention on the key project aspects.
2. Take this opportunity to repackage information from the data section to display your practical lessons learned with the client.

Future Recommendations

1. Provide simple actionable and well-justified advice on your client's future online marketing, particularly in relation to AdWords and the website.
2. Learning Component (14 points, maximum two pages).

Reporting

1. Learning objectives and outcomes
2. Group dynamics - what problems ..
3. Client dynamics - what problems ...
4. Future recommendations - what would they do differently in the future to improve their campaign strategy, learning experience, group dynamics and client dynamics?

Future recommendations

What would they do differently in the future to improve their campaign strategy, learning experience, group dynamics and client dynamics?

Letter to Business

1. Teams must deliver the ‘Letter to Businesses’ to prospective clients.
2. Remember: think of yourselves as consultants, and the business as the client. That is, you work for the business and not the other way around.
3. Make sure the business understands everything that will happen and how you will follow up with them once the campaign ends.

Adwords

- AdWords is Google's sponsored link programme. Customers use AdWords to display ads on the pages of search engine results.
- These ads are published next to the organic search results, and, if required by the customer, on websites on the search network and sites associated with Google.

Adwords

- The advertiser only pays each time the user clicks on the ad, and accesses the advertised web page. Advertisers have full control over the targeting of their campaigns (by geography and language), the budget, the keywords that trigger the publication of their ads and the ad text.
- All these adjustments can be made easily and in real time. This section briefs you on what AdWords is, and how to set up and optimize your account.

Search vs Ads

- Organic Results vs Sponsored Links
- There are two kinds of Google search results: natural results (also known as organic) and AdWords results, classified as sponsored links.
- Sponsored links appear in the right-hand column, and sometimes at the top of the page.

Adwords

Google AdWords Advantages

1. Control
2. Segmentation
3. AdWords
4. Relevance
5. Monitoring

Targeting

- It is also possible to direct campaigns at geographic segments and languages.
- For example, an advertiser who offers home repair services in Seville can display ads only for users located in Seville and who carry out Google searches in Spanish related to home repair services.
- The more targeted the geographical and language settings, and keywords lists, the more chance of a profitable campaign.

Relevance

Google AdWords campaigns offer advertisers the possibility of displaying their ads for a user's search term in a highly relevant manner.

The ads are shown to an audience carrying out an active search, whose receptiveness at that time is very high.

CPC

- Costs (Cost Per Click/Budget)
- The CPC is the maximum an advertiser will pay for a click on an ad. In choosing a maximum CPC for an ad group or a keyword, advertisers ensures that they will never pay more than this defined amount each time the ad registers a click.
- CPC is also a key value that affects ad position.

Daily budget

- The daily budget is the amount that the advertiser pays daily for a given campaign.
- For example, if an advertiser has two campaigns in an account, one with a daily budget of €10.00 and the other €20.00, the total daily budget is €30.00.
- The monthly cost of the whole campaign is €900.00.
- According to this model, if this advertiser established a maximum CPC of €0.20 per keyword, and the entire monthly budget of €900.00 was used, the advertised web pages would have received at least 4,500 visits from users who carried out searches related to the advertiser's business.

Keyword Bidding

The Google AdWords system uses dynamic bidding. There are no pre-established keyword prices; rather, the advertisers decide on the maximum price they will pay for their ads to appear on the search results page (from €0.01).

This price is a key factor that determines ad position in relation to the competition. Just as with the daily budget, the maximum CPC bid can be modified frequently and with no cost to the advertiser.

Ad Rank

- The position in which the ad appears on the Google search results page, Ad Rank, depends on two main factors: maximum CPC bid and the quality of the ad and keywords.
- The Google AdWords system compares the performance and relevance of the keywords and the ad text with the searches carried out to establish a Quality Score.
- This score, combined with the ad's maximum CPC bid, determines the ad position.

Ad Quality

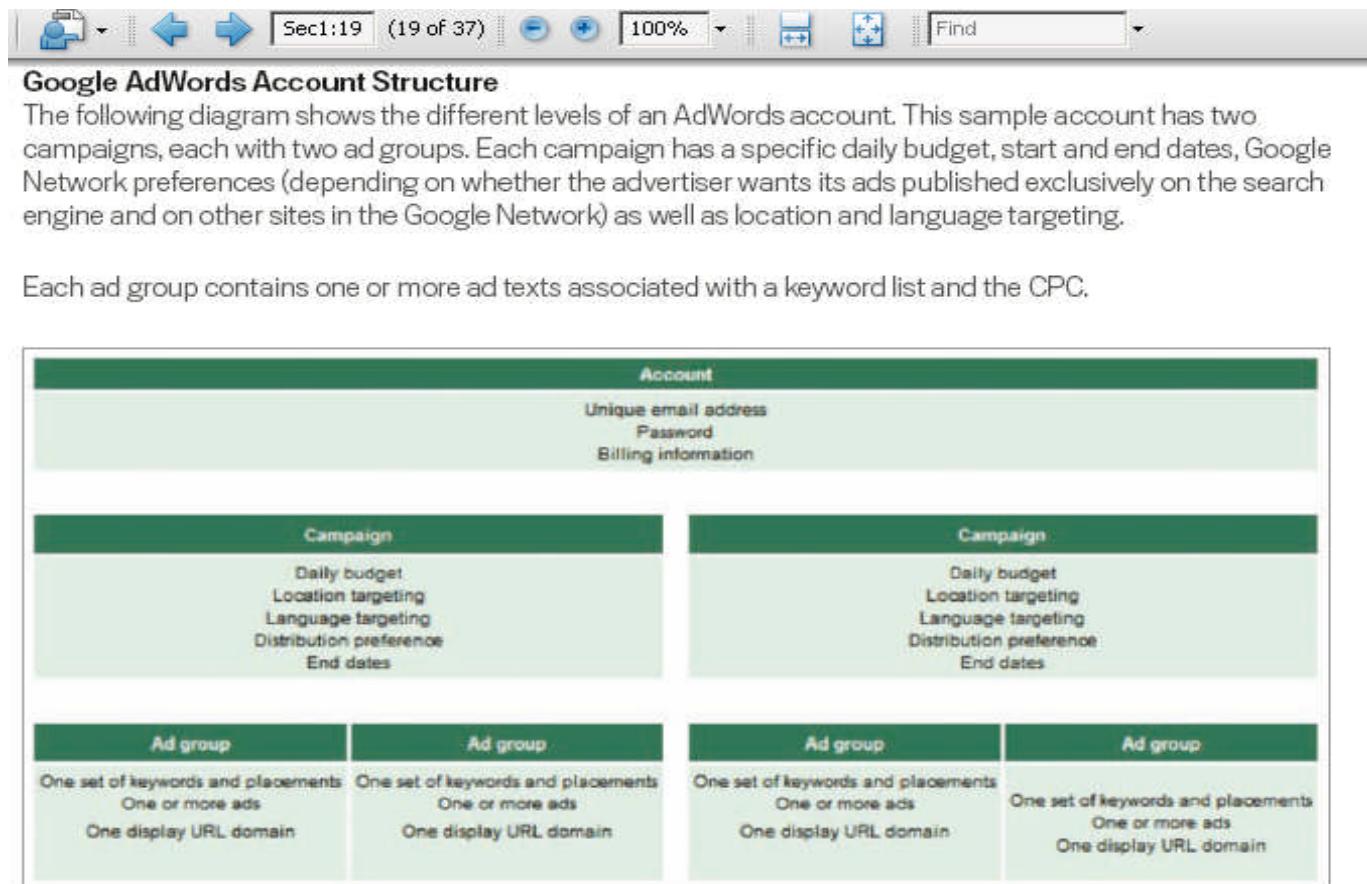
- Calculating the CPC and Quality Score
- Ad Ranking = CPC x Quality Score
- This equation rewards advertisers with an organised and relevant campaign.
- Thus, an advertiser with a maximum CPC lower than that of competitors can publish ads in higher positions if the ads are a higher quality.

Quality Score

- The Quality Score awarded to ads depends mainly on the percentage of clicks, also called click-through rate or CTR. The higher the percentage of clicks (CTR) that an ad receives, the higher the Quality Score.
- Therefore, advertisers should ensure they have very well targeted keywords lists and attractive ad texts, in order to achieve good CTR scores. The CTR formula follows:
- $\text{CTR} = \text{Clicks} / \text{Impressions} \times 100$

- CTR = Clicks / Impressions x 100
- Other Quality Score factors include the relevance of the ad and its keywords in relation to the searches carried out, the account history (overall CTR of all ads and keywords) and other indicators such as landing page quality.
- The following example demonstrates how advertiser A, with a lower maximum CPC bid, displays ads higher than advertiser B.

Ad groups



Dos and Don'ts

for account structure and campaign management

Do...

- create multiple Ad Groups per campaign
- group Campaigns by theme, geography or product line
- make it easy to maintain
- continue refining your keywords and ad text

Don'ts

Don't...

- create just one Ad Group and a big list of keywords
- mismatch keywords in one Ad Group
- run dozens and dozens of keywords with a low CPC
- stop checking your campaign statistics

Choosing Keywords

- To select keywords that will deliver an ad, put yourself in the place of users who are going to search. Which terms would they use?
- The best solution is to make a short list of keywords that are neither too general nor too specific.
- Then expand on this list, including possible variations of these words (such as both singular and plural terms, different spellings, synonyms, etc.).
- Keywords need to be tightly themed and relevant to the ads. Include specific keywords that directly relate to the specific theme of your ad group and landing page.
- For optimal ad visibility, include relevant keyword variations, along with singular and plural versions.

Relevance is key

- The keywords should relate closely to the goods or services you are advertising.
- If you are selling roses, use specific keywords such as Buy red roses rather than generic keywords like Flowers.
 - Generic keywords may be searched for more frequently, but the people searching for may not necessarily be interested in what you are offering.
 - You will receive better results with keyword phrases such as 'Red roses to your door' or 'Long-stemmed roses'.
- To determine the Ad Rank, the position your ad appears in, AdWords takes into account how relevant your ad and your website are to each search query (quality factor).
 - If your keywords are not relevant, your ad may appear a long way down the column of sponsored links or not at all.

Keyword tool

- Use the Keyword Tool
- Use the Keyword Tool to find relevant keyword ideas. You can access the tool at
- <https://adwords.google.com/select/KeywordToolExternal?hl=en-GB>
- Experiment!

Keyword Match Types

Broad Match is the default match setting.

If your ad group contains the keyword ‘tennis shoes,’ your ad is eligible to appear when a user’s search query contains either or both words ('tennis' and 'shoes') in any order, and possibly with other terms.

Your ads could also show for singular/plural forms, synonyms, etc.

Broad match keyword:

1. tennis shoes

Ads may show on searches for:

1. tennis
2. shoes
3. buy tennis shoes
4. tennis shoe photos
5. running shoes
6. tennis sneakers

Phrase Match

- If you enter keywords in quotation marks, as in ‘tennis shoes,’ your ad is eligible to appear when a user searches for the phrase tennis shoes, with the words in that order.
- Your ad can also appear for searches with other terms as long as the search includes the exact phrase you specified.

Phrase match keyword

Ads may show on searches for:

1. ‘tennis shoes’ red tennis shoes
2. buy tennis shoes
3. tennis shoes photo

Ads won’t show on searches for:

1. shoes for tennis
2. tennis shoe
3. tennis sneakers

Phrase match is more targeted than broad match, and more flexible than exact match.

Exact Match

- If you surround your keywords in brackets -- such as [tennis shoes] -- your ad is eligible to appear when a user searches for the specific phrase 'tennis shoes,' in this order, and without other terms in the query.

Ads won't show on searches for:

- [tennis shoes] tennis shoes red tennis shoes
- tennis shoe
- buy tennis shoes

- Negative match

- If your keyword is ‘tennis shoes’ and you add the negative keyword ‘-used,’ your ad will not appear for any searches that contain the word ‘used.’

Keywords: Ads may show on searches for:

1. tennis shoes tennis shoes
2. -used buy tennis shoes
3. tennis

Ads won’t show on searches for:

1. used tennis shoes
2. shoe used for tennis

Ad text

Ad Text

A Google AdWords ad comprises a headline, two description lines, a Display URL and a Destination URL that the user will be directed to after clicking on the ad.

Ads can contain (including spaces) a headline of up to 25 characters, an ad text of 70 characters, and 35 characters for the Display URL. This all appears in four lines: one for the headline, two for the ad text (in two lines of 35 characters) and one line for the Display URL.

New text ad

Headline	Get visits from Google
Description line 1	Advertise in AdWords
Description line 2	Your campaign active in few minutes
Display URL	adwords.google.com
Destination URL	<input type="text"/> http:// adwords.google.com

Ad preview

Get visits from Google
Advertise in AdWords
Your campaign active in few minutes
adwords.google.com

Ad text

A Google AdWords ad comprises a headline, two description lines, a Display URL and a Destination URL that the user will be directed to after clicking on the ad.

Ads can contain (including spaces) a headline of up to 25 characters, an ad text of 70 characters, and 35 characters for the Display URL.

This all appears in four lines: one for the headline, two for the ad text (in two lines of 35 characters) and one line for the Display URL.

How to Write Attractive Ad Text

Ads must be direct and targeted. It is important to include practical information for potential customers, while at the same time bring their attention to features that differentiate the business from its competitors.

If advertisers search Google with the chosen keywords in their listing, they can check the level of competition for those keywords and write ads that take into account the texts used by other companies.

A campaign's success or failure depends largely on the quality of its ads.

Headline

Try to include the advertised good or service in the headline.

A common mistake is to include the business name, which usually already appears in the Display URL, in the headline.

Users rarely search for the business name except for extremely well known brands.

If the user's search term is in the ad text, the term appears in bold when the ad is published, giving it high search result exposure.

This effect is maximised in the headline, which already appears in a larger font.

Description Lines

Lines 2 and 3 must describe the good or service.

It is very important for this text to be clear and informative.

Attract the consumer's attention by including a price, an offer, a call to action, any information that gives you an advantage over the competition.

URL

- The Display URL field must include the website's domain. This URL is visible to the user in the ad.
- The Destination URL, which is not visible in the ad, links to the web page that users will be taken to when they click the AdWord.
- The URL can be the same as the Display URL, but this field can also take the user directly to a specific web page that contains explicit offers, contacts, registration, etc.

Tips on writing effective ad texts

- Distinguish yourself from the competition.
- Tell users what they can expect from your website and your company with keywords such as excellent service, good value, professional, competent, and quick.
- Incorporate a call to action in your ad.
- It's better to say Buy flowers rather than Flowers for sale.
- If you are selling in a specific town, give the name of the town!

Tips on writing effective ad texts

Use the most important keywords in the ad text.

If search terms appear in the ad, they will appear in bold. This bold text increases the ad's chance of being noticed and subsequent clicks.

Experiment with ad variations.

Let your audience decide the best ad text.

Create multiple versions of your ad and then investigate which ones receive the most clicks.

Remember: Costs incur only when someone clicks on your ad.

Good vs Bad Ad

Good ad text

Masters in Marketing

Approved courses, work placement.

10% discount if you register online!

www.mastersacademy.net

Bad ad text

Academy.net

Academic courses

Tel: +34 902 34 34 34.

www.mastersacademy.net

Content Network and Placements

Google's content network includes millions of high-quality websites, news pages and blogs that partner with Google to display targeted AdWords ads.

Advertisers that display their ads on the content network, increase their advertising reach to target potential customers who visit these sites.

AdWords advertisers can manually select sites on the content network or let Google's targeting technology display their ads on the most relevant pages for advertisers goods and services.

Create Adwords account

The next step is to set the time zone and currency. For the Challenge, please choose US dollars (US\$) as your preferred currency and DO NOT enter any billing information.

Write down the CID number.

Creating your First Campaign

1. Click on the Create your first campaign button.
2. Choose a name for your campaign.
3. Choose what geographical locations you want your ads displayed.
4. Select which languages you want your customers to read.
5. **PAUSE** every campaign you created.
Failure to pause your campaigns will cost your budget and hinder your campaigns.

CPC too low

If your CPC bid limit is too low, your budget may not be used up in the first few days.

If this happens, increase your CPC bid limit after a few days or add more keywords.

Experiment

If your budget is fully used up, you can either increase your budget in order to get more website visitors, or you can optimize your keywords, i.e. pause more expensive keywords and add new keywords.

You can change your CPC bid at any time. The best thing is to get started and begin experimenting.

Invite team members

- Enter the email address and name of the person you want to invite.
- Enter professor's email.
- Professor will verify your accounts.
- Enter the email addresses of your team mates.

Companies

- Beaconbooksgh.com NGO Beacon Books
- www.axisocl.com AXIS
- www.ashesi.edu.gh NGO Ashesi
- (please search online) COFA
- sci-fiwebtech.com. Sic-Fiwebtech
- thevillageofhope.com/ NGO Village of Hope
- (please search online) Leading ladies network
- www.womenstrust.org NGO Women's trust
- Ghanablogging NGO Ghanablogging.com
- GrassrootsAfrica (verify the website) NGO GrassrootsAfrica.org.gh

Homework

Each group – submit writeup of $\frac{1}{2}$ page on the website you want to advertise, good writeups will get first choice.

From Monday lab:

- submit printout of two coupons you created.\
- Submit printout of your website/landing page you created in xampp.
- Submit text of 5 good and 5 bad (spam) ads on the internet (we will use it later).

Bad ad examples

Google

study guide copper hno3 sulphat

Search

About 2,430 results (0.15 seconds) Advanced search

rything	Chemistry Formula List Part 1 (Examville.com)	Ads
ges	22 Sep 2010 ... Only All chloride salts are not decomposable by heat certain sulphate salts are decomposed ... Example: Zinc sulphate , Copper (II) sulphate , Iron (III) sulphate NH ₄ Cl ... It is soluble in - diluted HNO ₃ White precipitate is 2- formed.	Chemicals Order premium quality products from the specialty chemicals company www.lanxess.in
eos	Examville.com Organic Chemistry Study Review Guide - Benzene ... www.docstoc.com/.../Chemistry-Formula-List-Part-1-(Examvillecom) - Cached	See your ad here »
vs		
pping		
iks		
CBS		
3S	Nomenclature Worksheet # 4 24 Sep 2009 ... CuNO ₃ copper (I) nitrate 9. francium	
albme	germanate Fr ₂ Ge ₃ O ₁₂ 29 ...	

Untargeted ad (which keyword was used?)

Google

html tag name value reference Search

About 165,000,000 results (0.23 seconds) Advanced search

Everything

- Images
- Videos
- News
- Shopping
- Books
- Places
- Blogs
- Realtime
- Discussions

The web

[Links in HTML documents](#)

An anchor **name** is the **value** of either the **name** or **id** attribute when used in the ... that **id** and **name** must be the same when both appear in an element's start **tag**: ... in the **HTML DTD**, the **name** attribute may contain character **references**. ...

Introduction to links and anchors - The A element - Document relationships: the ...

www.w3.org/TR/html401/struct/links.html - Cached - Similar

[HTML input tag](#)

In **HTML**, the <input> **tag** has no end **tag**. In **XHTML**, the <input> **tag** must be properly closed, like this <input />. ... **name**, **name**, Specifies a **name** for an input element, STF ... **value**, **value**, Specifies the **value** of an input element, STF ... Tutorials, references, and examples are constantly reviewed to

Ads

Name

1000s of Baby Names by Gender, Origin, Meaning, Free Registration.
babynamewinder.babycenter.in

[See your ad here »](#)

Conversion Tracking

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4/2015

After good CTR, what next?

1. How many of those clicks are actually resulting in sales.

1. Conversion tracking is a powerful tool in AdWords that lets you identify how well your ad campaign is generating leads, sales, downloads, [email sign-ups](#), and other key actions for your business.
2. The data recorded by conversion tracking allows you to identify which areas of your campaign are working and not working, so you can optimize your bids, ad text, and keywords accordingly.

CT (conversion tracking)

- Depending on your business, a conversion could be counted when a customer makes a purchase through your website, signs up for a newsletter, fills out an online survey or contact form, downloads an app or whitepaper, calls a phone number from a mobile phone, and so on.
- After you've identified what customer actions you want to track as conversions, it takes just a few simple and free steps to get conversion tracking up and running for your campaign.

Setting up CT

- Setting up conversion tracking involves generating a bit of HTML code in AdWords that you paste into the webpage on your site that customers visit immediately after completing the conversion (such as an "Order Confirmation" or "Thanks for Your Email" page).
- Click on the [**Tools and Analysis tab in AdWords**](#), and select **Conversions** from the drop-down menu, which brings up the **All conversions** page. Click on the **Conversions** tab, then click the **+Conversion** button to create your first conversion.

CT setup in Adwords

✓ New Conversion ✓ Settings Next steps

Who makes changes to the code on your website?

Someone else makes changes to the code
Choose this option to send an email with the code to your webmaster or someone else.

