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THE INFORMATION PROVIDED BY INMOBI IN THIS DOCUMENT, "**AUCTION DYNAMICS EXPLAINED**" SHOULD HELP YOU UNDERSTAND THE AUCTION MODELS DEPLOYED ON INMOBI EXCHANGE, IF YOU TRANSACT VIA THE OPEN RTB PROTOCOL. THE DOCUMENT COVERS DETAILS SPECIFIC TO INMOBI EXCHANGE AND HAS REFERENCES TO THE IAB OPEN RTB INTEGRATION DOCUMENT (v2.5), WHERE NECESSARY. WE WOULD URGE YOU TO GET IN TOUCH WITH YOUR DEDICATED INMOBI PARTNER MANAGER, SHOULD YOU HAVE ANY QUESTIONS.

PREPARED BY

INMOBI

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Auction Dynamics

Auction Dynamics or the auctioning model implemented by InMobi or other exchanges that you might work with, determines the price at which an impression is sold. The industry is quickly evolving from a second-price auction mechanism to an interim phase where both second-price and first-price will be supported and then eventually in to a pure first-price auctioning mechanism. While first-price has become popular with the rise in-app header bidding and real time bidding integrations, exchanges still support different types of auctions, all of which require different approaches and bidding strategies.

This document covers InMobi's approach to auction dynamics and what it means for demand partners.

Auction Types

InMobi currently operates both first-price and second-price auctions on the InMobi Exchange. Before we get into the details, here's a look at how both models work.

First-price auction is an auction mechanism where the buyer pays exactly the price they've bid on any given impression - which, as a result, maximizes the winning potential for advertisers. winning bids get to compete at the final auction with the actual bid price they were willing to pay for the impression.

First Price Auction Overview

SSP First price auction — Publisher side First price auction

Bidder 1 — $2 CPM
Bidder 2 — $7 CPM
Winning Bid $7 CPM
$7 CPM
Winning Bid $7 CPM
$3 CPM — Ad Network 1
$4 CPM — Ad Network 2

Second-price auction refers to an auction mechanism where the buyer pays $0.01 more than the *second* highest bid for an ad impression or the bid floor if there is none. Unlike a first-price auction

though, in a second-price auction, the bids can become less competitive - some might argue, unfairly - by way of the clearing logic they will encounter in the nested auctions further downstream.

Second Price Auction Overview

Note:

- InMobi currently operates both First Price and Second-Price auctions. 80% of our inventory currently runs on Second-Price auctions, while the remaining 20% runs on First-Price.
- All Header Bidding Inventory runs on First-Price Auction model.

Identifying Auction Types

Buyers should be aware of the type of auction they are participating in prior to submitting their bid. InMobi passes the auction type to a DSP within the oRTB bid request as recommended by IAB. This helps DSPs submit the most optimal bid price and ensure they don't under- or over-bid for any impression opportunity. Within the oRTB bid request, "auction type" is represented as "at:", as shown below.

Auction Type	oRTB Value ('at:')
First-Price Auction	at: 1
Second-Price Auction	at: 2

Transition to First Price

InMobi Exchange is now taking steps for a complete transition to first-price auctions, and we expect to complete the move in Q3, 2020 to make a gradual transition for our demand partners. While demand partners tweak their bidding strategies to adapt to this change, we believe this will create an environment for advertisers and publishers to arrive at a fair and transparent auction that benefits all players in the advertising value chain.

Note:

- During the transition period, both first- and second-price auctions will co-exist on the InMobi Exchange.
- Buyers will be able to identify the nature of auction by the "Auction Type" field in the bid request.
- All first-price auctions will have auction type value as 1, and second-price auctions as 2.

Benefits of First-Price Auction

Higher win rates: Buyers will likely see improved win rates as the first-price auction mechanism eliminates the risk of being undercut by lower bids from competitors. No matter where the decision is being made, your bid at the final auction remains equal to your original bid value.

Removes unknowns and ensures transparency into pricing: Buyers will now deterministically know what they are going to pay for an impression, without it being affected by competing bids or the clearing logic at the SSP's end. There is no scope for hidden fees by intermediaries that may be still possible in second-price auctions.

