Agenda   Understand the Facebook Auction

What is a Facebook objective?

How does Bidding work on Facebook?

- What is oCPM?

How does the Facebook auction model work?

- What is eCPM?

- What is discount bid pacing?

How does your ad get placed in the Newsfeed and on the Right Hand Side?

What are you charged for your ad?

- What are the different types of auctions?

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Objectives

Set Your Objective

Your can bid on ads on a variety of metrics (or objectives).
The full list from Facebook:

Clicks to Website: Get people to visit your website.

Website Conversions: Promote specific conversions for your website.

Page Post Engagement: Promote your Page posts.

Page Likes: Get Page likes to grow your audience and build your brand.

App Installs: Get people to install your mobile or desktop app.

App Engagement: Get people to use your desktop app.

Offer Claims: Create offers for people to redeem in your store.

Event Responses: Increase attendance at your event.

Video Views: Create ads that get more people to view a video.

Facebook Campaign Objectives Align To Four Broad Categories

These categories are:

1. Offline sales (brick & mortar retail)
2. Online sales (eCommerce)
3. Mobile (app installs and engagement)
4. Brand

As an advertiser, you should align your objective to which business goals you're seeking.

Align Your Objective To A Bid

Your campaign objective determines your bid type

Each objective has specific bid types which best align to it; some objectives align to multiple bid types.

Example bid and objective mapping:

Offline

Offer claims

Event responses

Clicks to website

Video views

Website conversions

Page post engagement

Online

Website conversions

Clicks to website

Offer claims

Mobile

App installs

App engagement

Clicks to website

Brand

Page post engagement

Page likes

Video views

Offer claims

App installs

App engagement

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Bidding

Bid Towards Your Facebook Campaign Objective

You can bid on a variety of metrics. Some of the most popular ones with Social.com clients include paying for:

Impressions (CPM, or cost per thousand impressions)

Clicks (CPC, or cost per click)

App installs, either Mobile or Facebook Canvas (CPI, or cost per install)

User Actions, such as Likes or video plays (CPA, or cost per action)

Facebook allows you to "**optimize for (business objective)**" using **oCPM**

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What Is oCPM?

Stands for **Optimized CPM** (cost per thousand impressions)

Facebook's preferred system for buying ads. Allows you to specify your campaign objective over four campaign goals: actions, clicks, reach, and impressions.

By telling Facebook your objectives, Facebook helps you reach them!

As of Q4 2014, Facebook refers to oCPM as "optimize for" in Power Editor

A $10 goal (not bid!) could be allocated $5 to clicks, $3 to likes, and $2 to reach or $8 to clicks and $2 to likes, or $10 to likes.

Other metrics, including Mobile App Installs or offers can also be purchased with oCPM.

Goals

NOT

Bids

Why Use Facebook Optimization (oCPM)?

Facebook automatically bids on your behalf, constrained by your goal price and campaign budget.

By giving Facebook more flexibility in choosing who to target, and how much to bid, Facebook uses its proprietary data to optimize your bids and reduce your total costs.

Facebook alone has access to real-time impression-level data and can make bidding decisions on level in a manner similar to real time bidding (RTB) for display ads. They use this data to serve impressions to users most likely to take your desired action.

No advertiser has access to that information or can use it to optimize ads, because it's not in the Ads API or available in either Power Editor or any partner's tool.

Total ROI usually exceeds either a CPC or traditional CPM campaign.

- Jon Loomer tested the oCPM versus CPC for a campaign, and found that oCPM resulted in 3x the link clicks and a dramatically higher CTR.
  Source: http://www.jonloomer.com/2013/12/15/cpm-or-ocpm-facebook-ads/

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Potential Objections To oCPM

Advertisers have limited visibility into the specifics of their ad placement, especially if bidding on multiple ad placements at once

Limited granularity for optimizing bids

oCPM informs Facebook of the advertiser's goals, which some advertisers might be wary of.