I make changes to the code
Choose this option to copy and paste the code we generate into your webpage's HTML.

Copy the code in the box below. Then, paste the code between the <body></body> tags of the page you'd like to track.
[Learn more](#)

For example, paste this code into the webpage the user sees after signing up for your newsletter

```
<!-- Google Code for Contact Us page visits Conversion Page -->
<script type="text/javascript">
/* <![CDATA[ */
var google_conversion_id = 1021600786;
var google_conversion_language = "en";
var google_conversion_format = "3";
var google_conversion_color = "ff6600";
var google_conversion_label = "lc9wCI76mgUQksiR5wM";
var google_conversion_value = 0;
/* ]]> */
</script>
```

Analyzing Your AdWords Conversion Data

You can see information about your conversions from the Campaigns tab at the ad group, ads, and keywords levels. Click the **Columns** tab, then **Conversions**, to customize which columns appear.

Some of the basic columns include:

1. **Conv. (1-per-click)**: Counts each time you receive one or more conversions from a single ad-click. You can use this number to approximate the number of new customers you're getting.
2. **Cost / conv. (1-per-click)**: Displays your cost (how much you spent on clicks) divided by your total conversions. This helps you measure your return on investment (ROI). Ideally, you should be spending less on clicks than you're earning on conversions.
3. **Conv. rate (1-per-click)**: Shows the percentage of clicks that resulted in conversions. The higher the percentage, the more effectively the ads or keywords are performing.
4. **View-through conv.**: Measures the number of times a customer viewed, but did not click on, your ad and later went through with a conversion.

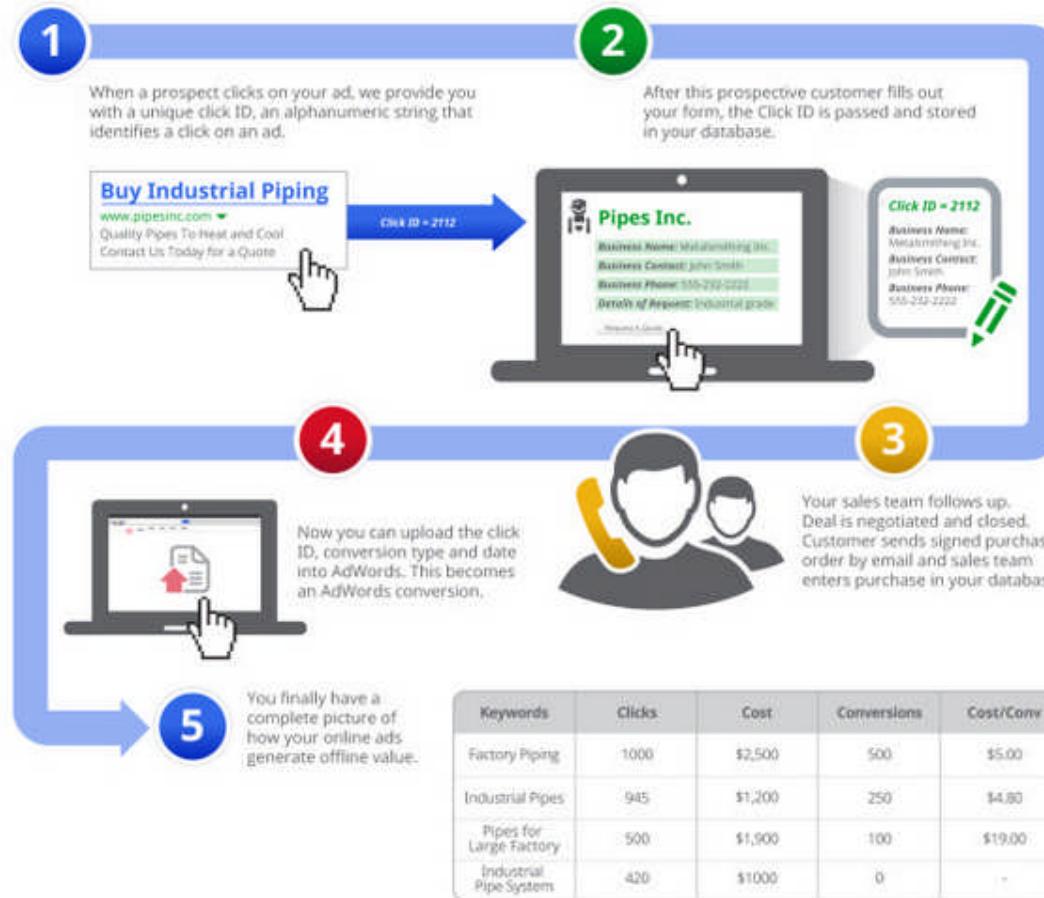
Funnel and Weak ROI

- Campaigns receiving many clicks and few conversions might represent a weak return on investment(ROI) if the ads cost more to run than the business is earning back through conversions.
- Examining Search Funnels data and reviewing ad text and keywords might help you understand why customers are failing to convert once they reach your website.

Fixing Low Conversions

1. Is the landing page unappealing? Does the website make it difficult for customers to navigate through to the conversion page?
2. Do the ads and keywords set up expectations about a product that the website does not deliver
3. (for example, do your ads appear when a customer searches for "cheap handbags" but take them to a website that sells expensive designer handbags?).
4. Try to put yourself in the customer's shoes to figure out why customers who click on your ads aren't going all the way.

Tracking Offline Conversions

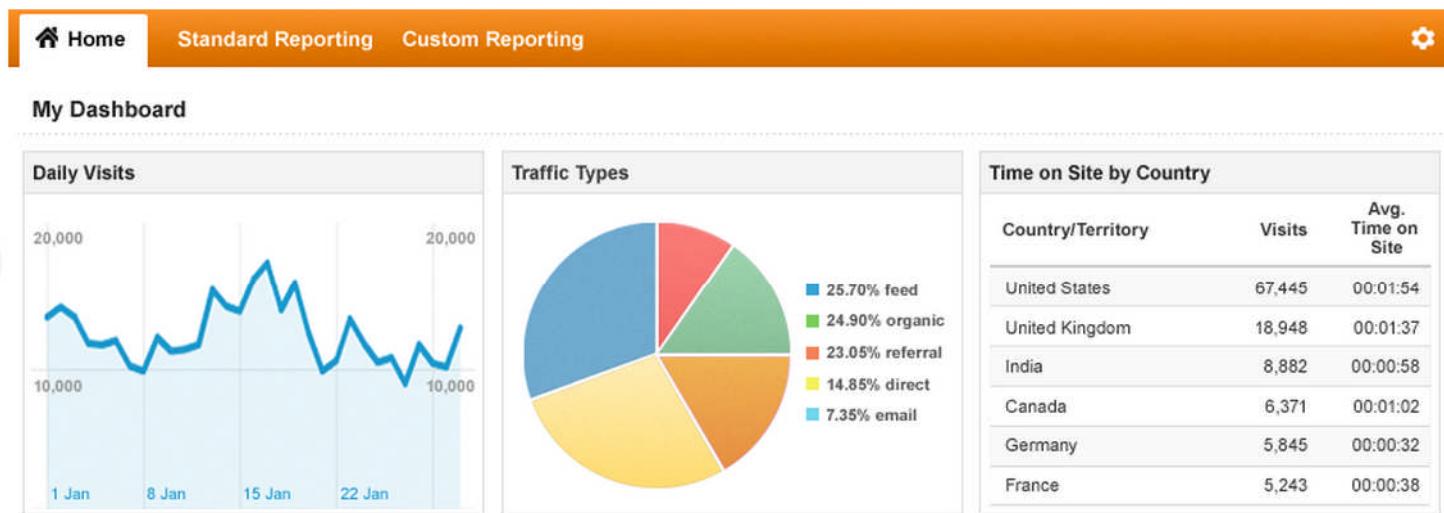


AdWords Offline Conversion Tracking

References

1. <http://www.wordstream.com/blog/ws/2013/08/13/adwords-conversion-tracking-guide>

Google Analytics



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4/2015

GA (Google Analytics)

1. GA is a freemium web analytics service offered by Google that tracks and reports website traffic.
2. Began in 2005 after Google acquired Urchin.
3. 50% to 66% of top million websites (Alexa rating) use GA.
4. Available whether they use Adwords or not.

GA Features

1. Integrated with AdWords, users can now review online campaigns by tracking landing page quality and conversions (goals).
2. Goals might include sales, lead generation, viewing a specific page, or downloading a particular file.

How

1. Google Analytics is implemented with "page tags" (tracking code in javascript called ga.js).
2. The website owner adds GA tracking code to every page of the website.
3. The tracking code runs in the client browser when the client browses the page (if JavaScript is enabled in the browser) and collects visitor data and sends it to a Google data collection server

Cookies in ga.js

- The tracking code sets first party cookies (If cookies are enabled in the browser) on each visitor's computer.
- These cookies store anonymous information such as whether the visitor has been to the site before (new or returning visitor), the timestamp of the current visit, and the referrer site or campaign that directed the visitor to the page (e.g., search engine, keywords, banner, or email).

References

I have been asked on numerous occasions to audit an Adwords campaign to “see if it is being managed properly.” Here is a checklist of some simple things you should be looking for when quickly auditing an account.

1. Conversion Tracking

I have come across too many accounts where advertisers are spending thousands of dollars on Adwords without any sort of tracking. Without having some sort of conversion tracking (Adwords) or goal tracking (Google Analytics) there is no way to measure the success of your Adwords campaign. The easiest way to see if an account has conversion tracking setup is to look in the conversions section under the tools menu in Adwords.

2. Campaign Architecture

Usually a sign of poor campaign architecture is the lack of multiple campaigns setup within the client’s account. Of course there are exceptions to this concept, but an account with only one campaign is usually a red flag for the clients we work with. Make sure ad groups are tightly themed and that branded keywords are always placed in their own campaign so you manage budgets efficiently for branded and generic terms.

3. Keyword Match Type

A common occurrence I see when looking at keyword match type is accounts strictly running broad match keywords. I see how this can happen since the default match-type when you add a keyword is broad. This can be very dangerous as Google will most likely match your ads to irrelevant search queries which in the end can waste spend. If you are running all broad match keywords you should also be running the exact, phrase & modified broad match of that keyword as well. This will give you more control in bidding and keep your traffic relevant.

4. Ad Copy Testing

You are only required to have one ad copy per ad group to get your ads running but this is also very detrimental to your Click-Through Rate (CTR), which impacts Quality score, which

impacts your Cost-Per- Click (CPC). Too often people will run a single ad copy per ad group and not test ad copy to maximize CTR. At a minimum you should always have two sets of copy for lower traffic campaigns and up to four for high traffic campaigns. The key is to be able reach statistical significance in a reasonable time frame (2 – 4 weeks).

5. Ad Extensions

Ad extensions are simple features that can be implemented for almost any client. The three main ones to look for in an audit are site-links, call extension & location extension. Ninety-nine percent of the time one of these extensions will make sense for an advertiser. Not having any of these is a red flag warning. I think site-links are the most impactful because they give advertisers additional ad space and links to internal pages. It is essentially additional ad space for free, so why not take it?

6. Network Settings

When discussing network settings in an Adwords account it is important to check if a campaign is running search and display in the same campaign. Running both search and display is a default setting in Adwords, and as a result many advertisers are not aware that they are opting into both. When this happens, display will usually end up eating away about ninety percent of your budget, which leads to lower quality traffic. Bottom line, always separate out your search and display campaigns.

7. Budgeting

If you are ever auditing an Adwords account and the first thing you see on the campaign dashboard is “limited by budget” this is a sure sign that you are either missing out on additional traffic or you are paying too much for each click. Either increase your campaign budget or look for keywords that you are bidding too high on that are eating up your budget. At the end of the day you would rather get two clicks for \$1 spent than one click for \$1 spent even if that means sitting in a lower ad position.

8. Mobile Bid Adjustments

Ever since Google introduced Enhanced campaigns you can no longer run mobile specific campaigns. Now you are automatically targeting mobile devices

when you create a campaign so make sure when looking at an account that mobile bid adjustments have been made. This can be found under the campaign settings tab in both the Adwords UI and Adwords Editor. Mobile and desktop devices will never perform the same so you always need to make the proper bid adjustments. If you don’t want to target mobile devices the workaround is to set a -100% bid adjustment.

9. Negative Keywords

If any campaign has phrase, modified broad or broad match keywords and doesn’t have a negative keyword list to accompany it then something is wrong. In order to minimize irrelevant traffic it is crucial have a negative keyword list to minimize wasted spend. The quickest way to see this is to run a search query analysis under the keywords tab and look at all the poor queries that are triggering your ads.

10. Keyword Level Bidding

When looking at keyword level bids, and “Max CPC’s” are set to the “default” ad group level bid this is a sign that there is a lack of bid control and any sort of bidding strategy going on. You always want to make sure keyword bids are set at the keyword level. No matter how tightly grouped your ad groups are no two keywords will perform the same. Make sure you have a stepped approach when setting keyword level bids, especially when you are bidding on multiple match types for the same keyword.

AdSense

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3/2015

Question

Q. How can a small website make money on internet by Advertising?

Answer: AdSense

Q. How can a website make money on internet?

A. By Showing Ads to the viewers of its website. Since Ads logistics are difficult, you can ask Google AdSense to show Ads on your website. Google will Charge the Advertisers and give you a part of the revenue.

AdSense Ad Formats

The screenshot shows the Google AdSense interface for creating a new ad unit. The left sidebar has 'Content' expanded, with 'Ad units' selected. The main area is titled 'Content > Create new ad unit'. The 'Name' field is set to 'MyBlog Test Ad Banner'. The 'Size' dropdown is set to '468 x 60 - Banner'. A dropdown menu for 'Ads' is open, showing various formats under 'Recommended' and 'Other'. The '468 x 60 - Banner' option is highlighted with a mouse cursor. Other visible options include Medium Rectangle, Large Rectangle, Leaderboard, Wide Skyscraper, Half Banner, Skyscraper, Vertical Banner, Square, Small Square, Small Rectangle, and Button sizes.

Name: MyBlog Test Ad Banner

Size: 468 x 60 - Banner

Ads

Recommended

- 300 x 250 - Medium Rectangle
- 336 x 280 - Large Rectangle
- 728 x 90 - Leaderboard
- 160 x 600 - Wide Skyscraper

Other - Horizontal

- 468 x 60 - Banner
- 234 x 60 - Half Banner

Other - Vertical

- 120 x 600 - Skyscraper
- 120 x 240 - Vertical Banner

Other - Square

- 250 x 250 - Square
- 200 x 200 - Small Square
- 180 x 150 - Small Rectangle
- 125 x 125 - Button

Link units

- 728 x 15
- 468 x 15

Page RPM

- Page revenue per thousand impressions (RPM) is calculated by dividing your estimated earnings by the number of page views that you received, then multiplying by 1000.
- Page RPM = (Estimated earnings / Number of page views) * 1000
- For example, if you earned \$0.15 from 25 pageviews, then your page RPM = $(\$0.15 / 25) * 1000 = \6.00 .

BAd Sense

[2014] We (Google) had blacklisted more than 200,000 total publisher pages, an encouraging decline from last year, and disapproved more than 3,000,000 attempts to join our AdSense network.

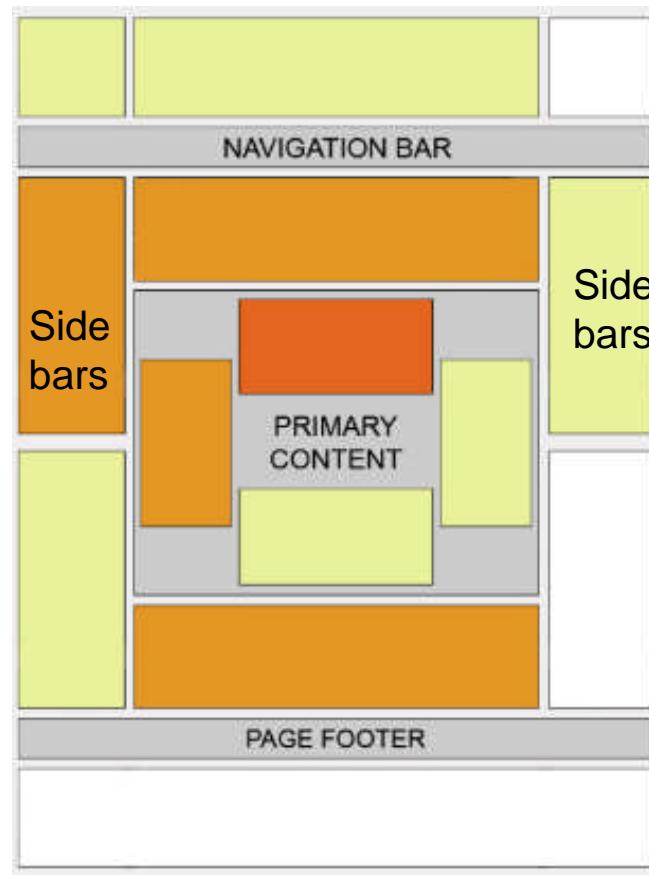
We also **removed more than 250,000 publisher accounts** for various policy violations.

References

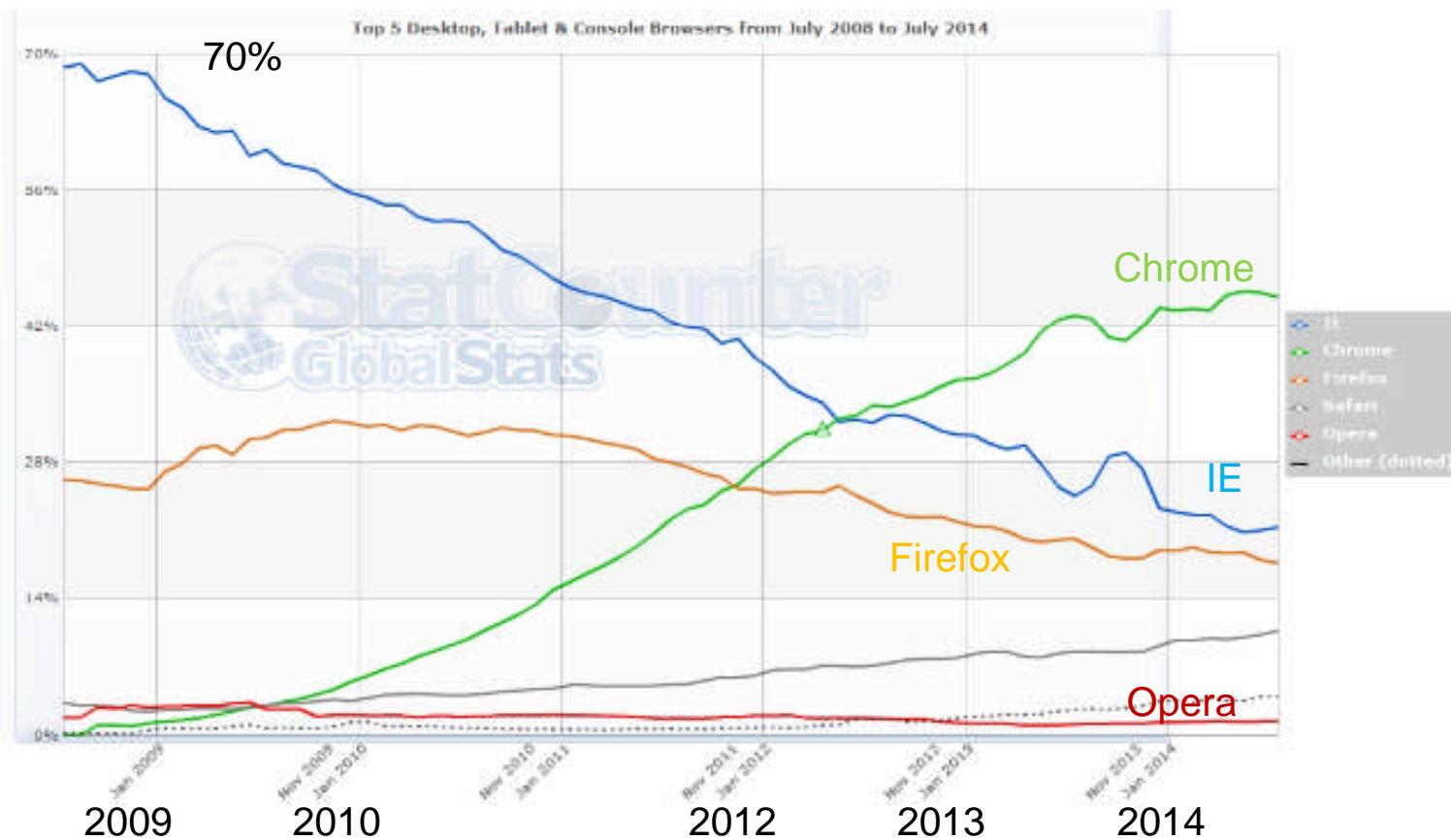
Usability

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The webpage



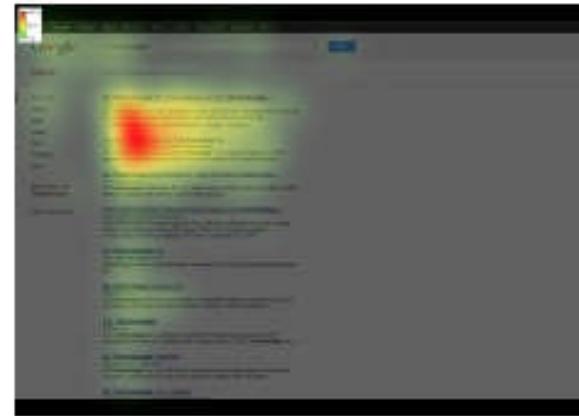
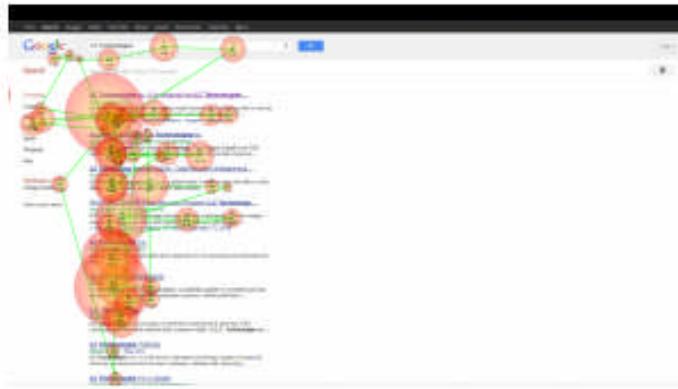
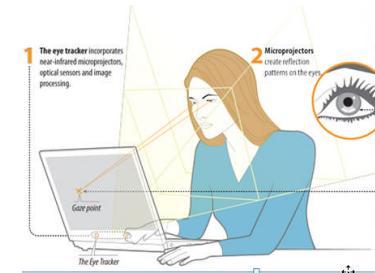
The Browsers



