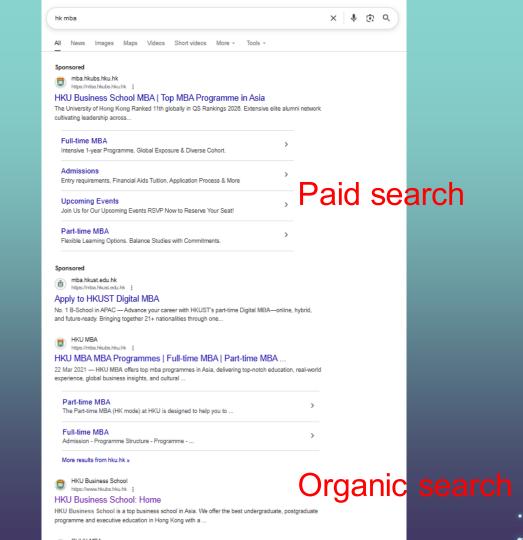
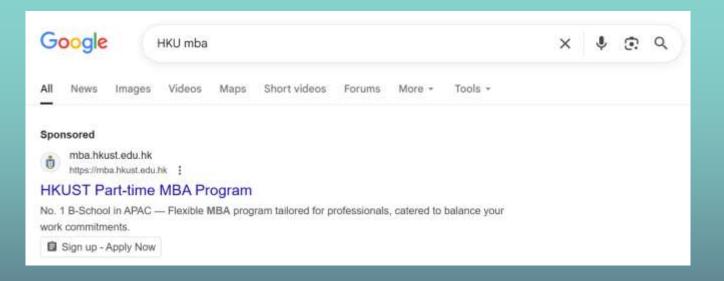
Paid Search Paying search engines to get traffic





I searched "HKU MBA" on Google. Why does HKUST MBA appear on the top of SERP instead?

Organic Search (SEO)

Less direct control over ranking

Limited control over message

- Message is typically generic / brand driven
- Pulled from code on website

When done well, it can be a very effective method of increasing traffic and leads

High organic rankings have a positive effect on the brand (and vice-versa) 69% of total search clicks are organic

Can be expensive (if outsourced) & time consuming; Not quick process and/or results

Paid Search (PPC)

Can directly influence ranking (based on bid)

Control over message

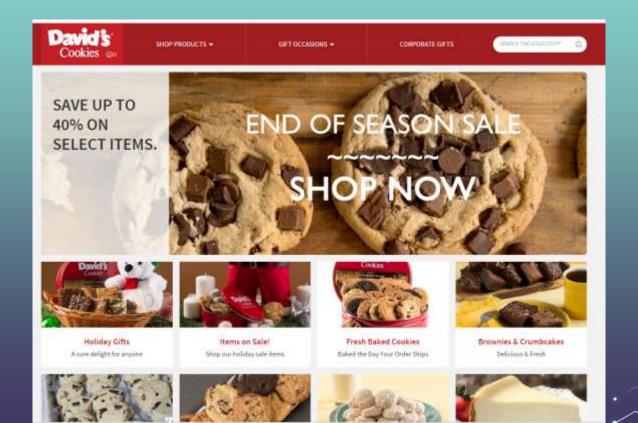
• Can be more product focused / benefit driven, frequent update

Compensates for inconsistencies in SEO, ensuring consistent placement

High paid rankings have a positive effect on the brand (and vice-versa)

Budgeting opportunity Immediate results

Example Advertiser





office gift baskets









Shopping



間 News



E More

Tools

About 284,000,000 results (0.93 seconds)

Corporate Gifting Made Easy | Crowd-Pleasing Desserts

[Ad] www.davidscookies.com/ + (800) 500-2800

Custom Logo Stickers & Cards. Choose A Gift & Customization Options. We'll Do the Rest. In a Rush? Provide A Recipient List & We'll Handle Shipping. Arrives in 2 Days or Less.