Combine Your Objective And Your Bid

After picking one of the objectives and a bid type, marketers set both a price per action (click; thousand impressions; app install) and a total budget for the campaign.

Objectives + **Bid** + **Price per action** = **Campaign**

Auction

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Facebook Places Your Bid Into A Series Of Auctions

A Facebook Auction is run for each impression to determine the ad with the highest eCPM score to show a user.

Your ad is placed into every possible auction, but your bid is automatically adjusted so that delivery against your objectives is smoothed out over the course of the day.

This is called **Discount bid pacing**.

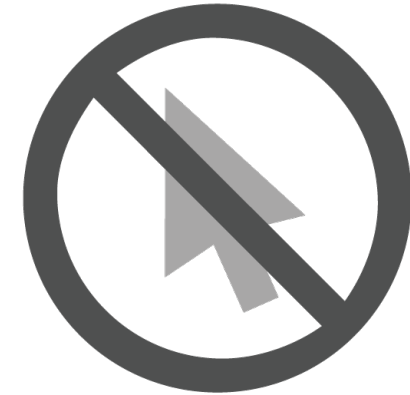Ensures that all of your advertising buy isn't spent all at once, but is instead spread out.

$1.00 CPC   95¢ CPC $1.05 CPC

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Winners of Each Auction Are Determined

To determine who wins an auction, Facebook converts all bids (or oCPM goal) to what it calls "eCPM" – a number which includes both the bid and the probability what you're bidding on happening.

Your actual bid on clicks, likes, or any other objective is a proxy for your actual bid.

The "winner" of each Facebook auction is the ad with the highest eCPM.

Thus, a "better" ad with a lower bid can win an auction over a less engaging ad with a higher bid.

What Is eCPM?

eCPM stands for Effective CPM

eCPM is your bid price multiplied by the probability of what you're bidding on happening

$$Bid \times P_{(action)} = eCPM$$

| Bid | Probability of action | eCPM |

If you bid on clicks (CPC), probability of action is **eCTR**, or the predicted (effective) click through rate. If you bid on any other Action, Facebook uses both eCTR and the probability of the action (such as an app install) occurring after the click.

Ad quality score is also factored into eCPM

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Example Of eCPM

Bid type	Bid cost			Facebook predicted action per impression		eCPM	Winner?
Likes	$5.00	x	2.90%	=		0.145	No
Clicks	$10.00	x	1.80%	=		0.180	Yes
Clicks	$20.00	x	0.65%	=		0.130	No

In the example, the $10 CPC offer wins because it has the highest eCPM despite not having the highest bid, because Facebook views it as more relevant (more likely to get the intended actions by the user)

All bid types are mixed in a single winner-take-all auction, unlike in a search ads auction!

All bid types and oCPM goals are converted to eCPM

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Quality Score Impacts Probability Of Action

In addition to Facebook's predicted probability of action, eCPM is also impacted by the quality score of your advertisement

If users repeatedly say they do not want to see your ad, or hide all ads from your account, it will hurt your eCPM score
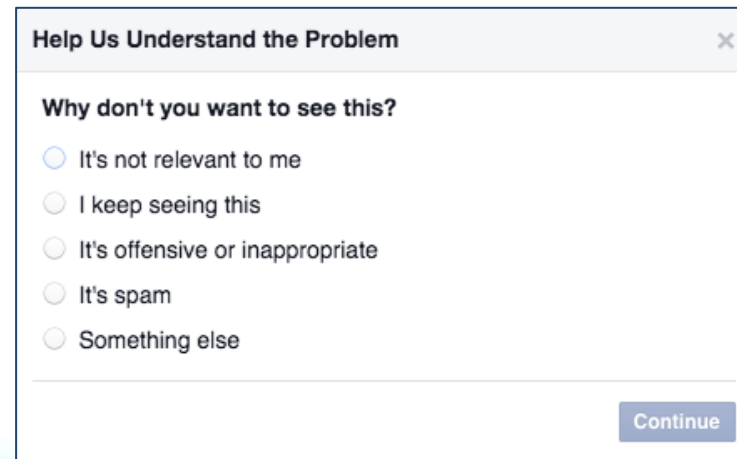
eCPM And oCPM Takeaways For New Ad Campaigns