Eye Tracking in Market Research

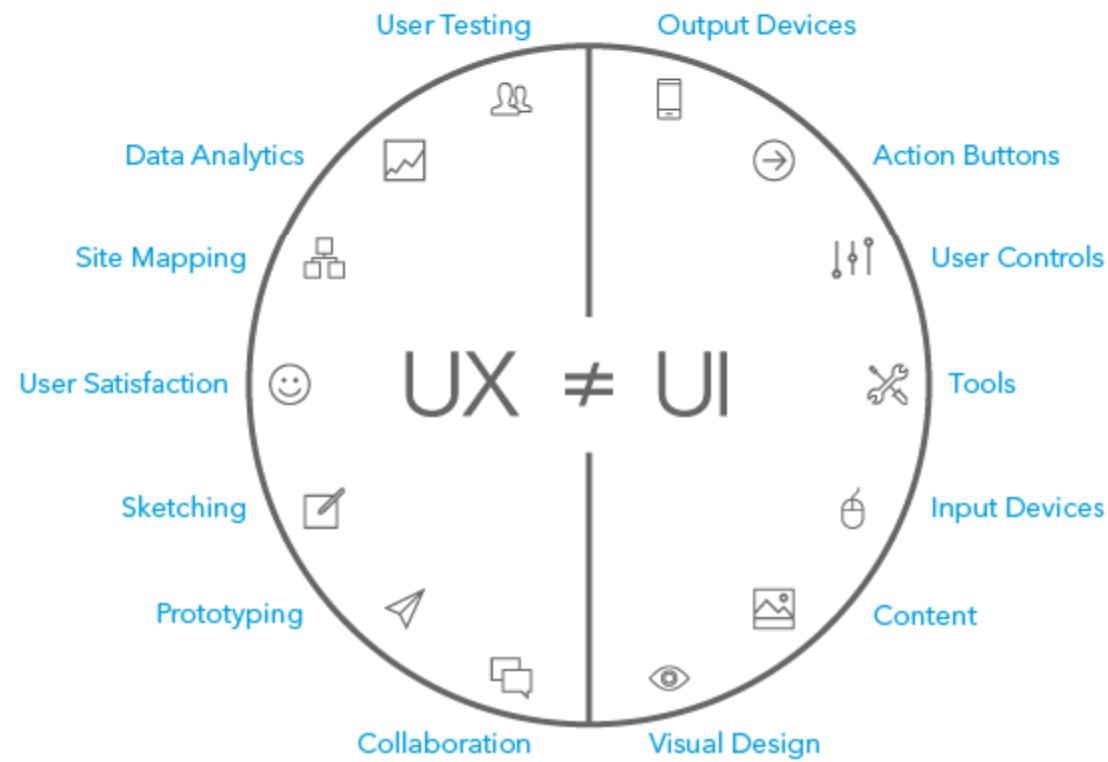
- Eye tracking has become an extremely powerful tool in market research.
- Knowing what people see and – more important – what they miss is the key to an effective marketing campaign which turns people into buyers.
- Eye tracking allows us to stop guessing and use the unique features to get proof into peoples' attention and behavior.
- Imagine looking through your customers' eyes to evaluate the impact of your marketing.
- Find hidden deficiencies and compare it to the campaign of your competitors.

Eye tracking reports



1. What attracts users attention and where should relevant content be placed?
2. How do clicks on a page relate to what the user observed?

UI vs UX



Search

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3/2015

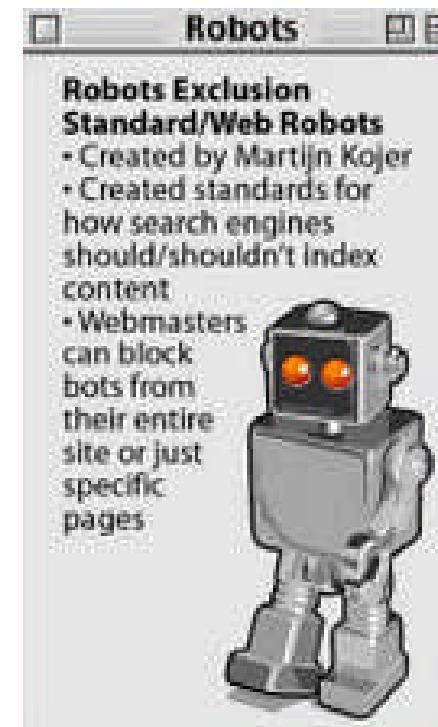
SEO Terms



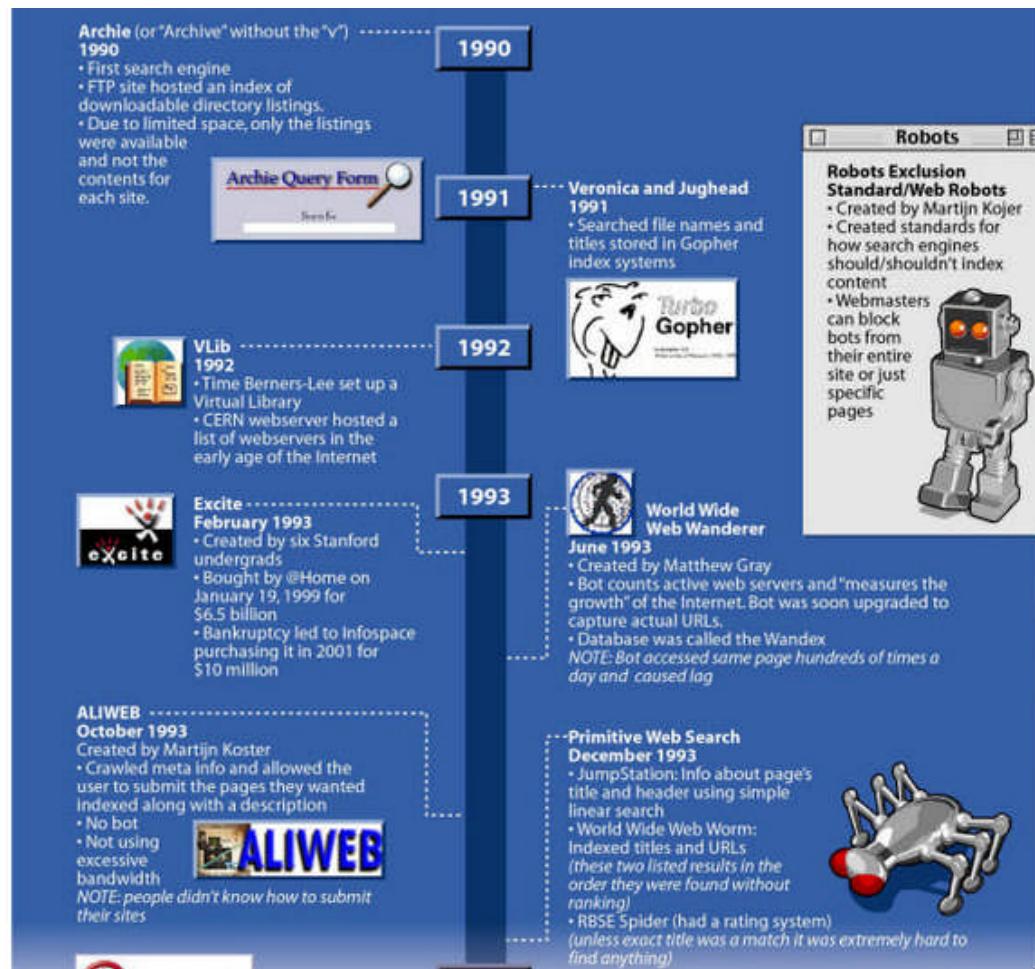
from <https://markjowen.wordpress.com/tag/google/>

Robots

- Robots.txt is a file telling search engines (robots) which files to NOT index.



History 1990-1994



History 1994-1996

1994

Infoseek
January 1994
• Webmasters could submit a page in realtime
December 95: Netscape began using them as their default search

E|Net Galaxy
January 1994
• Efficient in its utilization of different web search features
• Unnecessary library due to small size of Internet

WebCrawler
April 1994
• First crawler that indexed entire pages
• Too popular to be used during daytime
• **June 1995:** AOL buys WebCrawler
• **1997:** Excite bought out WebCrawler
• AOL begins using Excite

AltaVista
January 1994
• Unlimited bandwidth (for the time)
• First to allow natural language queries
• Advanced searching techniques
• Add or delete your own URL within 24 hours
• Search tips and new features
• Inktomi and Google sent them into irrelevancy
February 2003: Overture intends to purchase AltaVista for \$80 million in stock, \$60 million in cash
• Yahoo bought Overture in 2003

YAHOO! SEARCH
April 1994
• Created by David Filo and Jerry Yang
• Began as a collection of favorable web pages
• Increasing size influenced them to become a searchable directory
• A man-made description with each URL
• Informational sites added for free, but they expanded to include commercial sites. This is still available for \$300 a year.
• Long wait time to be included
• Yahoo didn't work on their search engine until **2002** when they began acquiring other search directories. Until that time they had outsourced their search services

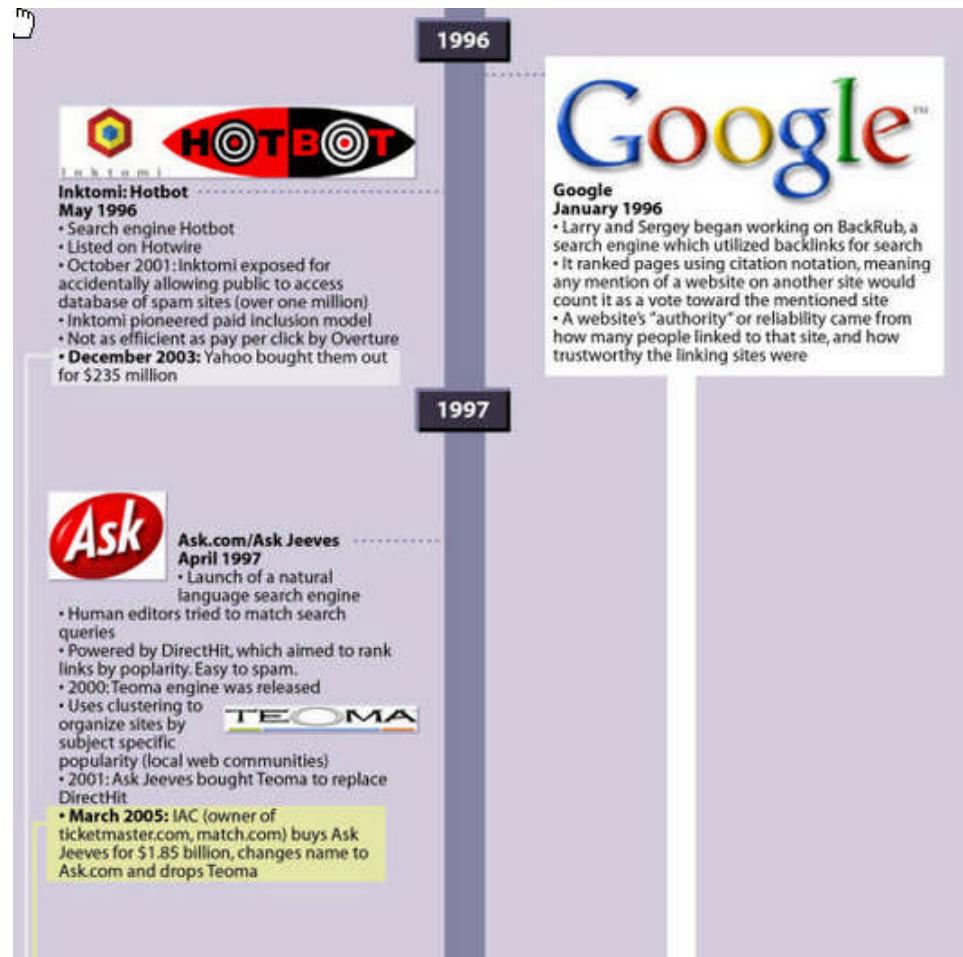
1995

Lycos
July 1994
• Went public with catalog of 54,000 documents
• Ranked Relevance retrieval
• Prefix matching and word proximity
• August 1994: Had identified 394,000 documents; 1.5 million by January 1995
• November 1996: Had identified 60 million documents (more than any other search engine)
• October 2004: Lycos was sold to Daum Communications, the second largest Internet portal in Korea

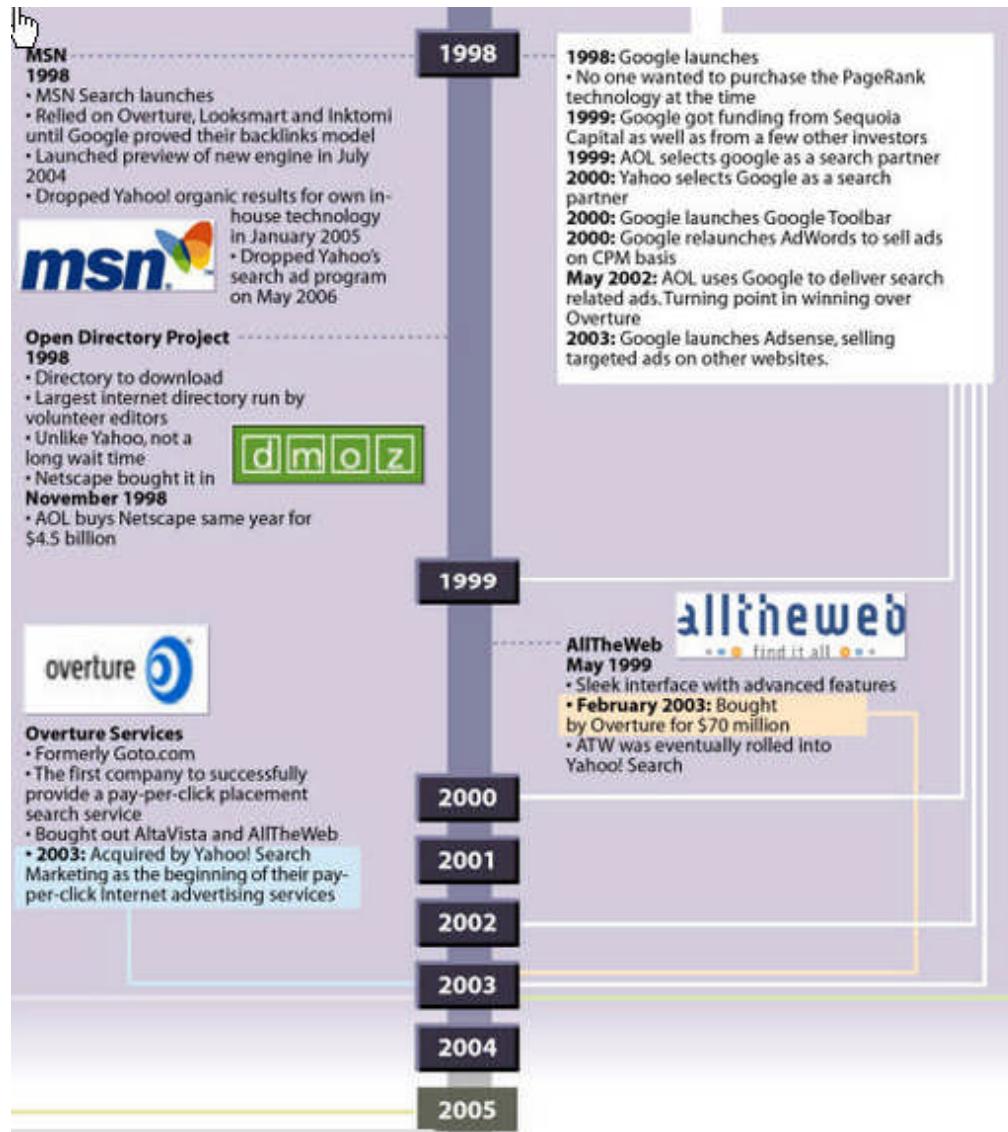
LookSmart
1995
• Competed with Yahoo by increasing inclusion rates back and forth
• **1998:** Bought non-commercial directory Zeal for \$20 million
• **2002:** Transitioned into a pay per click provider, destroying reliability. Began depending on MSN by syndicating links through their portal
• **2002:** Bought WiseNut
• **2003:** Felt the sting of rejection when it was dumped by Microsoft and lost more than 65% of its annual revenue
• **2006:** Shut down Zeal

LookSmart
Where To Look For What You Need.

