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## Changes to Ad Manager, AdMob auction

DVA Review  
2019-09-03



**PTX1035**

**1:23-cv-00108**

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## Agenda

*Today's focus:* Results on Ad Manager Web inventory, sell-side and buy-side view covered separately

(App performance reviewed earlier -- changes deliver status-quo like outcomes at transition)

ASK: Approval to complete ~100% sellside transition to new auction model in 2 weeks

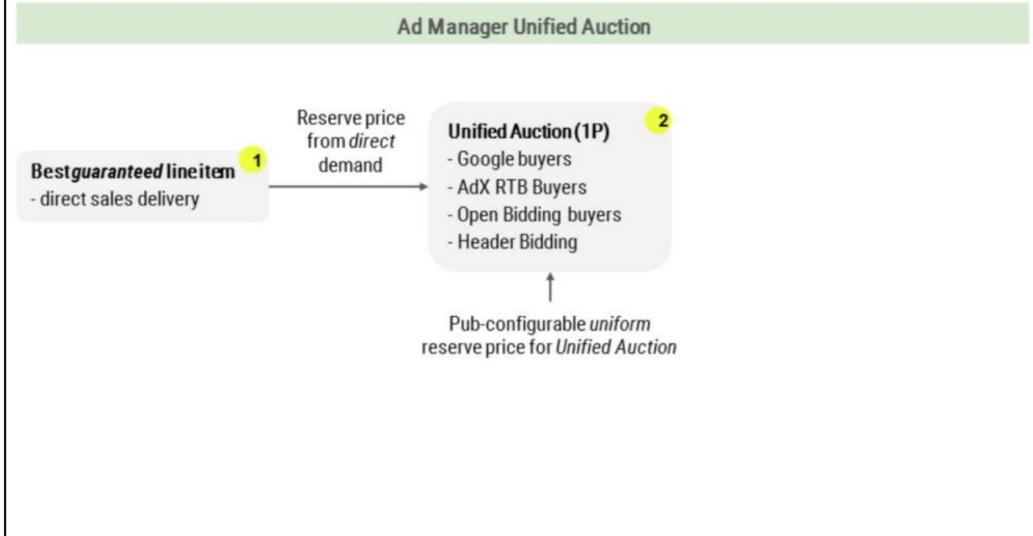
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- -1.5% Google gross revenue; neutral Google net revenue; -1.4% publisher payment from Google; neutral publisher payment overall

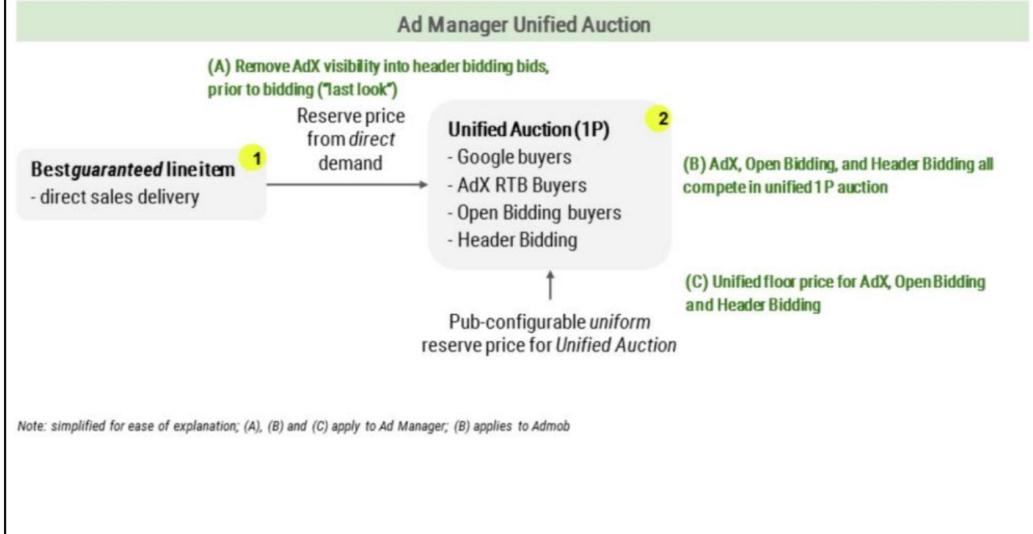
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*End-state:* Simple unified auction w/ equal access across indirect demand in end state