Cookie of the Month Club

Large Variety of Fresh, Homemade Cookies Delivered to You Monthly.

Cookie Gift Baskets

Unique Collection of Our Delicious Cookies Starting at Only \$39.35!

Olive & Cocoa | Office Gift Baskets | Custom Logo Branding

(Ad) www.oliveandcocoa.com/ ▼ (800) 538-5404

Our Gifts Are Gracefully Packaged Inside Handcrafted Wood Boxes.

Godiva® Corporate Gift Baskets | Chocolates For Self Or Gift

(Ad) www.godiva.com/Chocolate_Gifts • (800) 946-3482

Godiva Corporate Gift Baskets Are The Best Gift Option For Any Office. Order Today! Godiva...

Williams Sonoma® Gift Baskets | Free Shipping On Orders \$49+

(Ad) www.williams-sonoma.com/Gift-Baskets *

Shop Premium Gift Baskets For All Occasions. Exclusively at Williams Sonoma®.



How did we end up in position #1?

How much did we pay for this?

Are we paying more than the ad in slot #2?



How does Google sell paid ads?

- The searcher types a search query into Google, such as "MBA in Hong Kong."
- Advertisers bid against each other to "get the click" for this search query by bidding higher to get a higher position on the page. Generally, there are three to four paid ads at the top of the page, followed by organic results.

How does Google sell paid ads?

- Google assembles a search engine results page (SERP) based on advertising (in which advertisers bid for the click in the auction), plus organic results, and returns this to the searcher in the blink of an eye.
- If a user clicks on ads, then whichever ad they click on pays a fee to Google called the "cost per click." (The amount charged is a function of the bid below you mediated by Quality Score).

Paid search ads are sold by auction

Advertisers pay Google only when a user clicks on the ad.

There are two types of auctions: first-price auction and second-price auction. Google used to run second-price auctions but moved to first-price auction recently. But Amazon, Facebook and other platforms still use second-price auctions.

In a first-price auction, the one submitting the highest bid wins and pays how much he/she bids.

Paid search ads are sold by auction

Second price auction: The winner pays only the next highest, or the second highest bid - get it?

Second-Price Auction

Suppose that we have three bidders for the keyword "office gift basket", A, B and C.

A bids \$4, B bids \$5, C bids \$3.

B wins the auction because her bid is the highest (\$5>\$4 and \$3).

However, B only pays Google \$4 (the second highest bid, \$5 is the first highest, \$4 is the second highest, \$3 is the third highest bid).

Why not First-Price Auctions?

In first prize auction, people pay the prize they bid.

Advertiser	Bid	Position	CPC
D	\$1.00	1	\$1.00
В	\$0.75	2	\$0.75
Α	\$0.50	3	\$0.50
С	\$0.40	4	\$0.40

Why not First-Price Auctions?

In first price auction, people pay the price they bid.

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D	\$1.00	1	\$1.00
В	\$0.75	2	\$0.75
А	\$0.50	3	\$0.50
С	\$0.40	4	\$0.40

In this example, D wins the bid and pays \$1 (CPC means "cost per click"). Advertiser games the system.

Will D have incentives to decrease bid? How about bidding \$0.76?

Second Price Auction

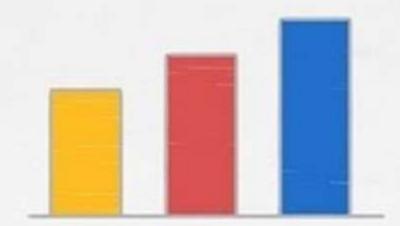
Winner pays CPC = next highest bid

Advertiser	Bid	Position	CPC
D	\$1.00	1	\$0.75
В	\$0.75	2	\$0.50
Α	\$0.50	3	\$0.40
С	\$0.40	4	\$0

In this example, D already pays \$0.75, and she has no incentive to decrease her bid. If she decreases the bid to any number greater than \$0.75, she still pays \$0.75. If she bids <0.75, she will lose the auction.

