

# How Does the AdWords Auction Work?

## PRIZED AUCTION ITEMS

"Insurance"

"Loans"

"Mortgage"

"Attorney"

## TOTAL GOOGLE EARNINGS

**\$32.2 BILLION**  
in advertising revenue.



## IT ALL STARTS WITH A QUERY



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



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.

## 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.

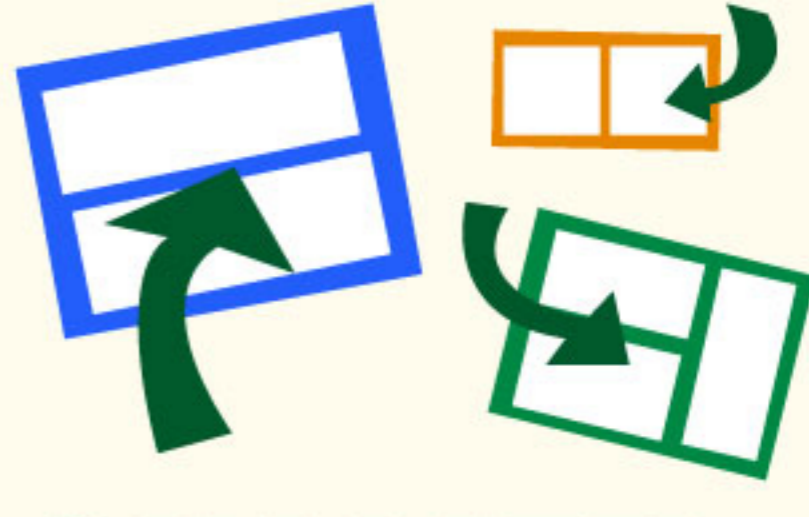
Google then enters the keyword from your account it deems **most relevant** into the auction with the maximum bid you've specified as well as the associated ad.

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



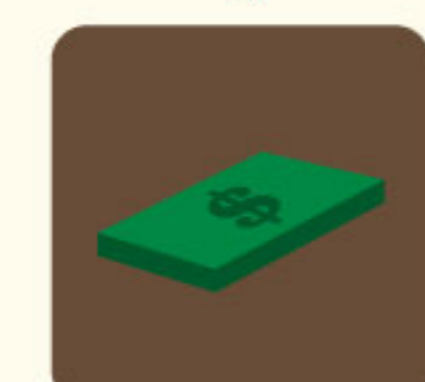
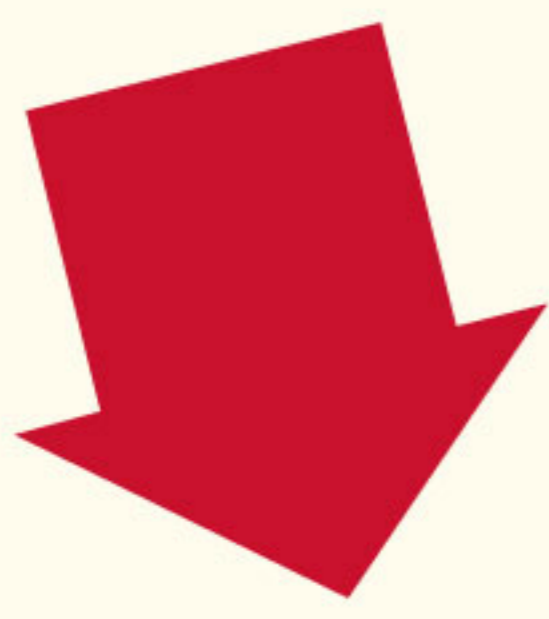
## HOW DOES GOOGLE DETERMINE WHICH AD IS SHOWN WHERE?

Once you are entered into the auction, Google looks at two key factors to determine where your ad ranks: your **maximum bid** and your **quality score**.



$$\text{AD RANK} = \text{CPC BID} \times \text{QUALITY SCORE}$$

The best combined **CPC Bid x Quality Score** gets the best position:



This is the maximum bid you specify for your keyword.



This is a metric to determine how relevant and useful your ad is to the user (components are CTR, relevance, and landing page). The higher your quality score, the better.

$$\text{KEYWORD RELEVANCE} + \text{USER EXPERIENCE} = \text{QUALITY SCORE}$$

$$\text{Max Bid} \times \text{Quality Score} = \text{Ad Rank} \rightarrow \text{Position}$$

Advertiser	Max Bid	Quality Score	Ad Rank	Position
Advertiser I	\$2.00	10	20	1st (SOLD!)
Advertiser II	\$4.00	4	16	2nd
Advertiser III	\$6.00	2	12	3rd
Advertiser IV	\$8.00	1	8	4th

## HOW DOES GOOGLE DETERMINE WHAT YOU PAY?

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

$$\text{YOUR PRICE} = \frac{\text{THE AD RANK OF THE PERSON BELOW YOU}}{\text{YOUR QUALITY SCORE}} + \$0.01$$

Advertiser	Max Bid	Quality Score	Ad Rank	Actual CPC
Advertiser I	\$2.00	10	20	$\frac{16}{10} + 0.01 = \$1.61$
Advertiser II	\$4.00	4	16	$\frac{12}{4} + 0.01 = \$3.01$
Advertiser III	\$6.00	2	12	$\frac{8}{2} + 0.01 = \$4.01$
Advertiser IV	\$8.00	1	8	Highest CPC

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

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

## OTHER 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.

### CPM

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

### Alternative Bidding Methods

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

#### CPM

**CPM Bids** – If a CPM bid is entered into an auction with CPC bids and CPC bid, eCPM is used to determine bid (the effective cost per 1000 impressions for both the CPM bid and the CPC bid).

#### CPA

**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.



Sources:

- <http://searchenginewatch.com/article/2094180/Google-Reports-Q2-2011-Earnings-Record-9-Billion-Revenue>
- <http://adwords.google.com/support/aw/bin/answer.py?hl=en&answer=6111>
- <http://www.youtube.com/watch?v=K7l0a2PVhPQ>
- <http://www.youtube.com/watch?v=jR7AMb6rZ08&feature=relmfu>
- <http://adwords.google.com/support/aw/bin/answer.py?hl=en&guide=23293&page=guide.cs>
- <http://www.wordstream.com/articles/most-expensive-keywords>