An ad with a higher CTR can win with a lower CPC bid, because a **higher CTR improves your ad's eCPM score**

- Similarly, improving the click-to-install ratio will decrease the app install bid required to win

New ads will take time to ramp up impressions and spend, because Facebook's algorithms "test" the ad to determine the probability of action for eCPM

- Your new ads in existing advertising accounts initially have their probability of action predicted using the prior history of the advertising account

- Therefore, accounts with low action-to-impression ratio has a greater likelihood be penalized lower predicted probability of action, and thus lower eCPM, as well as the reverse

If your advertising account is new, with no history, Facebook predicts probability of action using comparable targeting and campaigns from aggregated data from other advertisers

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Ad Buying And The News Feed

Auction-Winning Ads Gets Placed in the Feed

Organic

Ad 1

Organic

Organic

Ad 2

Ads are sorted into the newsfeed based on their organic score plus their eCPM.

An ad's organic score is a Facebook metric for how likely users are to engage with it.

Ads cannot be in the first position in the newsfeed

- An organic story must be first.

There is a minimum number of organic stories between each ad.

Individual users receive more or fewer advertisements depending on their engagement rate with the ads

User Engagement on Your Feed Ads Matters

Ads compete with organic content for location in the newsfeed; ads which are more engaging to users will get better placement.

Viewers liked and shared the ad on the left more than the ad on the right, due to a superior headline, image, or call to action, which will probably result in better placement.

Facebook Charges The Auction Winner (Feed)

Facebook uses a **modified second price auction** to set the price you pay

This is very similar to how Search Ads are priced

The highest bidder (according to eCPM) wins the auction and pays the price of second highest bid

- Note: If the auction winner has the second (or lower) highest bid, because of the eCPM modification, the winner pays their actual bid.

Bid	Won Auction?	Price Paid
$20	Yes	$10
$10	No	$0
$5	No	$0

| Bid	Won Auction?	Price Paid
$20	No	$0
$10	No	$0
$5	Yes	$5

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Facebook Charges The Auction Winner (RHS) (1/2)

RHS auction prices use a variant of a VCG (Vickery-Clark-Groves) auction, which accounts for the "negative externality" of an auction.

This means each winner of a RHS slot pays the price for their slot that would be paid had they not been in the auction themselves.

It is calculated according to following formula:

CPM Paid = Next Highest Slot Bid * (Your eCPM – Following Slot eCPM)
           + Following Slot Bid * (Following Slot eCPM – Subsequent Slot eCPM)
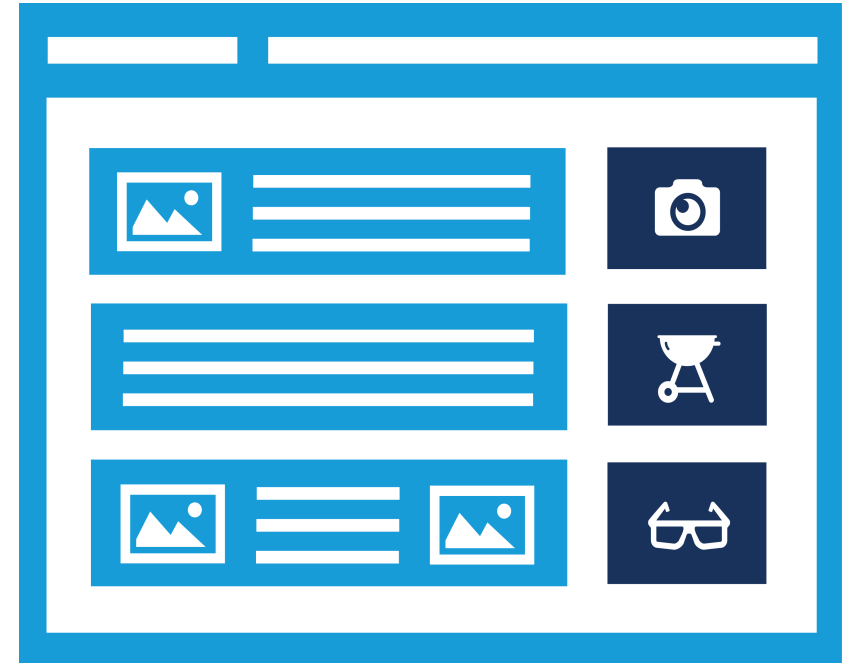
Facebook Charges The Auction Winner (RHS) (1/2)