Second Price Auction



The designer of secondprice auction, William Vickrey, won the Nobel Prize in Economics in 1996. 

Quality Matters!

Quality score affects eligibility to compete in auction, likelihood of winning auction, and the actual amount paid per click. Three main dimensions to improve Quality Score:

Click-through rate

Identify keywords with low Quality Score, and may be worthwhile pausing or deleting them

Low scores bring down the overall ad group quality

Ad Relevancy

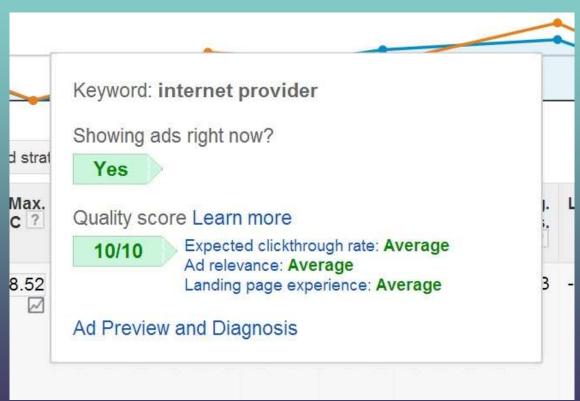
Make keyword matches more restrictive

Build negative keyword list to filter irrelevant search queries

Landing page

Why does Google care about the landing page quality?

Quality Matters!



First-price auctions with quality score

Position determined by ad rank = bids x quality score

Advertiser	Bid	Quality Score	Ad Rank	Position	Actual CPC
А	\$0.50	10	5.0	1	\$0.50
В	\$0.75	6	4.5	2	\$0.75
С	\$0.40	8	3.2	3	\$0.40
D	\$1.00	2	2.0	4	\$1.00

Second-auction with quality score

Position determined by ad rank = bids x quality score CPC = next guy's ad rank / own quality score

Advertiser	Bid	Quality Score	Ad Rank	Position	Actual CPC
А	\$0.50	10	5.0	1	4.5/10 = \$.45
В	\$0.75	6	4.5	2	3.2/6 = \$.53
С	\$0.40	8	3.2	3	2.0/8 = \$.25
D	\$1.00	2	2.0	4	0/2= \$0

Summary

Search engine runs an auction for every search.

Advertisers only pay when a user clicks (pay-per-click).

Both first-price and second-price auctions are commonly used in auctions.

Many refinements such as "quality score".





What is the most expensive keyword in Google's search advertising?



Let's guess

What is the most expensive keyword in Google's search advertising?

It is insurance.



Let's guess

What is the most expensive keyword in Google's search advertising?

It is insurance.

How much do you need to pay Google to get a click on "insurance"?

Let's guess

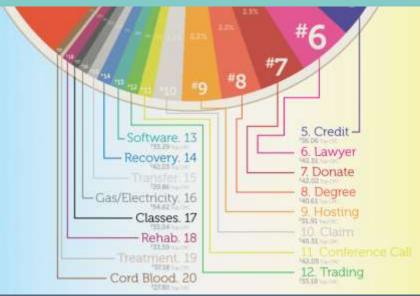
What is the most expensive keyword in Google's search advertising?

It is insurance.

How much do you need to pay Google to get a click on "insurance"?

It is \$54.91.





MOST EXPENSIV IN GOOGLE ADWORDS

What does Google want?

Google wants you to advertise on lots of keywords.

Google wants you to bid high.

Google wants keyword matching to be loose; you want it to be tight.

Google wants you to advertise on broad geographies.

Google wants you to write ad that says "free" or "free pizza" and "free beer."

Google wants clicks.

In contrast, you want clicks that lead to valuable conversions.

Guess

HKU MBA programme wants to bid on some keywords. Which of the following keywords would you target first?