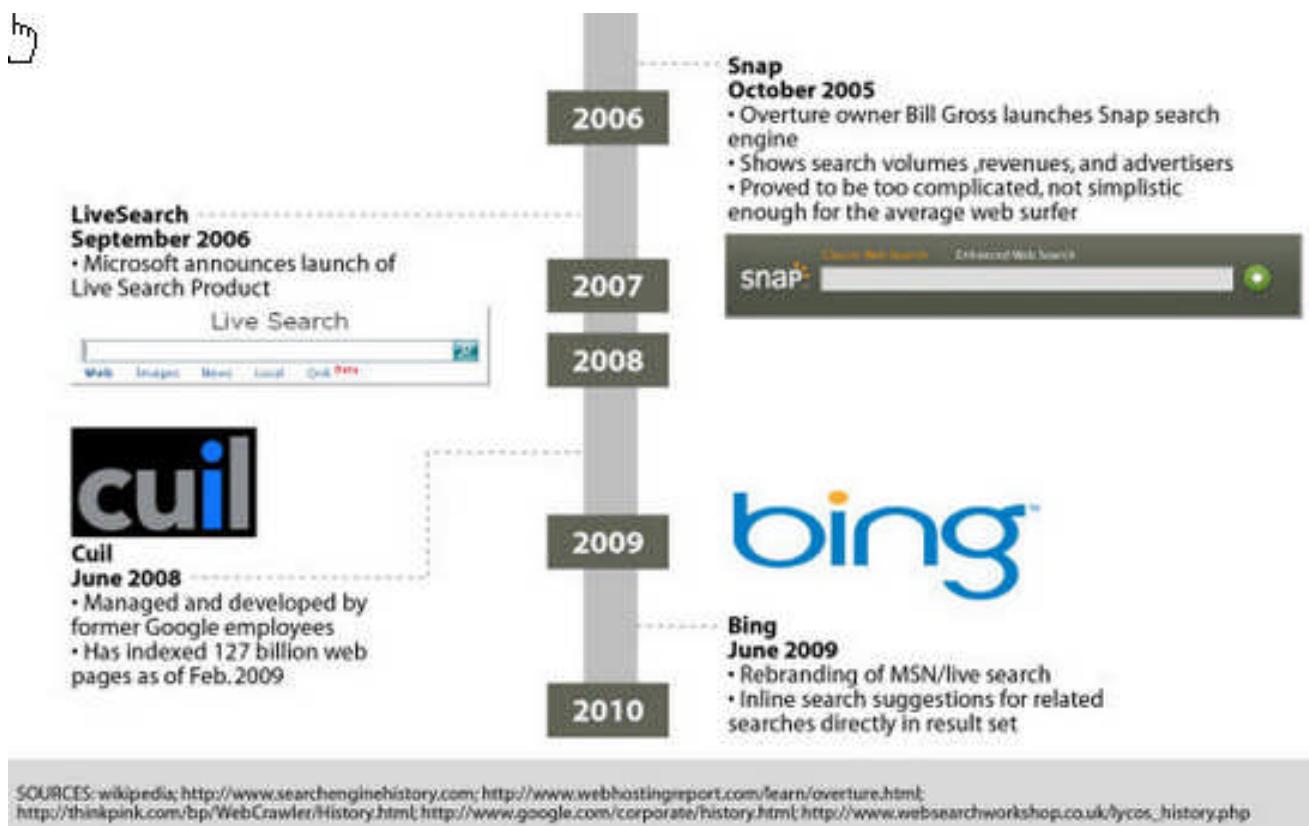
History 1996-1998



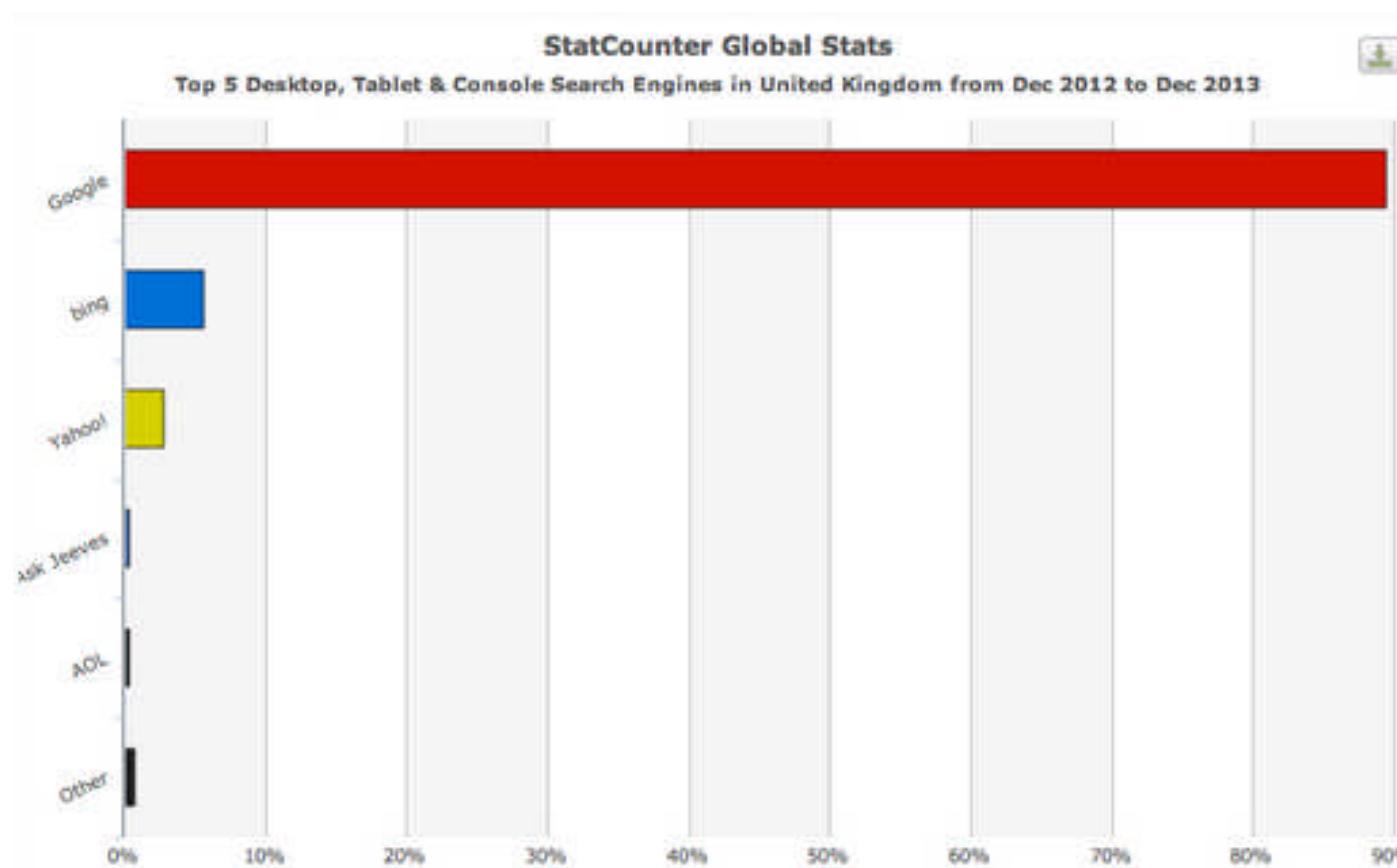
History 1998-2005



History 1998-2005

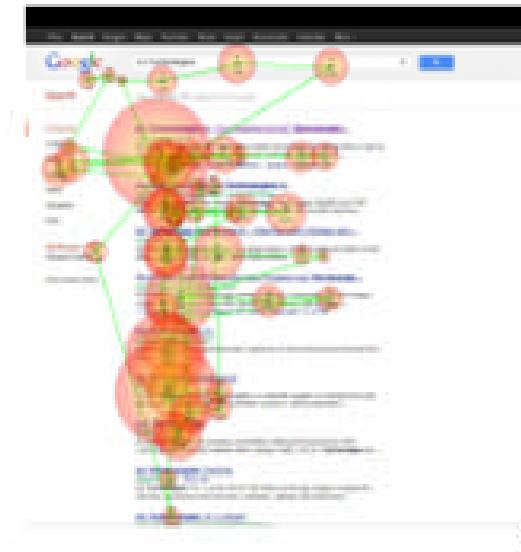
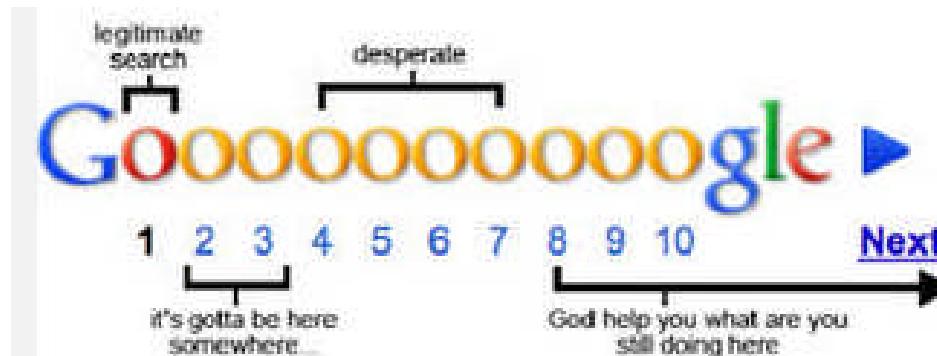


Search Market Share



How many results/matches?

- Most people don't look beyond top of the first page (first few results)

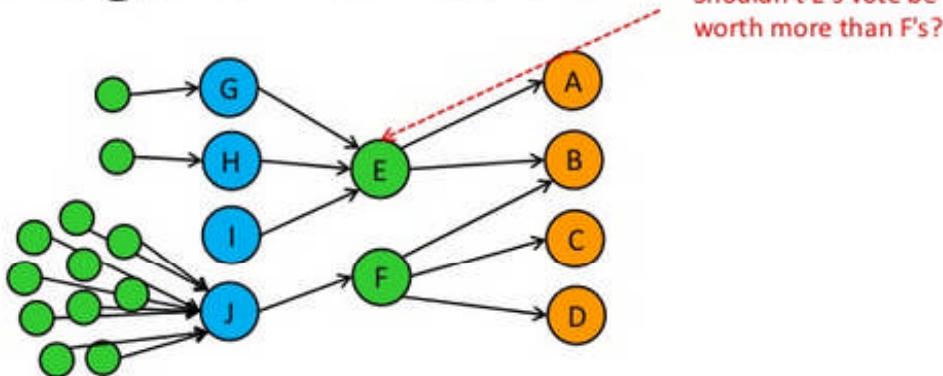


Eye tracker

Page Rank

PageRank: Intuition

How many levels
should we consider?



- Imagine a contest for The Web's Best Page
 - Initially, each page has one vote
 - Each page votes for all the pages it has a link to
 - To ensure fairness, pages voting for more than one page must split their vote equally between them
 - Voting proceeds in rounds; in each round, each page has the number of votes it received in the previous round

In practice, it's a little more complicated... but not much!

References

1. <https://markjowen.wordpress.com/tag/google/>
2. <http://research.google.com/archive/googlecluster-ieee.pdf> in IEEE Micro 2003
3. <http://highscalability.com/google-architecture>
4. <http://www.slideshare.net/AditiTechnologies/google-architecture-breaking-it-open>

Indexing

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3/2015

Questions

How can we quickly search something in
Billions of webpages?

Answer

Question: How to quickly search Billions of webpages?

Answer: Download the pages and index them on thousands of computers.

Search Terminology

- Search engine results page (SERP)
- Documents - webpages.
- Crawling - downloading webpages.
- Scraping - downloading without permission
- Repository - collection of documents.
- Tokens - words
- Stop words - useless words, like 'a', 'and', 'the'.
- Dictionary, Lexicon - sorted list of words.
- Index - (document, list of words)

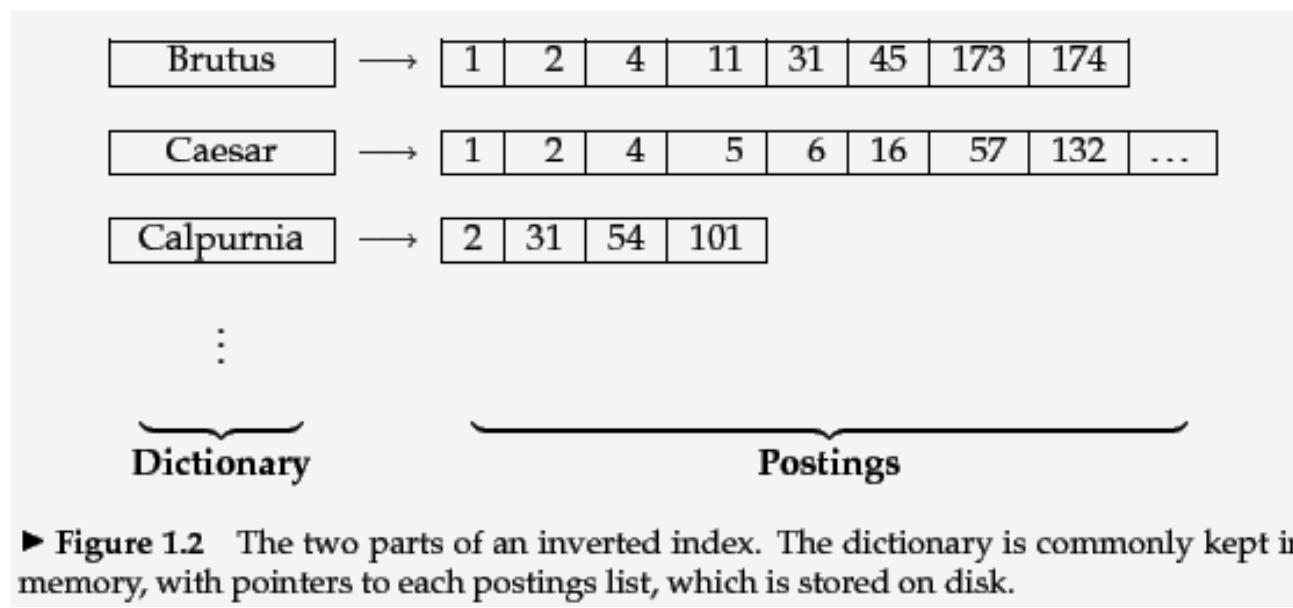
Example of an index of Shakespeare's plays

	Antony and Cleopatra	Julius Caesar	The Tempest	Hamlet	Othello	Macbeth	...
Antony	1	1	0	0	0	1	
Brutus	1	1	0	1	0	0	
Caesar	1	1	0	1	1	1	
Calpurnia	0	1	0	0	0	0	
Cleopatra	1	0	0	0	0	0	
mercy	1	0	1	1	1	1	
worser	1	0	1	1	1	0	
...							

► **Figure 1.1** A term-document incidence matrix. Matrix element (t, d) is 1 if the play in column d contains the word in row t , and is 0 otherwise.

Inverted Index Example

Dictionary of words pointing --> to list of documents and location containing the words

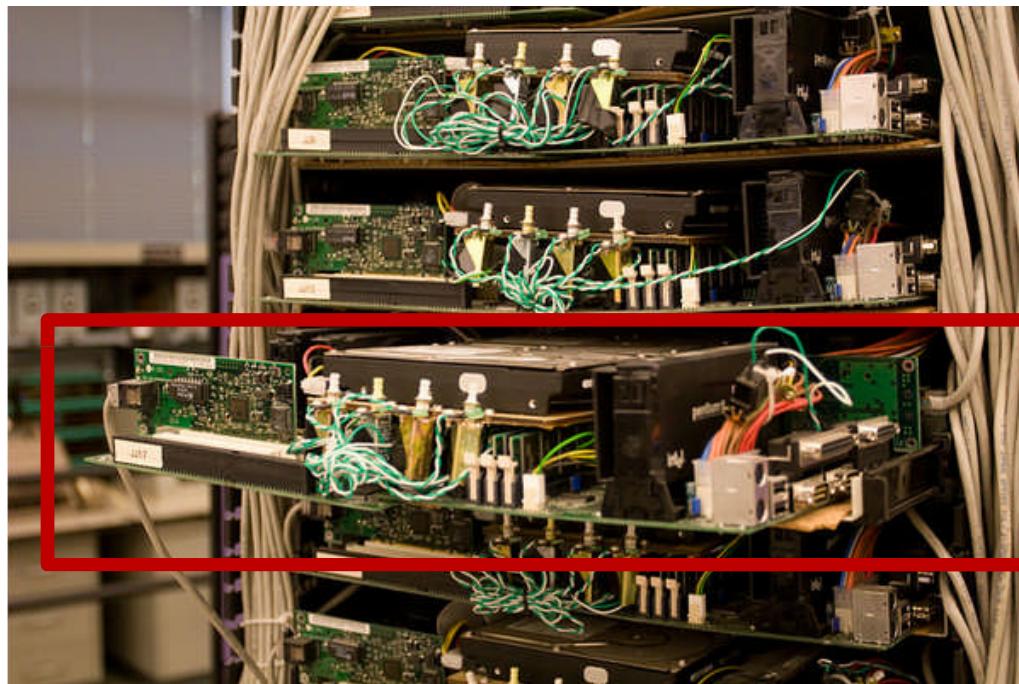


From [http://nlp.stanford.edu/IR-book/html/htmledition/
an-example-information-retrieval-problem-1.html](http://nlp.stanford.edu/IR-book/html/htmledition/an-example-information-retrieval-problem-1.html)

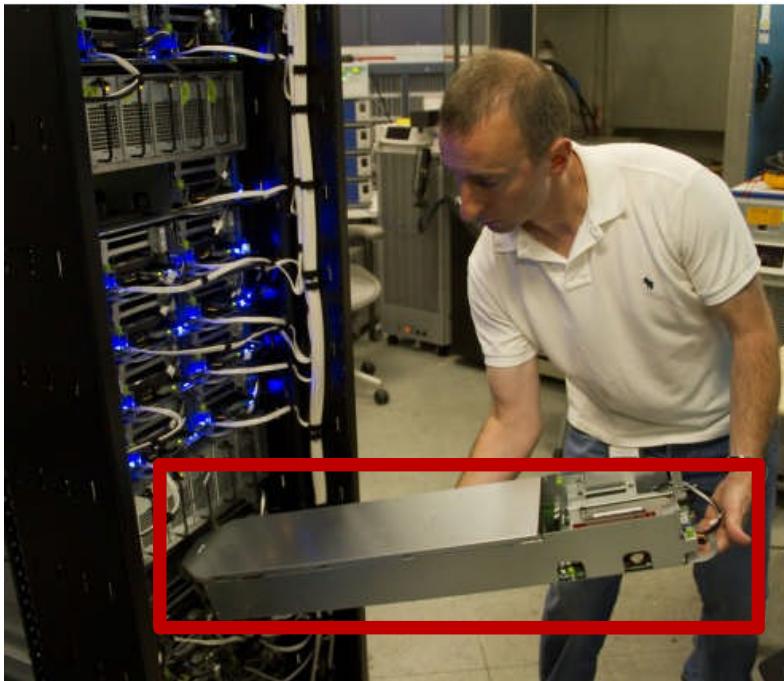
Search Hardware

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3/2015

Google Rack Computer



Google Rack Computer



Google Data Center



More on

<http://www.dailymail.co.uk/sciencetech/article-2219188/Inside-Google-pictures-gives-look-8-vast-data-centres.html>