In this example, there are three RHS ads; the top-placed ad is for a camera, the second for a barbeque, and the third for sunglasses.

The Camera ad pays the barbeque and sunglasses bid modified by eCPM:

$2.50 = $10*(1.00-0.80) + $5*(0.80-0.70)

Barbeque ad pays:

$0.70 = $5*(0.80-0.70) + $4*(0.70-0.65)

Sunglasses ad pays:

$0.80 = $4*(0.70-0.65) + $4*(0.65-0.50)

Bid	eCPM	Paid
$20	1.00	$2.50
$10	0.80	$0.70
$5	0.70	$0.80
$4	0.65	$0
$4	0.50	$0

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Potential Objections To The Facebook's Auction Model

No impression-level optimization nor real-time bidding directly controllable by the advertiser.

Advertisers have limited transparency into the bidding process, and thus limited ability to glean insights for future campaigns.

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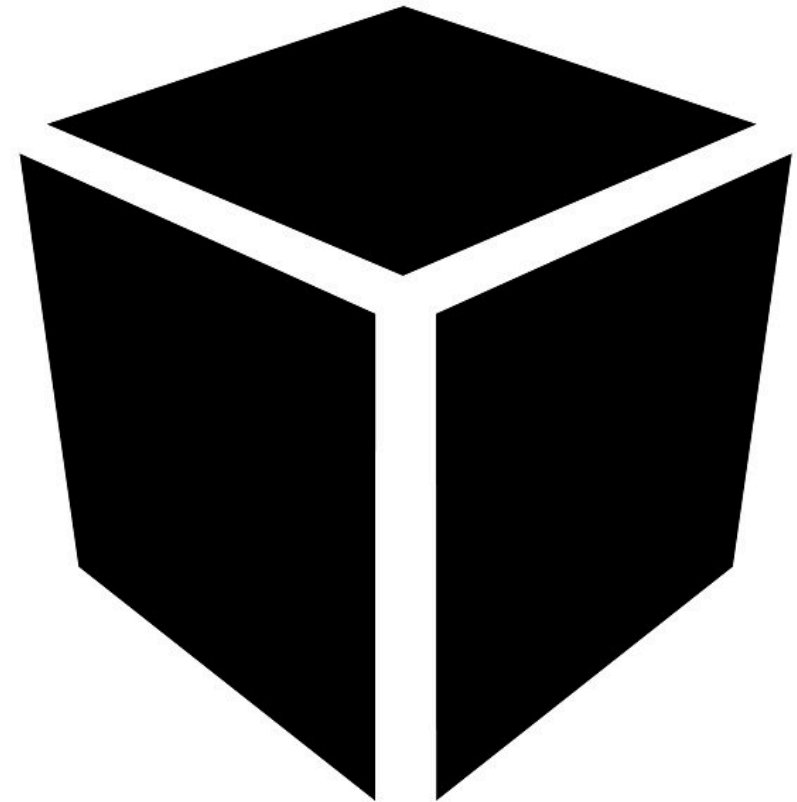
So How Does The Auction Work, Overall?

Advertisers . . .

1. Define their business objectives

2. Select their bid type and place their bid

3. Have their bid compete in Facebook's auction

4. Have their winning ad placed and pay for their placement