- A. cheap mba in hk
- B. Should I pursue an mba?
- C. mba programmes
- D. mba in hong kong

Types of Keyword Matches

Google offers you three types of keyword match:

- Broad match (comprehensive matching)
- Phrase match (moderate matching)
- Exact match (tight matching)

Broad match

Ads may show on searches that relate to your keyword.

home decor

cream colored leather sectional

Notation for inputting keywords:

keyword

Phrase match

Ads may show on searches that include the meaning of your keyword.

Q

cheap furniture stores

living room furniture deals

what store is the best place to find a bedroom dresser

Notation for inputting keywords:

"keyword"

Exact match

Ads may show on searches that are the same meaning as your keyword.

furniture store

home furnishing shop

Notation for inputting keywords:

[keyword]

Broad Match

Default match type.

If you input cat boarding (that is, no quotes and no brackets). Google can substitute nearly anything for those words, and before you know it, you're running on dog hotels, dog food, cat videos, cat toys, and so on and so forth.

Never use it for Google Ads!

Phrase Match

Add quotes: "cat boarding."

You would think this would trigger your ads for phrases such as "best cat boarding in Hong Kong" or "where to board my cat," which is true. But even with phrase match you will end up with some farafield matches like "pet boarding" or even "dog boarding." "Phrase match" in Google ads no longer means what "phrase match" means in common sense English.

Exact Match

Add [] brackets: [cat boarding]

Only exact matches are allowed. This will even exclude desired matches as in "Cat Boarding Hong Kong". If you go with exact match, you must brainstorm and/or mine your data to get ALL possible variations of keywords, close synonyms.

Negative Keywords

A negative keyword is a single word or a phrase prefaced by a single minus symbol.

Can you give an example in which you would like to use negative keywords?

Negative Keywords

Can you give an example in which you would like to use negative keywords?

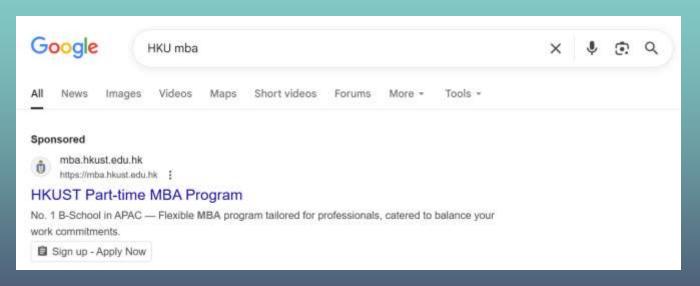
- If you only offer boarding service to cats, then you may want to exclude "dog" from the keyword match.
- If you are offering quality boarding services, you may want to exclude "free" or "cheap" from your keyword match.

Developing Your Keyword List

Key is to figure out how potential customers are searching for your product Play with Google's auto-complete feature



Buy Your Competitor's Keywords



Smaller share brands tend to poach the larger share brands

Buy Your Own Keywords

Your company name, as in "HKU MBA." Once you've made a name for yourself (at least in your city or town), you want to Google your company's name and make sure that what you see is positive. Many brands run ads on Google using their own names to prevent competitors from running ads against the brand.

Analyzing Your Competitor's Keywords

There are many tools for your to analyze your competitors' keywords. One of the most commonly used tool is

https://www.spyfu.com/

This website allows you to do research on your competitors' keywords strategy and help you develop your own keywords list!

Guess

HKU MBA programme wants to bid on some keywords. Which of the following keywords would you target first?

- A. cheap mba in hk --- searchers are unlikely to pay for it.
- B. Should I pursue an mba? --- does not necessarily lead to transactions.
- C. mba programmes --- too broad!
- D. mba in hong kong --- best choice!

Targeting Options other than Keywords

Language

Locations: Country, City, or Zip code

Device & browser

Timing: using Ad Schedule & Bid Adjustment

Example

You run a dog-sled touring business in Alaska, and you have an existing ad group max CPC bid of \$1.00. You've scheduled your ad to show on Tuesdays between 8 and 11 a.m. You decide to set a bid adjustment of +10% on Tuesdays between 8 and 10 a.m. So, your maximum bid for that time period would be $$1.00 \times (+10\%) = 1.10 .