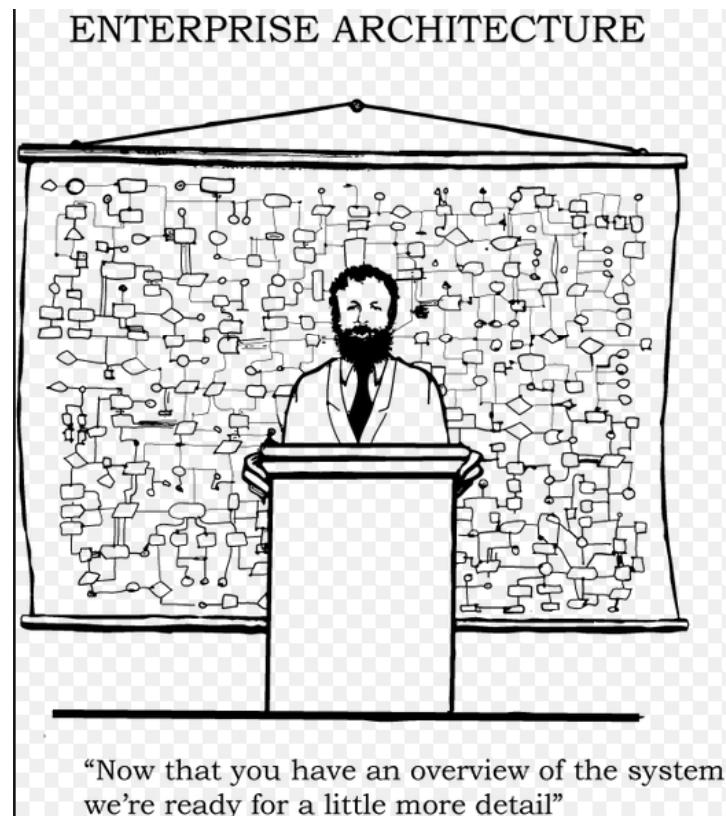
Google Data Centers 2006



Search Architecture

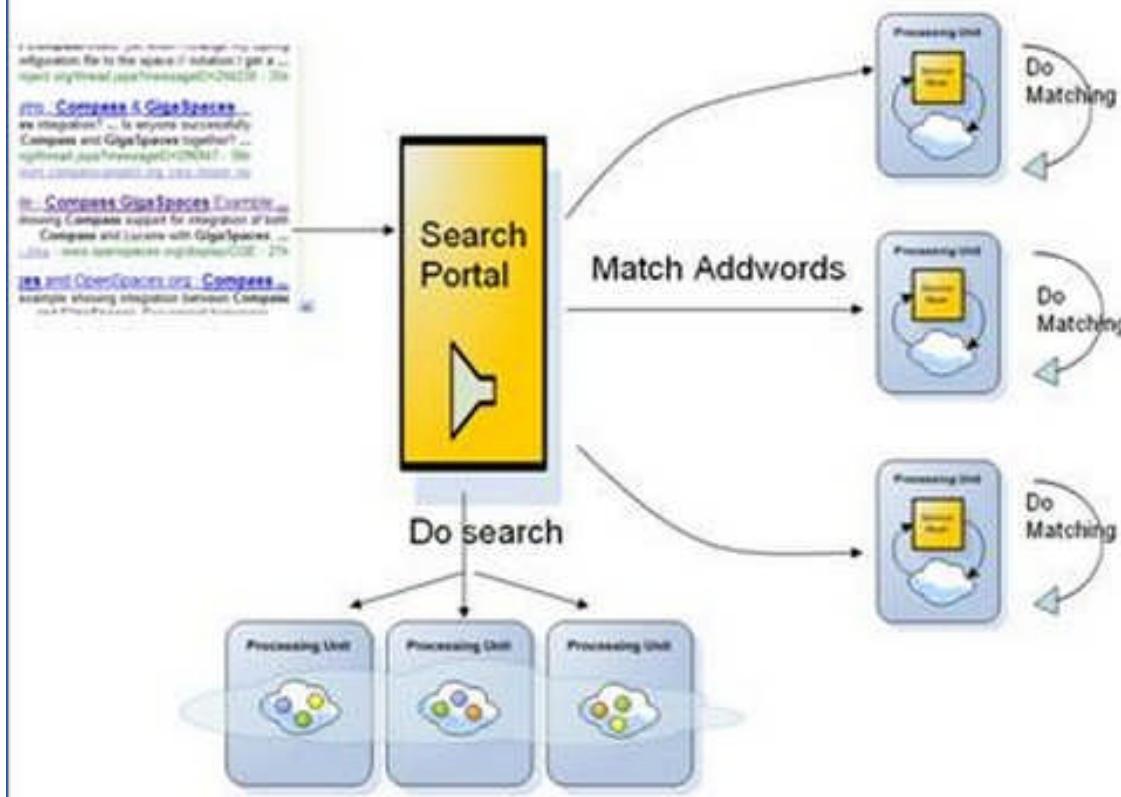
mosh@hmi-tech.in
3/2015

Details



Search Architecture

Search engine as a bidding system



Google Cluster Architecture

by Barroso, Jeff Dean, Holzle

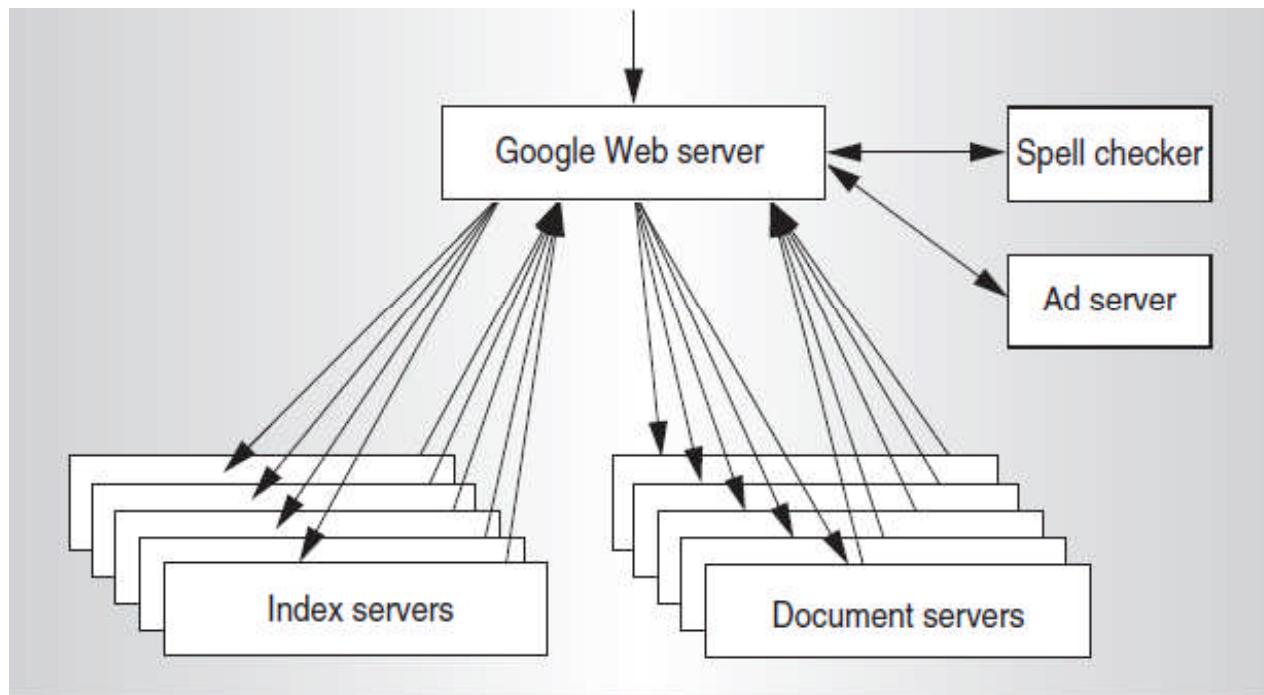
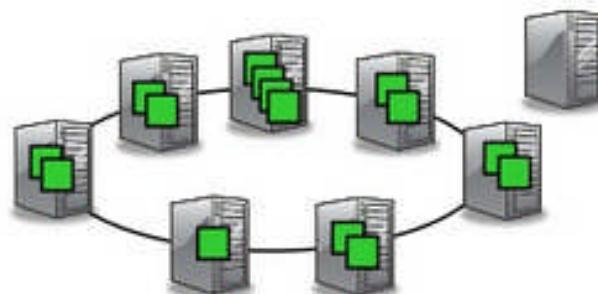


Figure 1. Google query-serving architecture.

from <http://research.google.com/archive/googlecluster-ieee.pdf>

GFS

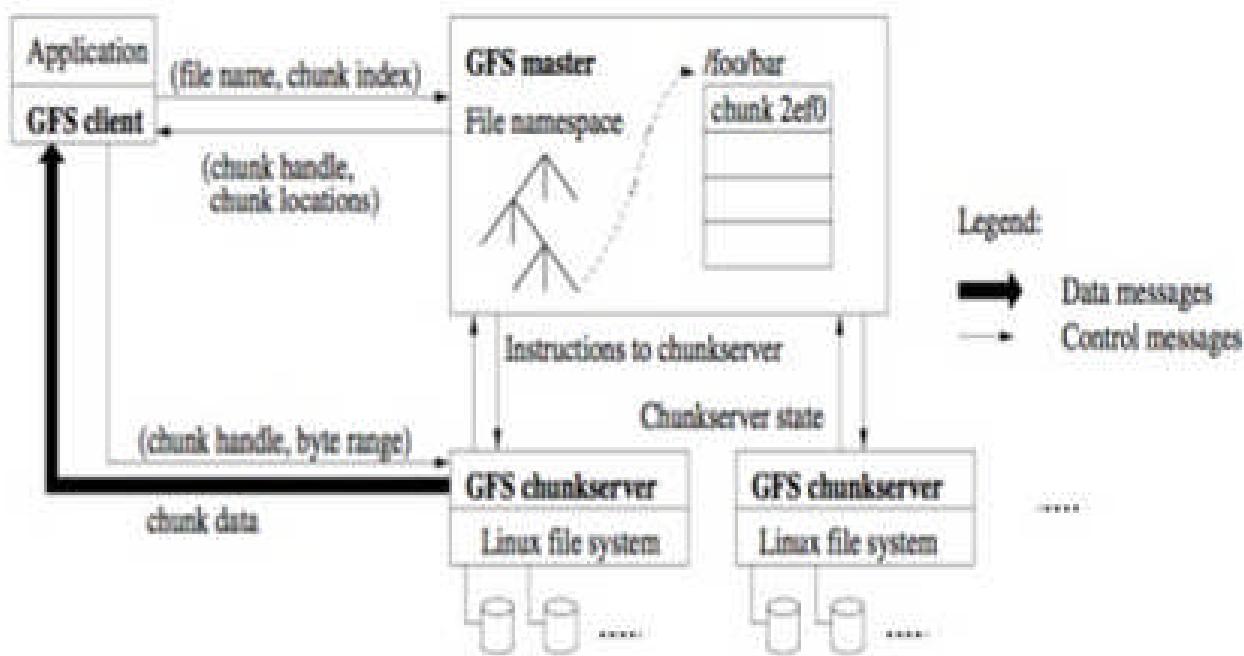


Google File System (GFS)

- Single virtual file system spread over many machines
- Optimized for sequential read and local accesses
- **PRO:** High throughput, high capacity
- **"CON":** Specialized for particular types of applications

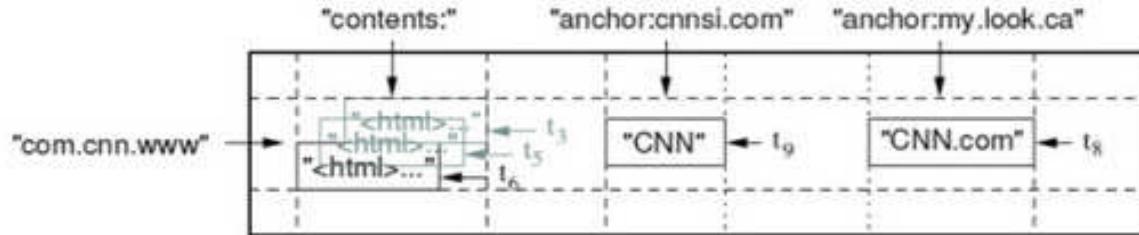
GOOGLE APP ENGINE	GOOGLE APPS SEARCH INDEX CRAWL GMAIL
Python, Java, C++	Python, Java, C++, Sawzall, other
	GWG
BigTable	Mapreduce BigTable Chubby Lock
GFS / GFS II	
INTERIOR NETWORK IPv6	
RHEL 2.6.X PAE	
SERVER HARDWARE	
RACK	
DC	
Exterior Network	

GFS



<http://www.slideshare.net/AditiTechnologies/google-architecture-breaking-it-open>

Big table is a giant excel sheet



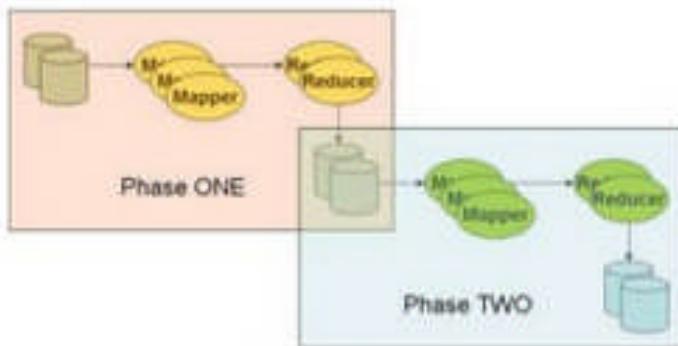
- Physically sorted on row-key – like a row-store
- Column families - like column-stores
- Variable (record-by-record) columns within a column family
- Column-values versioned; stored in reverse chronological order
- Designed to store hyperlink structure of web

Map Reduce for parallel computations

Map Reduction can be seen as a way to exploit massive parallelism by breaking a task down into constituent parts and executing on multiple processors

The Major Functions are MAP & REDUCE (with a number of intermediary steps

MAP Break task down into parallel steps
REDUCE Combine results into final output

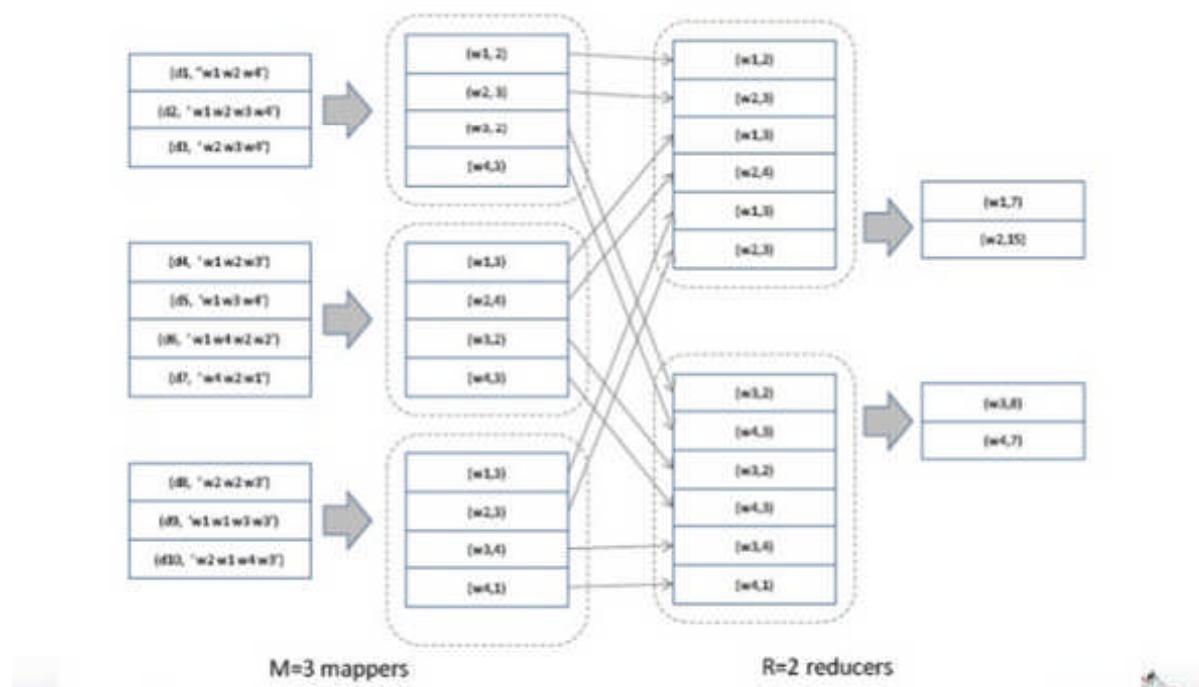


Word count as MR program

Word-Count using MapReduce

ADITI

Problem: determine the frequency of each **word** in a large document collection



From
<http://highscalability.com/google-architecture>

21-3-2015

Google Architecture

SATURDAY, NOVEMBER 22, 2008 AT 10:01AM

Update 2: [Sorting 1 PB with MapReduce](#). PB is not peanut-butter-and-jelly misspelled. It's 1 petabyte or 1000 terabytes or 1,000,000 gigabytes. *It took six hours and two minutes to sort 1PB (10 trillion 100-byte records) on 4,000 computers* and the results were replicated thrice on 48,000 disks.

Update: [Greg Linden](#) points to a new Google article [MapReduce: simplified data processing on large clusters](#). Some interesting stats: 100k MapReduce jobs are executed each day; more than 20 petabytes of data are processed per day; more than 10k MapReduce programs have been implemented; machines are dual processor with gigabit ethernet and 4-8 GB of memory.

Google is the King of scalability. Everyone knows Google for their large, sophisticated, and fast searching, but they don't just shine in search. Their platform approach to building scalable applications allows them to roll out internet scale applications at an alarmingly high competition crushing rate. Their goal is always to build a higher performing higher scaling infrastructure to support their products. How do they do that?

Information Sources

1. [Video: Building Large Systems at Google](#)
2. [Google Lab: The Google File System](#)
3. [Google Lab: MapReduce: Simplified Data Processing on Large Clusters](#)
4. [Google Lab: BigTable.](#)
5. [Video: BigTable: A Distributed Structured Storage System.](#)
6. [Google Lab: The Chubby Lock Service for Loosely-Coupled Distributed Systems.](#)
7. [How Google Works](#) by David Carr in Baseline Magazine.
8. [Google Lab: Interpreting the Data: Parallel Analysis with Sawzall.](#)
9. [Dare Obasanjo's Notes on the scalability conference.](#)

Platform

1. Linux
2. A large diversity of languages: Python, Java, C++

What's Inside?

The Stats

1. Estimated 450,000 low-cost commodity servers in 2006
2. In 2005 Google indexed 8 billion web pages. By now, who knows?
3. Currently there over 200 GFS clusters at Google. A cluster can have 1000 or even 5000 machines. Pools of tens of thousands of machines retrieve data from GFS clusters that run as large as 5 petabytes of storage. Aggregate read/write throughput can be as high as 40 gigabytes/second across the cluster.
4. Currently there are 6000 MapReduce applications at Google and hundreds of new applications are being written each month.
5. BigTable scales to store billions of URLs, hundreds of terabytes of satellite imagery, and preferences for hundreds of millions of users.

The Stack

Google visualizes their infrastructure as a three layer stack:

1. Products: search, advertising, email, maps, video, chat, blogger
2. Distributed Systems Infrastructure: GFS, MapReduce, and BigTable.
3. Computing Platforms: a bunch of machines in a bunch of different data centers
4. Make sure easy for folks in the company to deploy at a low cost.
5. Look at price performance data on a per application basis. Spend more money on hardware to not lose log data, but spend less on other types of data. Having said that, they don't lose data.

Reliable Storage Mechanism With GFS (Google File System)

1. Reliable scalable storage is a core need of any application. GFS is their core storage platform.

2. Google File System - large distributed log structured file system in which they throw in a lot of data.
3. Why build it instead of using something off the shelf? Because they control everything and it's the platform that distinguishes them from everyone else. They required:
 - high reliability across data centers
 - scalability to thousands of network nodes
 - huge read/write bandwidth requirements
 - support for large blocks of data which are gigabytes in size.
 - efficient distribution of operations across nodes to reduce bottlenecks
4. System has master and chunk servers.
 - Master servers keep metadata on the various data files. Data are stored in the file system in 64MB chunks. Clients talk to the master servers to perform metadata operations on files and to locate the chunk server that contains the needed they need on disk.
 - Chunk servers store the actual data on disk. Each chunk is replicated across three different chunk servers to create redundancy in case of server crashes. Once directed by a master server, a client application retrieves files directly from chunk servers.
5. A new application coming on line can use an existing GFS cluster or they can make your own. It would be interesting to understand the provisioning process they use across their data centers.
6. Key is enough infrastructure to make sure people have choices for their application. GFS can be tuned to fit individual application needs.

Do Something With The Data Using MapReduce

1. Now that you have a good storage system, how do you do anything with so much data? Let's say you have many TBs of data stored across a 1000 machines. Databases don't scale or cost effectively scale to those levels. That's where MapReduce comes in.
2. MapReduce is a programming model and an associated implementation for processing and generating large data sets. Users specify a map function that processes a key/value pair to

generate a set of intermediate key/value pairs, and a reduce function that merges all intermediate values associated with the same intermediate key. Many real world tasks are expressible in this model. Programs written in this functional style are automatically parallelized and executed on a large cluster of commodity machines. The run-time system takes care of the details of partitioning the input data, scheduling the program's execution across a set of machines, handling machine failures, and managing the required inter-machine communication. This allows programmers without any experience with parallel and distributed systems to easily utilize the resources of a large distributed system.

3. Why use MapReduce?
 - Nice way to partition tasks across lots of machines.
 - Handle machine failure.
 - Works across different application types, like search and ads. Almost every application has map reduce type operations. You can precompute useful data, find word counts, sort TBs of data, etc.
 - Computation can automatically move closer to the IO source.
4. The MapReduce system has three different types of servers.
 - The Master server assigns user tasks to map and reduce servers. It also tracks the state of the tasks.
 - The Map servers accept user input and performs map operations on them. The results are written to intermediate files
 - The Reduce servers accepts intermediate files produced by map servers and performs reduce operation on them.
5. For example, you want to count the number of words in all web pages. You would feed all the pages stored on GFS into MapReduce. This would all be happening on 1000s of machines simultaneously and all the coordination, job scheduling, failure handling, and data transport would be done automatically.
 - The steps look like: GFS -> Map -> Shuffle -> Reduction -> Store Results back into GFS.
 - In MapReduce a map maps one view of data to another, producing a key value pair, which in our example is word and count.

- Shuffling aggregates key types.
 - The reductions sums up all the key value pairs and produces the final answer.
- The Google indexing pipeline has about 20 different map reductions. A pipeline looks at data with a whole bunch of records and aggregating keys. A second map-reduce comes a long, takes that result and does something else. And so on.
 - Programs can be very small. As little as 20 to 50 lines of code.
 - One problem is stragglers. A straggler is a computation that is going slower than others which holds up everyone. Stragglers may happen because of slow IO (say a bad controller) or from a temporary CPU spike. The solution is to run multiple of the same computations and when one is done kill all the rest.
 - Data transferred between map and reduce servers is compressed. The idea is that because servers aren't CPU bound it makes sense to spend on data compression and decompression in order to save on bandwidth and I/O.

Storing Structured Data In BigTable

- BigTable is a large scale, fault tolerant, self managing system that includes terabytes of memory and petabytes of storage. It can handle millions of reads/writes per second.
- BigTable is a distributed hash mechanism built on top of GFS. It is not a relational database. It doesn't support joins or SQL type queries.
- It provides lookup mechanism to access structured data by key. GFS stores opaque data and many applications needs has data with structure.
- Commercial databases simply don't scale to this level and they don't work across 1000s machines.
- By controlling their own low level storage system Google gets more control and leverage to improve their system. For example, if they want features that make cross data center operations easier, they can build it in.
- Machines can be added and deleted while the system is running and the whole system just works.
- Each data item is stored in a cell which can be accessed using a row key, column key, or timestamp.

- Each row is stored in one or more tablets. A tablet is a sequence of 64KB blocks in a data format called SSTable.
- BigTable has three different types of servers:
 - The Master servers assign tablets to tablet servers. They track where tablets are located and redistributes tasks as needed.
 - The Tablet servers process read/write requests for tablets. They split tablets when they exceed size limits (usually 100MB - 200MB). When a tablet server fails, then a 100 tablet servers each pickup 1 new tablet and the system recovers.
 - The Lock servers form a distributed lock service. Operations like opening a tablet for writing, Master arbitration, and access control checking require mutual exclusion.
- A locality group can be used to physically store related bits of data together for better locality of reference.
- Tablets are cached in RAM as much as possible.