Marketplace Types and Auction

Open Marketplace (Open Exchange): Inventory is available in our open marketplace for all buyers, with no preferential access. Open Marketplace bids will go through either first-price or second price-auctions, depending on the impression.

Private Marketplace: Buyers participating in a preferred deal get "first look" at the inventory. We have two classes of access both offering value adds including InMobi first party data powered audience segments, custom creative support and managed KPI service.

- **Priority Access (Refusal to First Refusal):** These deal IDs will have first right to bid on the qualifying impressions. This qualifies as a higher level of access compared to Open Marketplace and Standard Access (explained below) deal IDs, and hence carries a price premium. Only in the case when none of the buyers with a Priority Access Deal ID decide to bid on an impression would bids from Open Exchange and Standard Access Deal IDs qualify to participate in the auction. Bids qualify for first-price auction here.

- **Standard Access:** These deal IDs have same level of access as Open Marketplace and will compete with other Standard Access Deals and Open Marketplace bids. Bids will participate in first or second price auction depending on the impression.

Auction Notifications

InMobi sends demand partners real-time notifications to indicate when an impression has been served and billed, as well as when a bid is lost and the reason for the loss.

The following figure illustrates the OpenRTB interactions between an exchange and its bidders. For each inbound ad request, bid requests are broadcast to bidders, responses are evaluated under prevailing auction rules (at InMobi) and a winner is selected.
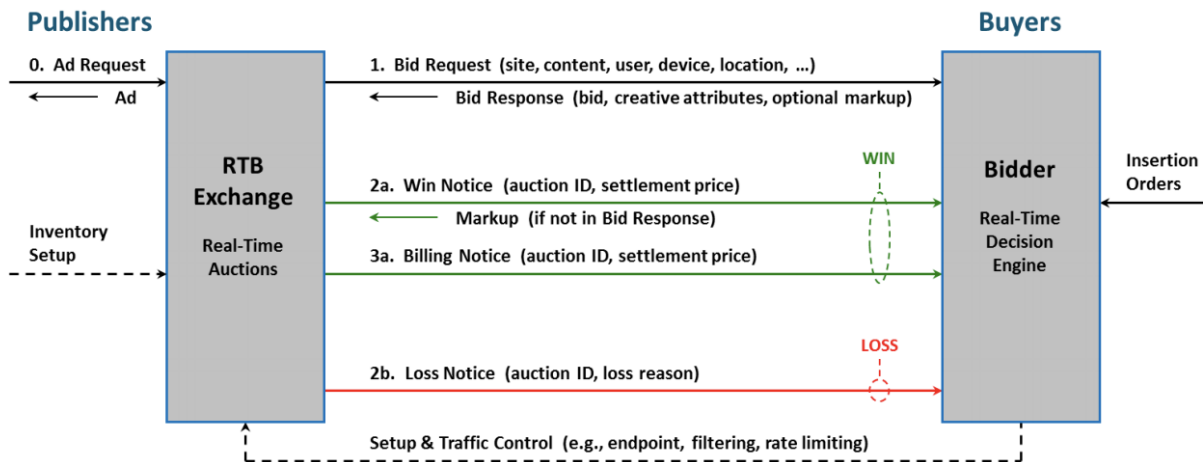
- The winning bidder is notified of the auction win via a win notice.
- Ad markup can either be included in the bid prospectively or in response to the win notice.
- A separate billing notice is also available to accommodate specific details like billing on device delivery, viewability, etc

The win notice is essential to inform the bidder's pricing algorithms of a success, whereas the billing notice indicates that spend should actually be applied.

- Loss notification is also available to inform the bidder of the reason their bid did not win. Loss reason code will follow the guidelines mentioned in oRTB spec v2.5

The URLs for win, billing, and loss notices and the ad markup itself can contain any of several standard macros that enable InMobi to communicate critical data to the bidder (e.g., clearing price).

Prerequisites: It's essential that the bidder is either oRTB 2.3 or oRTB 2.5 compliant and provide an http/https endpoint to receive auction notification responses.

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