Because many of the customers that love your dog-sled tours live in Anchorage, you decide to set an additional +20% adjustment for Anchorage. Your maximum resulting bid for a search that occurs on Tuesdays at 9:30 a.m. for a customer in Anchorage will be \$1.32. Here's how it works:

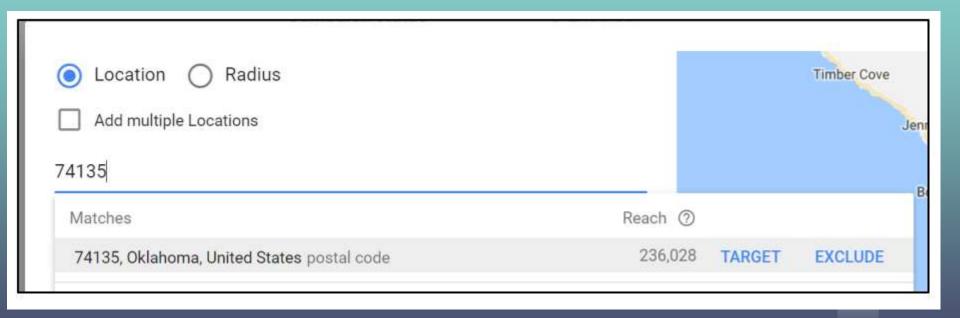
Starting bid: \$1.00

Tuesdays, 8 to 10 a.m. adjustment: \$1.00 x (+10%) = \$1.10

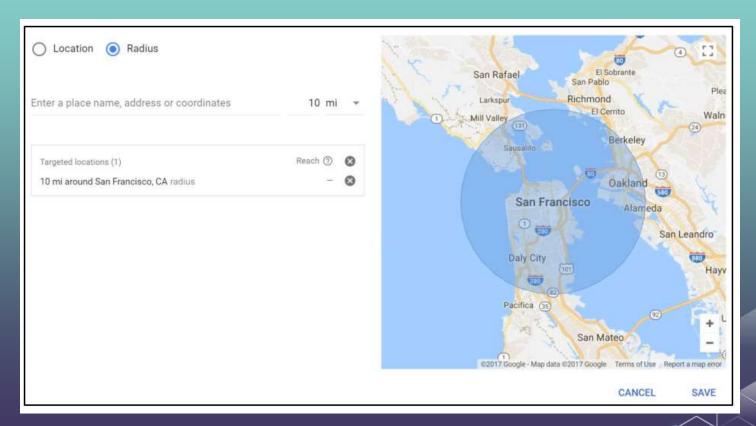
Anchorage adjustment: \$1.10 x (+20%) = \$1.32

Maximum bid for Tuesdays, 8 to 10 a.m., in Anchorage: \$1.32

Targeting Options other than Keywords



Targeting Options other than Keywords





"I know half my advertising is wasted, I just don't know which half" --- John Wanamaker





How do we measure the effects of online ads?

Impressions

Frequency & Reach

Clicks

Click-through rate

Ad Engagement

Mouse-over, Interaction

FB: Like, Share

Twitter: RT, Favorite

Conversions

Sign-ups, Downloads, Place in cart, Purchase



Impression: A user loads 1 ad on a website

Frequency: Number of ads per person

Reach: Number of people who see at least one ad

Clicks

Instantaneous feedback on individual ads – revolutionary!

Clicks can be used as a measure of intent to buy.

Click-Through Rate (CTR) = the number of times a link was clicked divided by the number of times it was seen. CTR=Clicks/Impressions

Higher is better, and you want this to be > 2% in general. Anything > 2% is good, >5% is very good. It speaks to how exciting and "on target" your ad headline and copy was vs. the search query.