Hardware

- When you have a lot of machines how do you build them to be cost efficient and use power efficiently?
- Use ultra cheap commodity hardware and built software on top to handle their death.
- A 1,000-fold computer power increase can be had for a 33 times lower cost if you use a failure-prone infrastructure rather than an infrastructure built on highly reliable components. You must build reliability on top of unreliability for this strategy to work.
- Linux, in-house rack design, PC class mother boards, low end storage.
- Price per wattage on performance basis isn't getting better. Have huge power and cooling issues.
- Use a mix of collocation and their own data centers.

Misc

- Push changes out quickly rather than wait for QA.
- Libraries are the predominant way of building programs.
- Some applications are provided as services, like crawling.

4. An infrastructure handles versioning of applications so they can be released without a fear of breaking things.

Future Directions For Google

1. Support geo-distributed clusters.
2. Create a single global namespace for all data. Currently data is segregated by cluster.
3. More and better automated migration of data and computation.
4. Solve consistency issues that happen when you couple wide area replication with network partitioning (e.g. keeping services up even if a cluster goes offline for maintenance or due to some sort of outage).

Lessons Learned

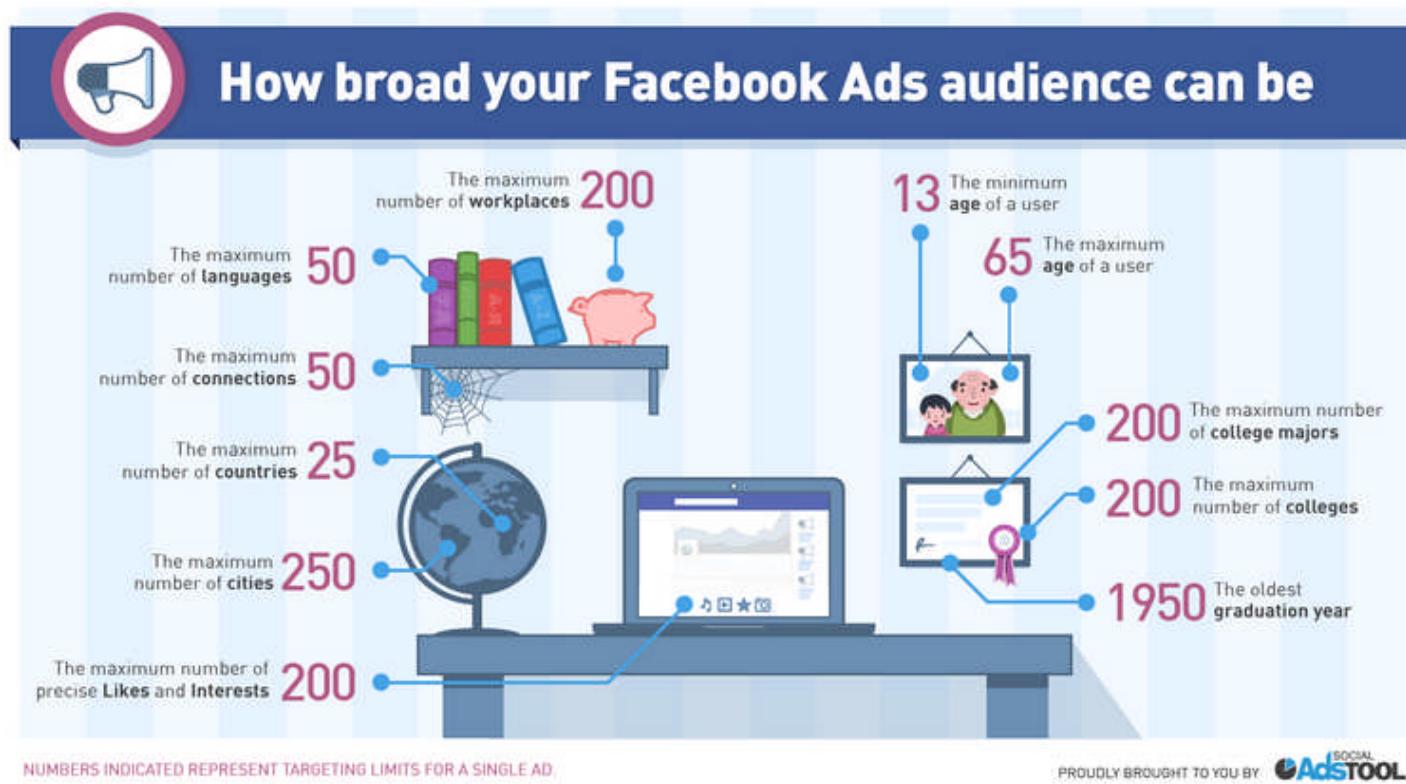
1. **Infrastructure can be a competitive advantage.** It certainly is for Google. They can roll out new internet services faster, cheaper, and at scale at few others can compete with. Many companies take a completely different approach. Many companies treat infrastructure as an expense. Each group will use completely different technologies and there will be little planning and commonality of how to build systems. Google thinks of themselves as a systems engineering company, which is a very refreshing way to look at building software.
2. **Spanning multiple data centers is still an unsolved problem.** Most websites are in one and at most two data centers. How to fully distribute a website across a set of data centers is, shall we say, tricky.
3. **Take a look at Hadoop** if you don't have the time to rebuild all this infrastructure from scratch yourself. Hadoop is an open source implementation of many of the same ideas presented here.
4. **An unappreciated advantage** of a platform approach is junior developers can quickly and confidently create robust applications on top of the platform. If every project needs to create the same distributed infrastructure wheel you'll run into difficulty because the people who know how to do this are relatively rare.

5. **Synergy isn't always crap.** By making all parts of a system work together an improvement in one helps them all. Improve the file system and everyone benefits immediately and transparently. If every project uses a different file system then there's no continual incremental improvement across the entire stack.
6. **Build self-managing systems that work without having to take the system down.** This allows you to more easily rebalance resources across servers, add more capacity dynamically, bring machines off line, and gracefully handle upgrades.
7. **Create a Darwinian infrastructure.** Perform time consuming operation in parallel and take the winner.
8. **Don't ignore the Academy.** Academia has a lot of good ideas that don't get translated into production environments. Most of what Google has done has prior art, just not prior large scale deployment.
9. **Consider compression.** Compression is a good option when you have a lot of CPU and limited IO.

FB Ads

mosh@hmi-tech.in
3/2015

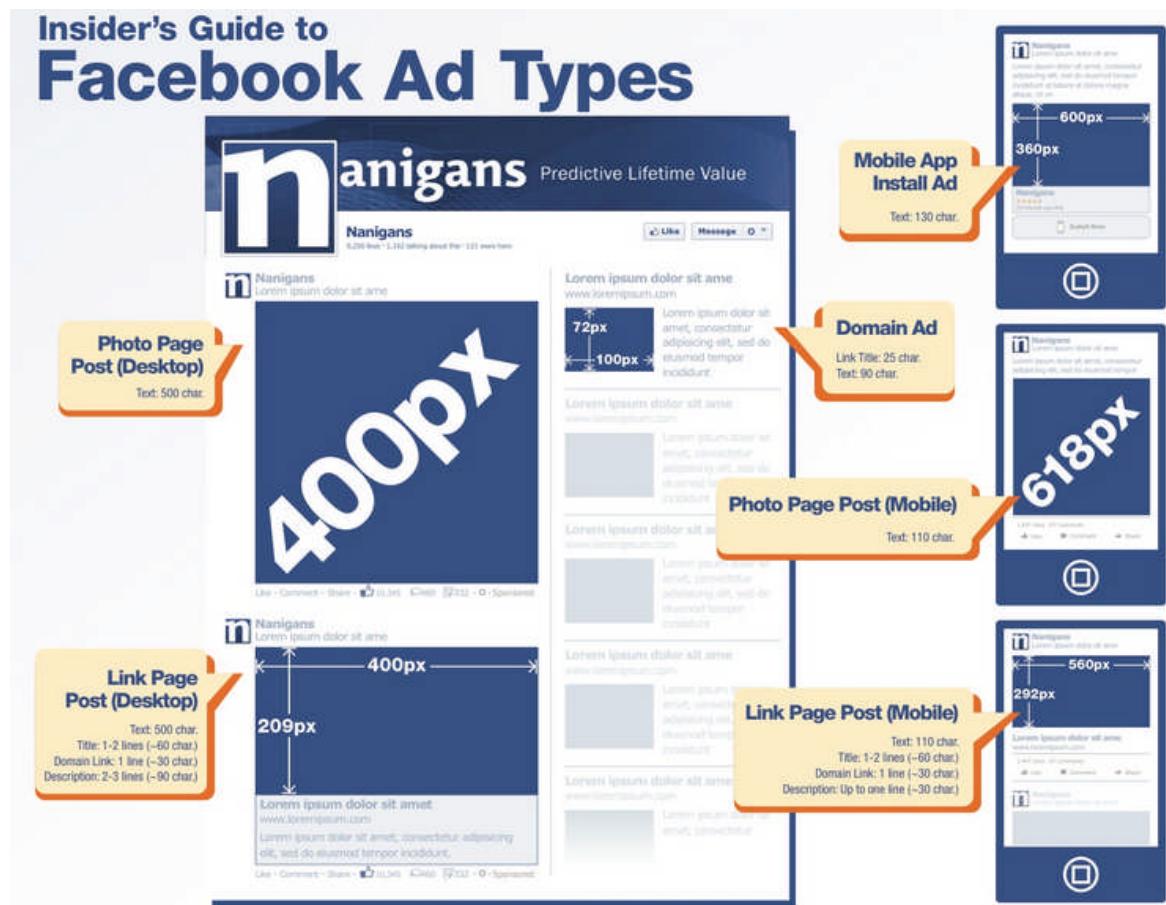
Facebook Ad Audience



Facebook Ad types



Facebook Ad types



References

HTML

Definitions and Acronyms

- HTML - hyper text markup language
- DOM – Document Object Model
- CSS - cascading style sheet
- JS - javascript
- URL - universal resource locator
- HTTP - hyper text transfer protocol
- HTTPS - http secure
- IP - internet protocol

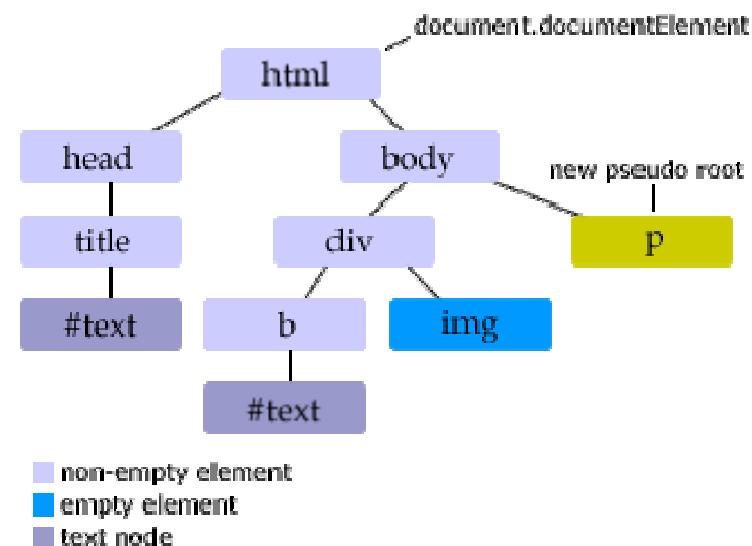
Making a Webpage DOM

Dom is made of

- <tag>
- </tag> .. closing tag
- <tag attribute=value>
- elements

webpage.html with notepad++

```
<!DOCTYPE html>
<html>
<head>
    <title> webpage by NAME
    </title>
</head>
<body>
    <h1> Heading </h1>
    <p> paragraph 1
    <p> Para 2
</body>
</html>
```



Open the file in Chrome

- Notepad > file > save as > file=“web1.htm”
- Chrome > Control-O (open) > “web1.htm”



Tags

<body> -- tag begin
more NODEs between tags
</body> -- /tag end

Some tags are self closing:

 or

Comments

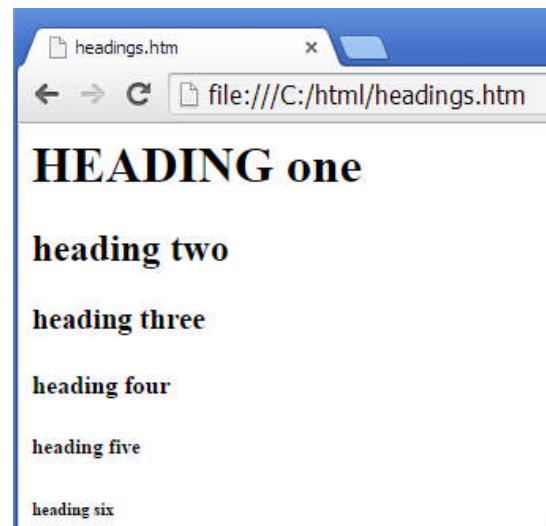
< ! - -

COMMENT not displayed

- - >

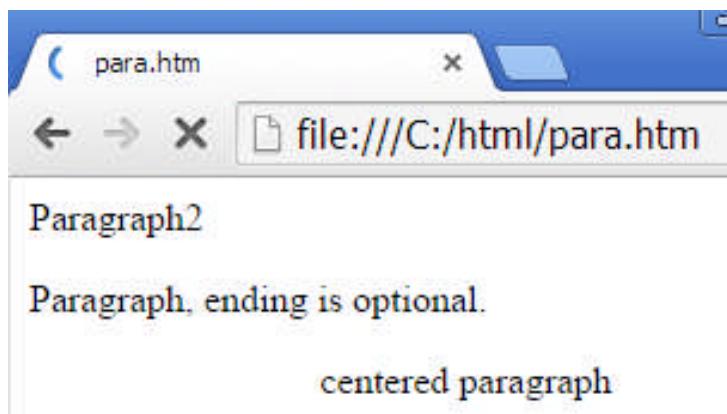
Headings.htm

```
<h1> HEADING one </h1>
<h2> heading two </h2>
<h3> heading three </h3>
<h4> heading four </h4>
<h5> heading five </h5>
<h6> heading six </h6>
```



para.htm

```
<p> Paragraph2 </p>
<p> Paragraph, ending is optional.
<p align=CENTER> centered paragraph
</p>
```

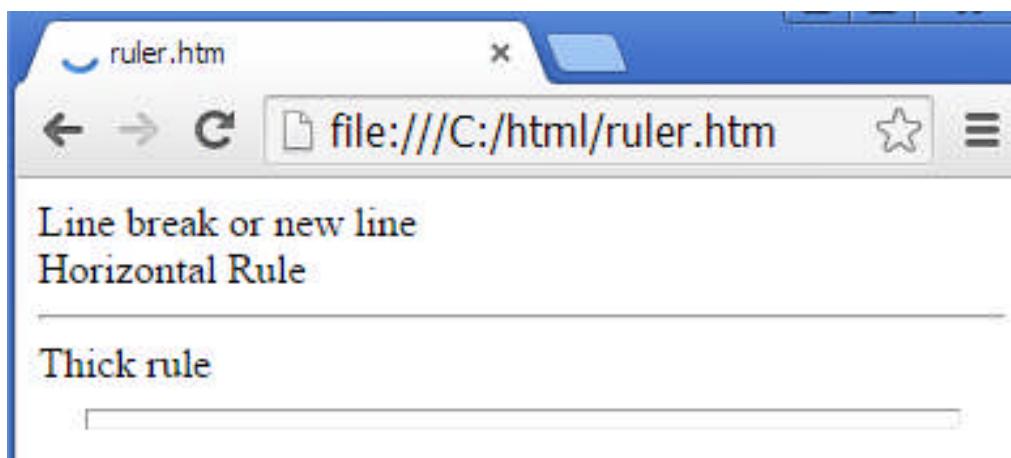


Ruler.htm

Line break or new line

Horizontal Rule <hr>

Thick rule <hr size=8 width="90%">



Lists

```
<ul> UNNUMBERED LISTED.  
    <li> Item A  
    <li> Item B  
</ul>  
<!-- ----- -->  
<ol> NUMBERED LIST.  
    <li> Item A  
    <li> Item B  
</ol>  
<!-- ----- -->  
<dl> DEFINITION LIST.  
    <dt> TAG1 <dd> DATA  
    <dt> TAG2 <dd> DATA  
</dl>
```



UNNUMBERED LISTED.
• Item A
• Item B

NUMBERED LIST.
1. Item A
2. Item B

DEFINITION LIST.
TAG1
 DATA
TAG2
 DATA

Anchors

Href

```
<a href="URL">Description of URL</a>
<a href="mosh.jpg">link to image</a>
<a href="mailto:you@gmail.com"> EMAIL</a>
```

Marks in URL

```
<a name="MARK1"> Name of MARK1</a>
<a href="#MARK1">Click to JUMP to Mark1</a>
<a href="URL#MARK1">Link to MARK1 in URL</a>
```

Images

```

```

```
<a href="forest.jpg">  
click to see image  
</a>
```

```

```

```
<p align="center">  
    centered Image  
</p>
```

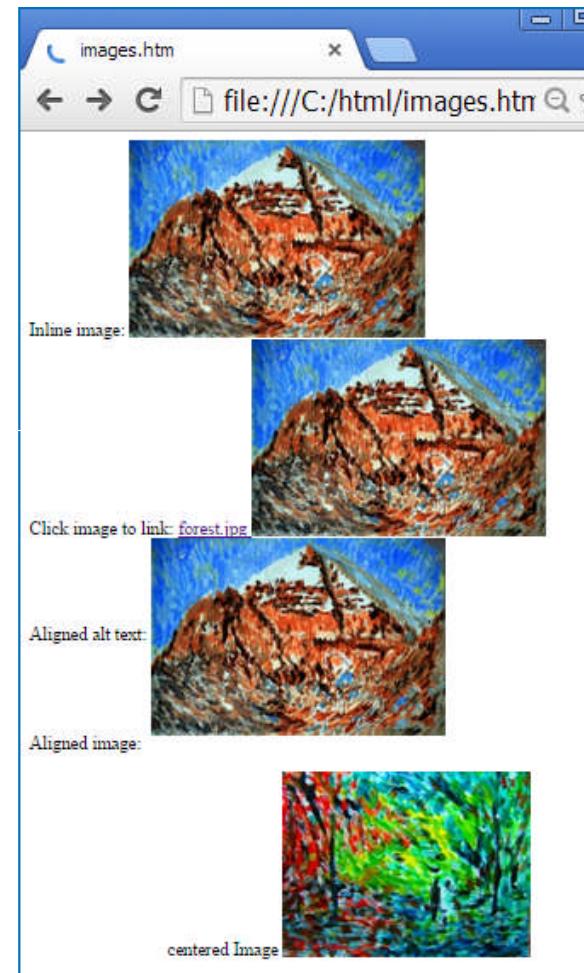


Table.htm

```
<table border="1" cellpadding="1" cellspacing="1"  
summary="table2">  
    <caption> Food cost table </caption>  
    <tr> <th> Food </th>    <th> Cost </th> </tr>  
    <tr> <td> Rice </td>    <td> $11 </td> </tr>  
    <tr> <td> Dal </td>    <td> $12 </td> </tr>  
</table>
```

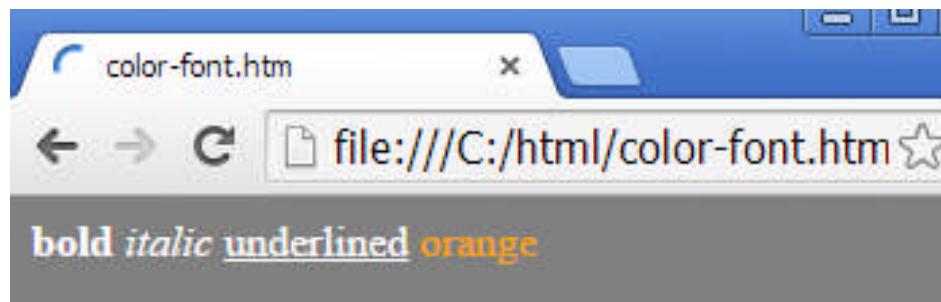


Food cost
table

Food	Cost
Rice	\$11
Dal	\$12

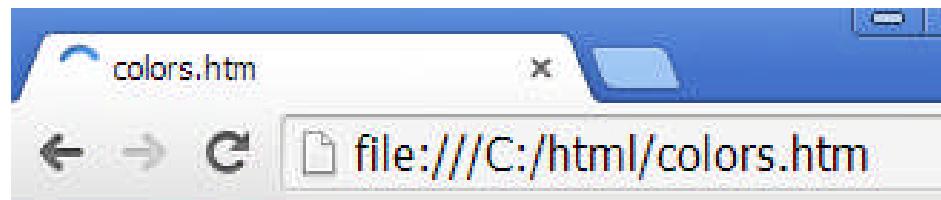
color-font.htm

```
<BODY BGCOLOR="GRAY" TEXT="WHITE"  
LINK="YELLOW" VLINK="YELLOW">  
    <B>bold</B>  
    <I>italic</I>  
    <U>underlined</U>  
    <font color="orange"> orange</font>  
</BODY>
```



Colors.htm

```
<FONT color="#000000">black</FONT>
<FONT color="#FF0000">red</FONT>
<FONT color="#00FF00">green</FONT>
<FONT color="#0000FF">blue</FONT>
<FONT color="#FFFF00">yellow</FONT>
<FONT color="#FF00FF">magenta</FONT>
<FONT color="#00FFFF">cyan</FONT>
<FONT color="#FFFFFF">white</FONT>
```



black red green blue yellow magenta cyan

font-size.htm

```
<FONT SIZE="+1">Font+1  
<FONT SIZE="-1">Font-1  
<FONT size=1>size1</FONT>  
<FONT size=2>size2</FONT>
```



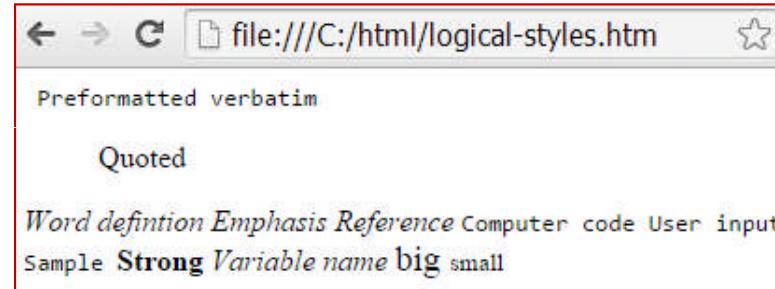
Fonts

```
<FONT face="arial">arial</FONT>  
<FONT face="script">script</FONT>  
<FONT face="roman">roman</FONT>  
<FONT face="courier new">courier  
new</FONT>  
<FONT face="modern">modern</FONT>
```



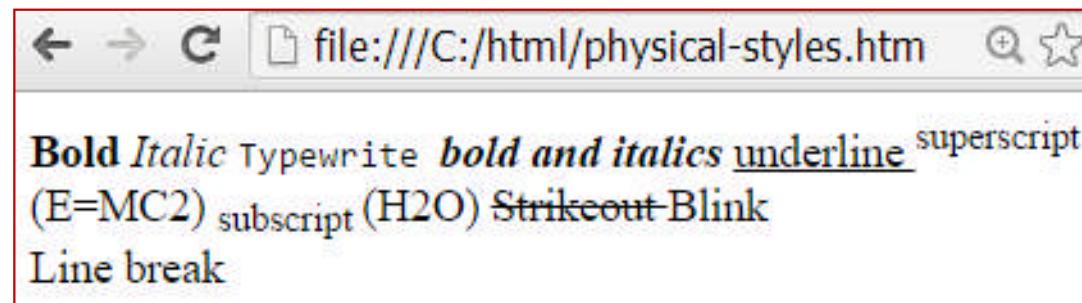
logical-styles.htm

```
<pre> Preformatted verbatim </pre>
<blockquote> Quoted
</blockquote>
<dfn> Word defintion </dfn>
<em> Emphasis </em>
<cite> Reference </cite>
<code> Computer code </code>
<kbd> User input </kbd>
<samp> Sample </samp>
<strong> Strong </strong>
<var> Variable name </var>
<BIG> big </BIG>
<SMALL> small </SMALL>
```



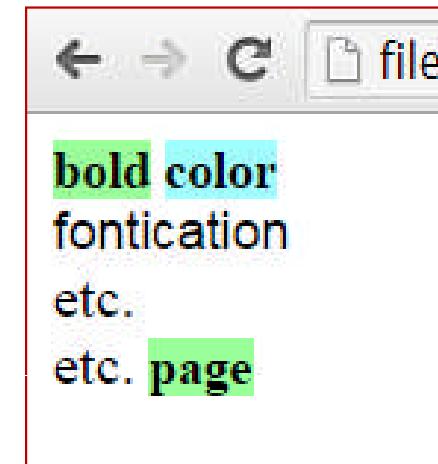
physical-style.htm

```
<b> Bold </b>
<i> Italic </i>
<tt> Typewrite </tt>
<l><b> bold and italics</b></l>
<u> underline </u>
<sup> superscript </sup>(E=MC 2 )
<sub> subscript </sub> (H2O)
<s> Strikeout </s>
<blink> Blink </blink>
<br> Line break
```



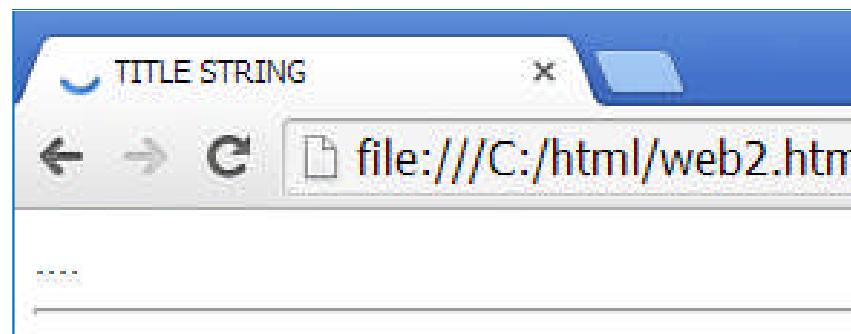
Inline-Style.htm

```
<b style="color: black; background-color:  
    rgb(153, 255, 153);">bold</b>  
<b style="color: black; background-color:  
    rgb(160, 255, 255);">color</b>  
<div style="font-family: Arial,Helvetica,sans-  
    serif;">fontication</div>  
<div id="content" style="width: 750px; border-  
    right: medium none;">  
<span style="font-size:  
    18px;">etc.<br>etc.</span>  
<span style="background: none repeat scroll  
    0% 0% rgb(153, 255, 153); color:  
    black; font-weight: bold;">page</span>
```



web2.htm

```
<base href="URL">
<html>
  <head>
    <title> TITLE STRING </title>
  </head>
  ....
  <!-- COMMENT -->
  <body>
  </body>
</html>
<hr>
```

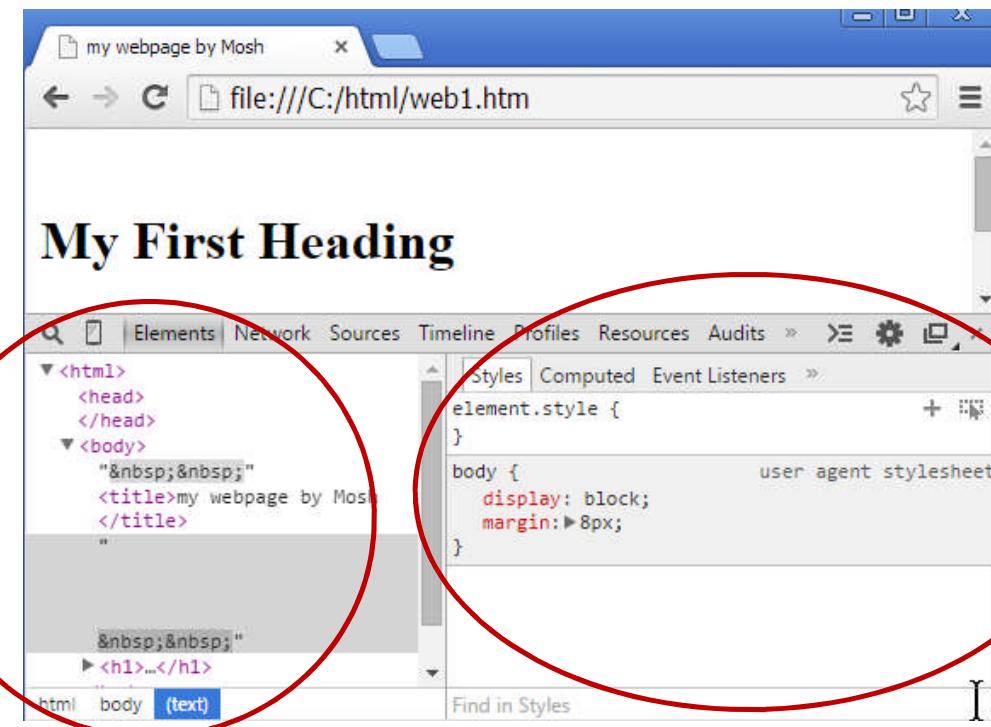


Inspecting HTML in Chrome

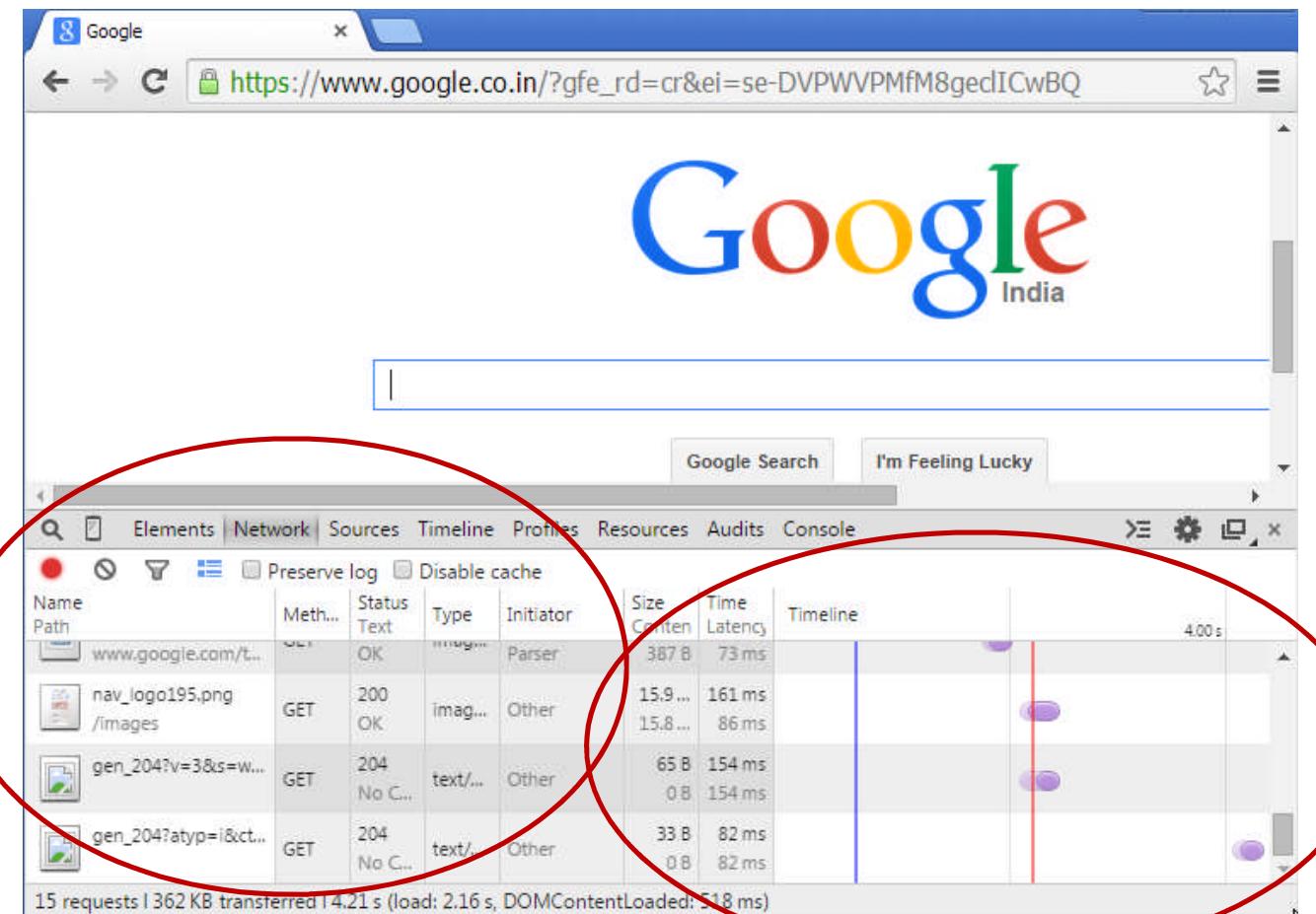
Right click > inspect element



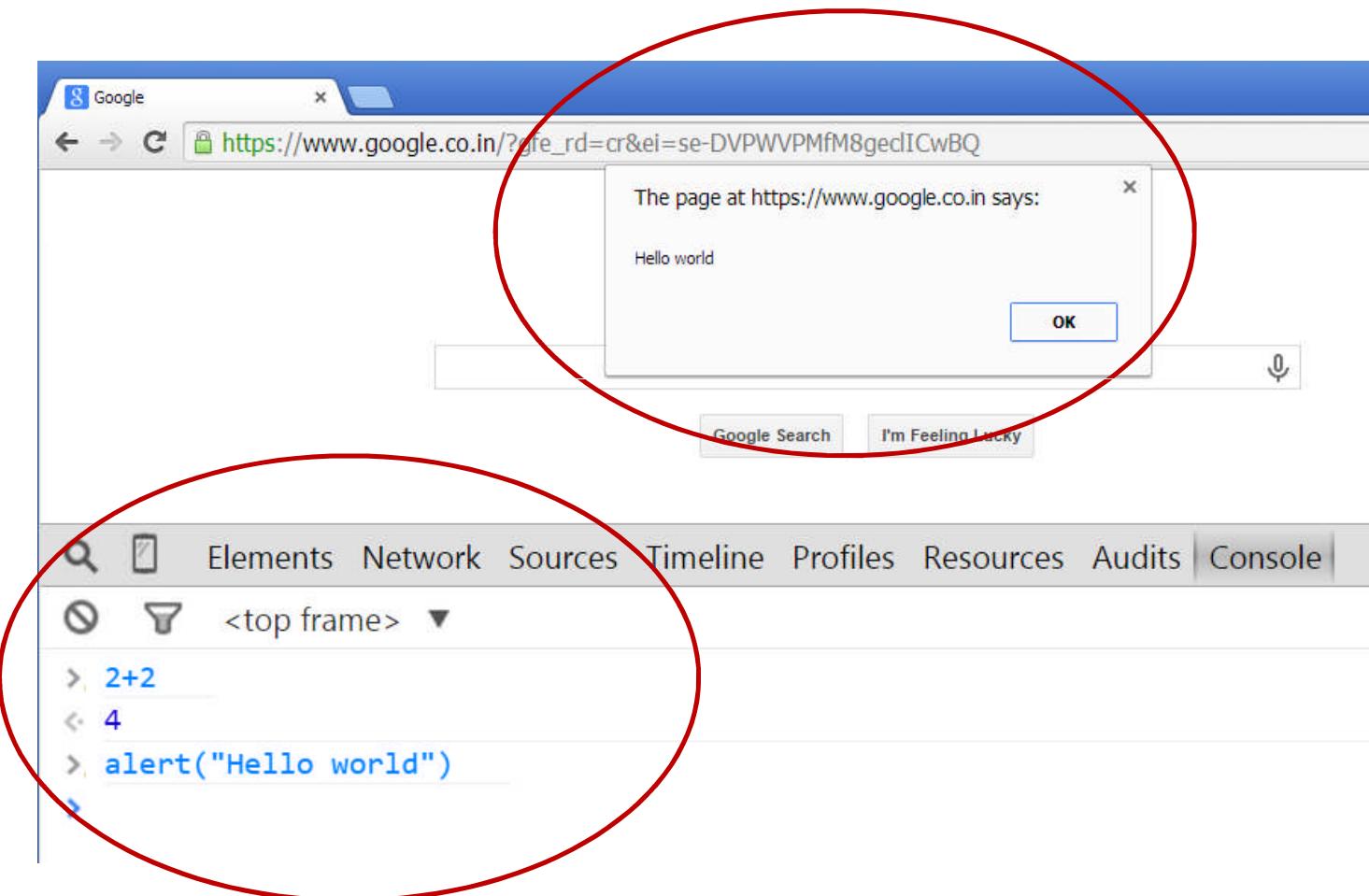
View HTML source and CSS



View network activity



Javascript console

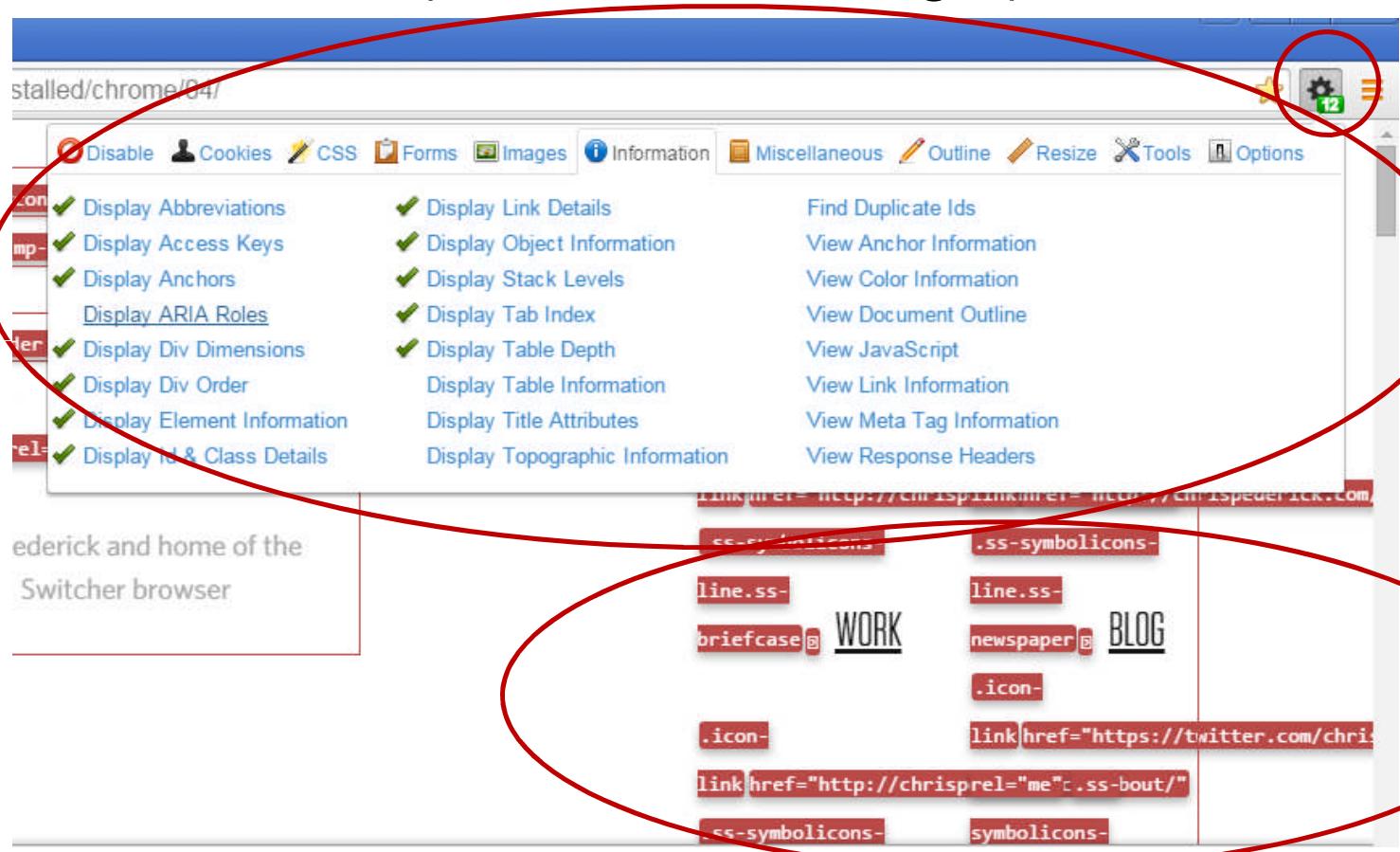


JavaScript

1. Google chrome developer tools
2. <https://developer.chrome.com/devtools/docs/javascript-debugging> (lots of info about chrome).