Clicks

Instantaneous feedback on individual ads – revolutionary!

Clicks can be used as a measure of intent to buy.

Click-Through Rate (CTR) = the number of times a link was clicked divided by the number of times it was seen. CTR=Clicks/Impressions

Correlation between CTR & ad effectiveness (AdFX) is debatable E.g. Does a higher CTR on mobile mean higher mobile AdFX? Ads are smaller, but fill more of the screen Up to 50% of clicks on mobile banner ads are accidental (GoldSpot Media)

Sometimes clicks are unreliable...Firms might even engage in click fraud



Engagement

Engagement: A catch-all for user interactions with the ad beyond clicking including mouse-over, interacting with interactive ads, rollover, start or skip video

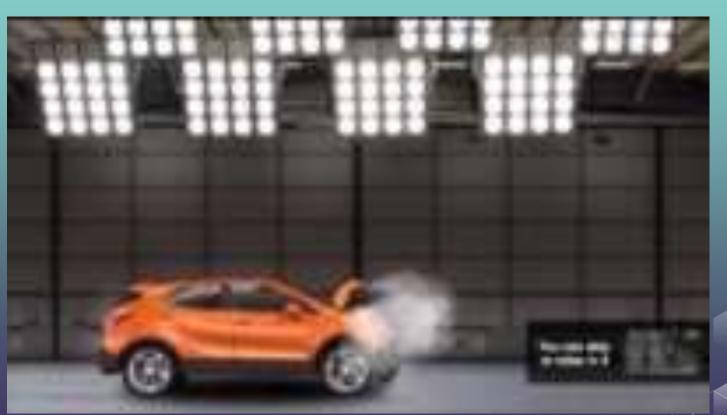
Social engagement/conversion include

FB: Like, Share

Twitter: RT, Favorite

Intentional measure showing whether consumer likes ad more than just clicks

Engagement



Conversions

Conversions: A catch-all for user interactions with advertiser including sign-ups (newsletter, membership, etc.), downloads, shopping on-site, placing items in cart, purchasing.

Conversion Rate (CR) = the number of conversions divided by the number of times the ad was clicked. CR=Conversions/Clicks

Probability of Purchase = $CTR \times CR$, here purchase is broadly defined.

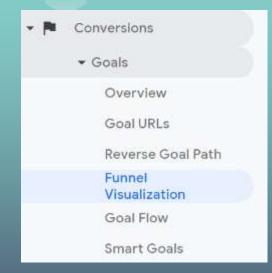
Conversions

If you have a high CTR but low conversions:

Here your problem isn't with Google, but rather with your landing page. You're getting clicks, but they're not converting. Assuming your keyword patterns are tight (i.e., transactional, relevant searches), then work on your landing page experience. What will get users to convert to your desired goal once they land on your website? What's fouling it up?

Conversions: Pros and Cons

- (+) Some direct response advertisers only need conversion info (like app makers & downloads)
- (+) For brand advertisers (like Coca-Cola), conversions (& engagement) are often all they can measure!
- (–) Conversion rates are typically very low Decisions require much more impression data



(entrance):

/store fitml

/store html/guickview

/google+nedesign/apporet/mens/quickview

/home-



Some Metrics

```
Impression = number of instances ad is seen by user
Cost-per-Click (CPC) = cost paid to search engines
Click-Through Rate (CTR) = efficiency of generating clicks from
delivered impression
Conversion Rate (CR) = efficiency of generating sales from click
Probability of Purchase = CTR x CR
Revenue = Prob. of purchase x Profit margin per purchase x
Impressions
Cost = \#Clicks \times CPC, where \#Clicks = Impression \times CTR
Net Revenue = Revenue - Cost
Return on Investment (ROI) = Net Revenue / Cost
```

Next Class

I will introduce the group data project next class (Thursday).

Next week is reading week (no classes). Oct 20 class is cancelled for your group work.