Chrome Developer Tools

(install from Google)



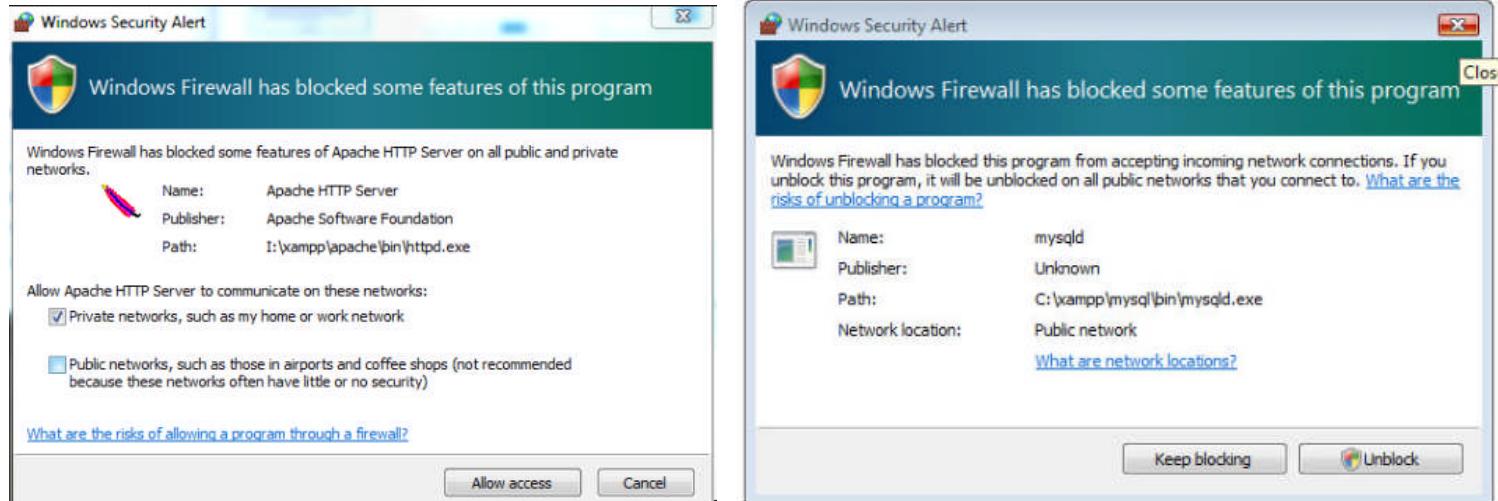
Xampp



XAMPP is the acronym for **X-cross platform, Apache, MySQL, PHP and Perl**

Download and Install Xampp

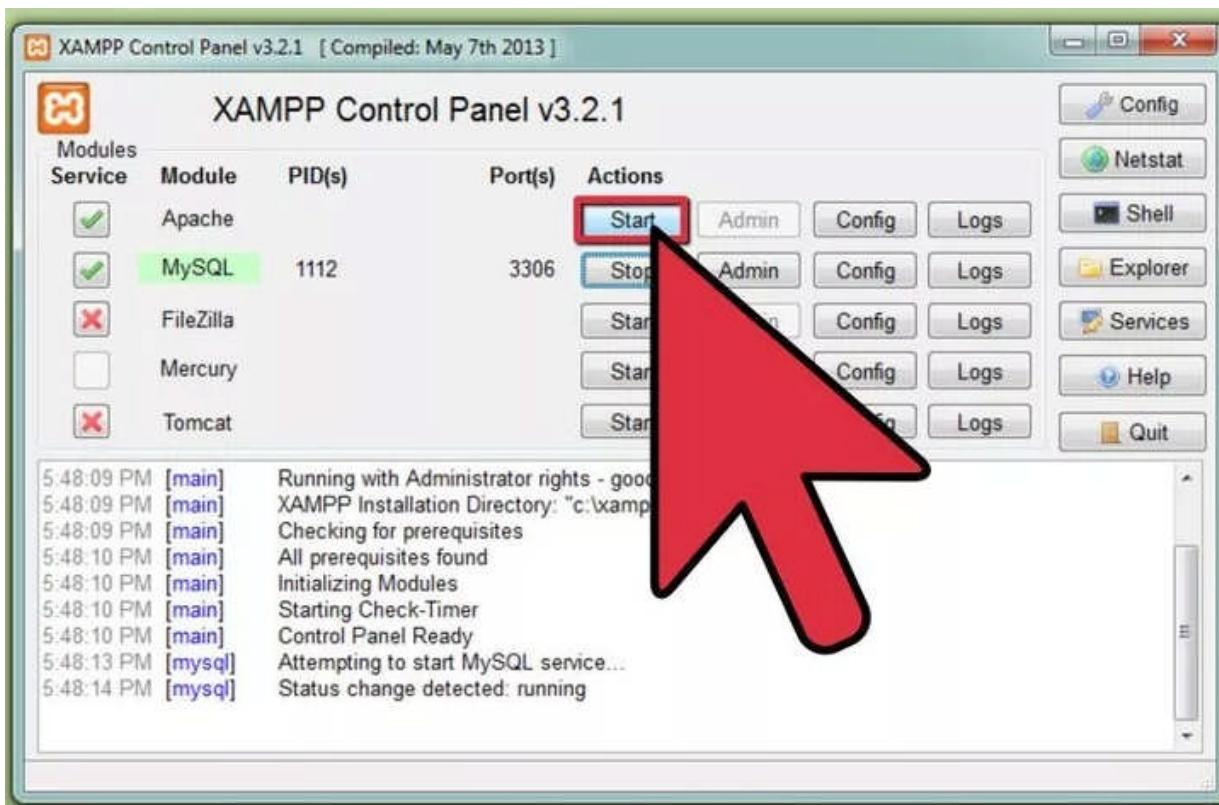
- From google, download and install xampp in c:/xampp
- Firewall - block Apache and Mysql



Start Xampp

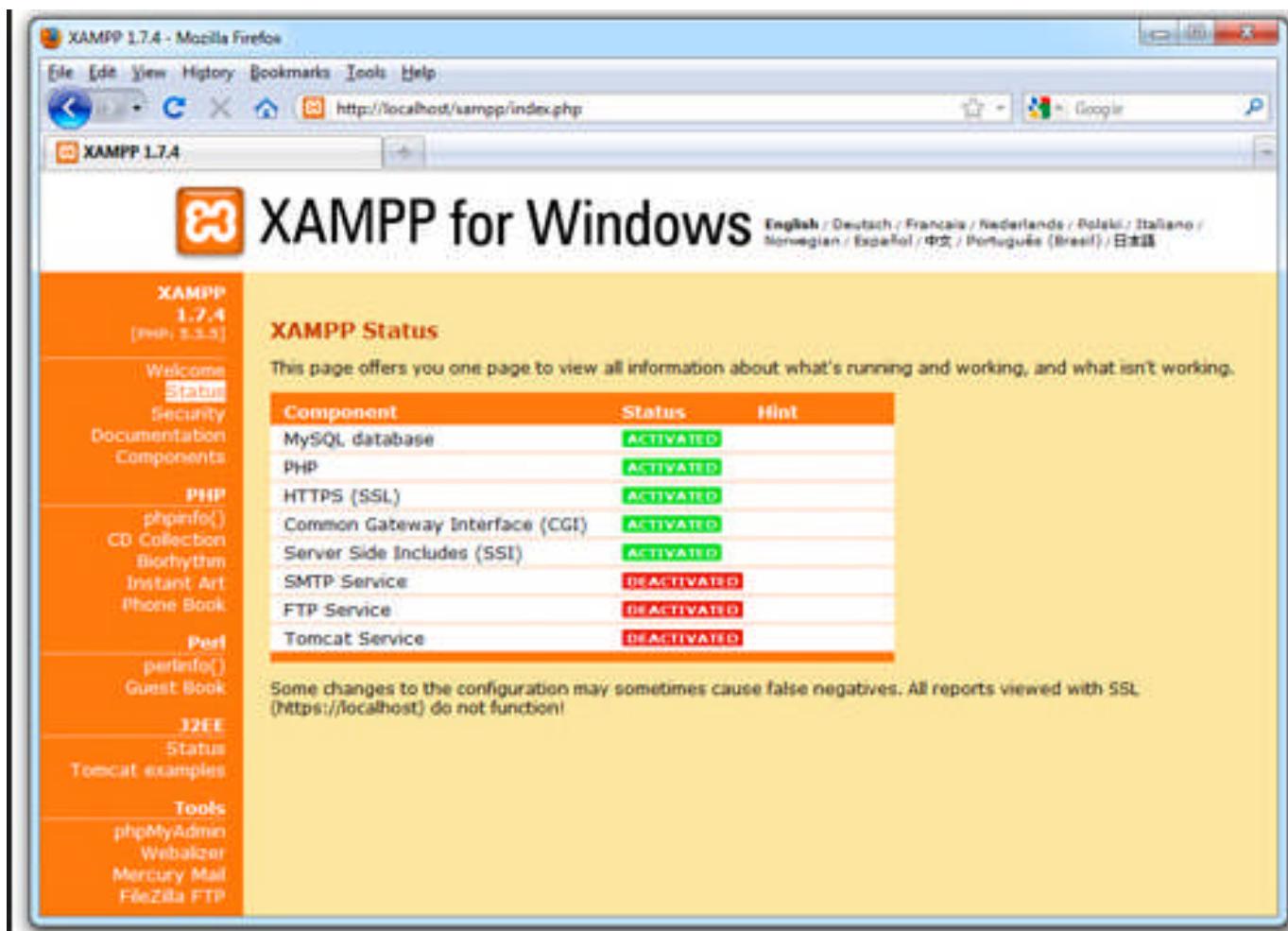
- Start Apache, MySql services.
- chrome <http://localhost>

Start Apache and MySQL



See <http://www.guru99.com/xampp-netbeans.html>

http://localhost



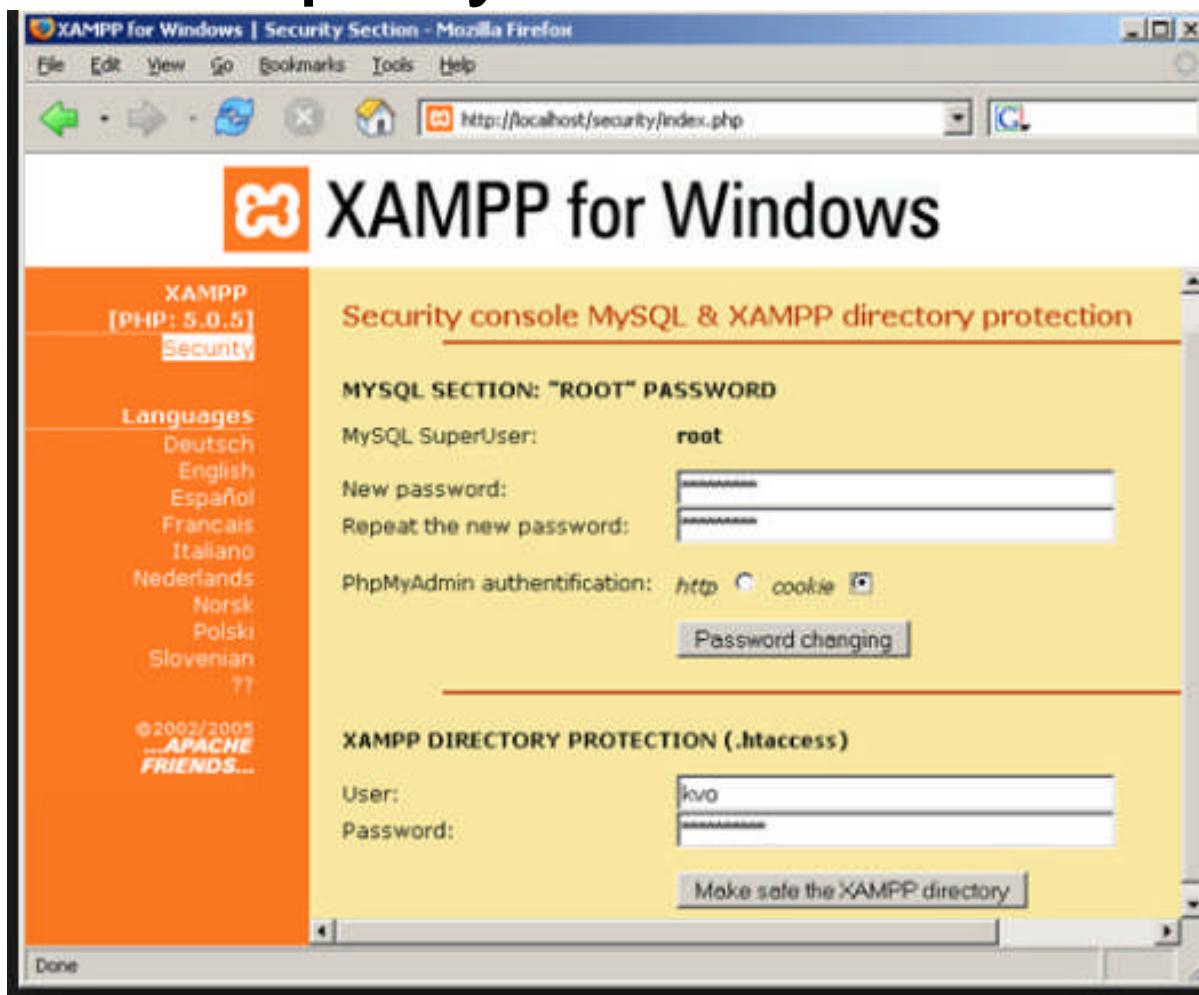
Test webpage

Notepad++ > New file >
c:/xampp/htdocs/test.htm

```
<?php  
echo "Hello World!";  
?>
```

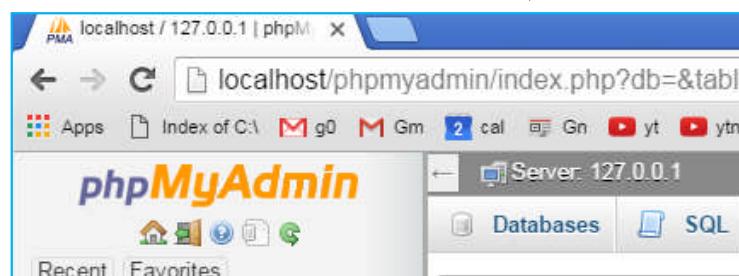
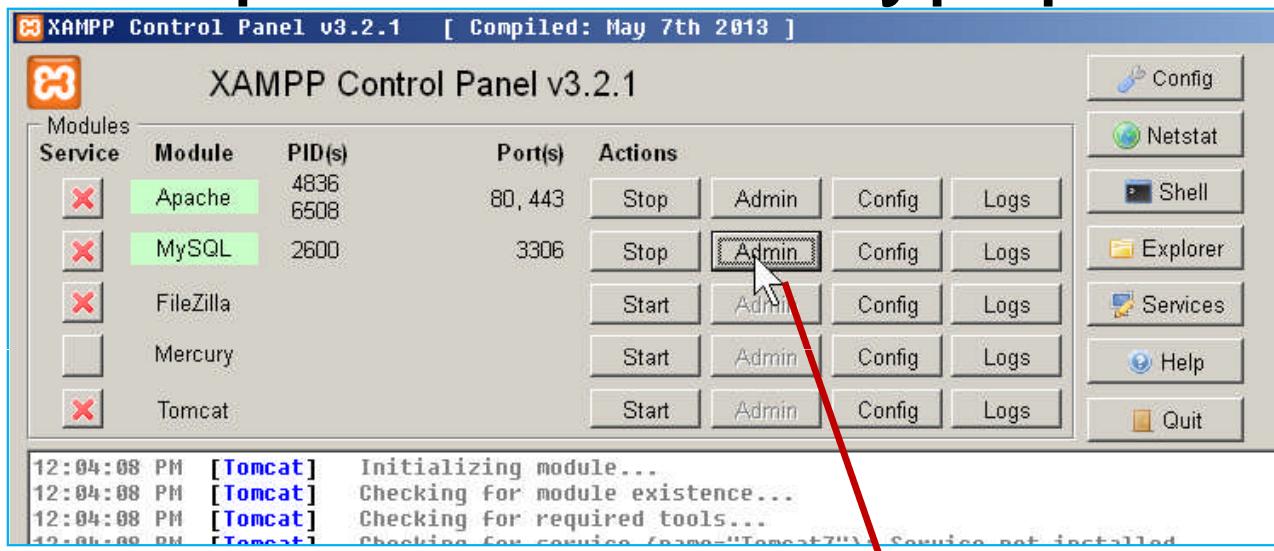
> chrome http://localhost/test.htm

Setup MySQL account



MySQL Admin >

http://localhost/myphpadmin



http://localhost/myphpadmin

The screenshot shows a web browser window with the URL `localhost / 127.0.0.1 | phpM`. The main content is the phpMyAdmin interface. On the left, there's a sidebar with icons for Home, Import, Export, and others. The main area shows a table with two rows: "Server: 127.0.0.1" and "Databases". A modal dialog box is open, displaying server details under "Database server" and "Web server".

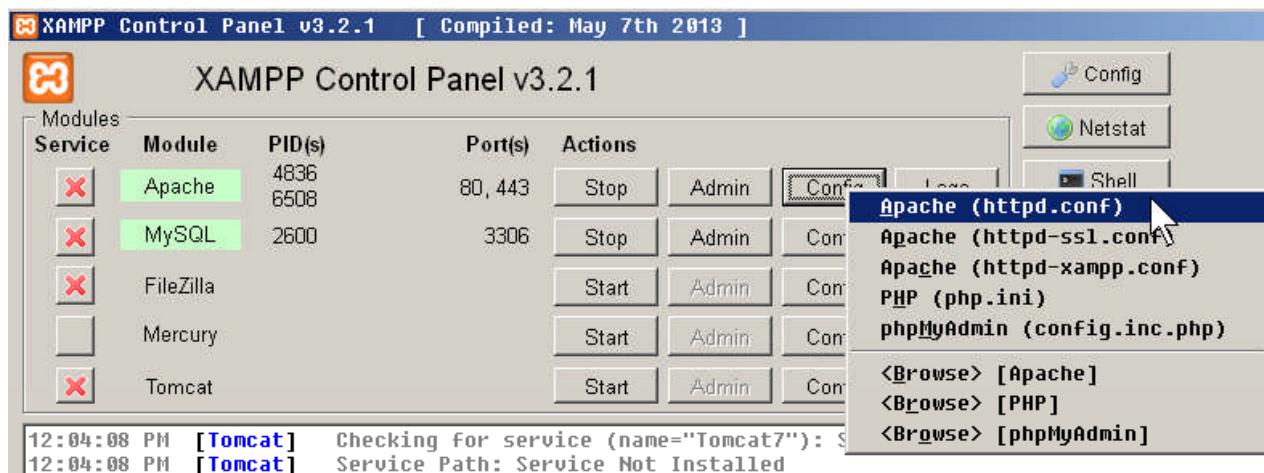
Database server

- Server: 127.0.0.1 via TCP/IP
- Server type: MySQL
- Server version: 5.6.24 - MySQL Community Server (GPL)
- Protocol version: 10
- User: mosh@localhost
- Server charset: UTF-8 Unicode (utf8)

Web server

- Apache/2.4.12 (Win32) OpenSSL/1.0.1 PHP/5.6.8
- Database client version: libmysql - mysqlnd 5.0.11-dev - 20120503 - \$Id: 3c688b6bbc30d36af3ac34fdd4b7b5b787fe55\$
- PHP extension: mysqli ⓘ

Export C:/ as http://localhost/C



```
# Add this text to httpd.conf
Alias /C "C:/"
<Directory "c:/">
    Options Indexes FollowSymLinks Includes ExecCGI
    AllowOverride All
    Order allow,deny
    Allow from all
    Require all granted
</Directory>
```

Chrome localhost/C .. To visit the C:/ via apache

Restart (stop/start) Apache

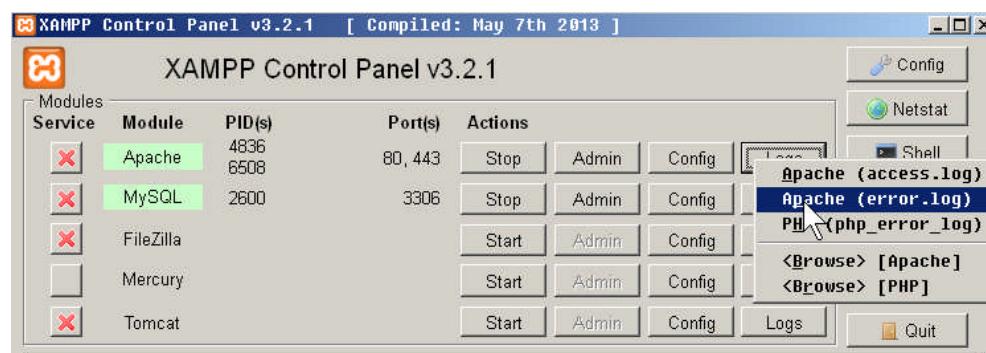
After any config changes in

c:/xampp/apache/conf/

Restart apache, check errors in

c:/xampp/apache/logs

Chrome http://localhost/C/



Php

Javascript

MySQL

Database

- A database is a collection of Excel sheets

Jquery

(Javascript Library)

Wordpress

(package for making websites)

Title

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3/2015

References