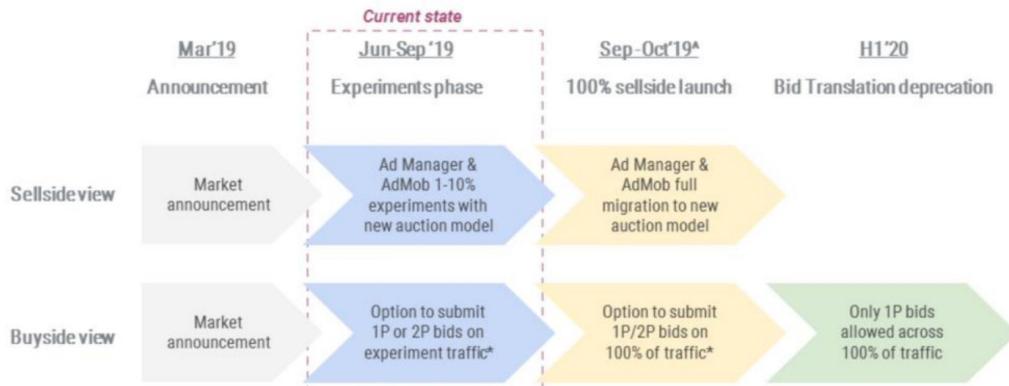


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*End-state:* Simple unified auction w/ equal access across indirect demand in end state



## Ad Manager & AdMob migration to new auction model in Sep '19, with buyer option to continue submitting 2P bids



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## Buy-side view (web)

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## Sell-side view (web)

Impact of individual changes comprising this launch

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## Expected Impact

	Impact on Ad Manager Web inventory	Impact on Ad Manager App inventory	Impact on Admob inventory
<b>(A) LastLook removal</b>	Reduces incentive to inflate HB prices, ensuring fairer competition with AdX/EB ("boost")  Reduces AdX/EB visibility into HB prices prior to bidding		
<b>(B) Migration to 1P auction</b>	GDA/ DV3/Auth. Buyers get direct access to the final 1P auction, improving competitiveness against external 1P demand (eg. Exchange/ Open Bidding)		
<b>(C) Unifying floor prices</b>	Levels playing field across AdX, EB, HB, reducing effective AdX floors		
<b>(D) Investments in optimizations</b>	Adaptation of auction optimizations and fine-tuning of bidding logic will improve performance over time		

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## Removing Last Look\* has significant negative impact

	Impressions	Value Clamped	Revenue	Google Profit	GDN profit	Post Revshare Payout	Aggregate:
LastLookOverDfpRemnant::GlobalControl 246003051 <b>TOTAL * Adx_Only * Web</b>	548,549,820	1,786,486	690,764	154,233	56,196,1323	511,824	<ul style="list-style-type: none"> <li>● -9.6% revenue</li> <li>● -4.9% value</li> </ul>
ifPriceFromSettingWinnerCostExperiment 246003052 <b>TOTAL * Adx_Only * Web</b>	406,914,005 <b>-9.41%</b> [-9.56, -9.26] %	1,699,227 <b>-4.88%</b> [-5.65, -4.12] %	624,314 <b>-9.62%</b> [-9.95, -9.29] %	144,356 <b>-6.40%</b> [-7.95, -4.86] %	54,296,8083 <b>-3.38%</b> [-7.79, 1.03] %	457,340 <b>-10.64%</b> [-10.79, -10.50] %	
LastLookOverDfpRemnant::GlobalControl 246003051 <b>Adwords_Buyer * Adx_Only * Web</b>	333,223,170	418,763	248,815	73,917	35,312,8161	174,720	
ifPriceFromSettingWinnerCostExperiment 246003052 <b>Adwords_Buyer * Adx_Only * Web</b>	298,497,863 <b>-10.42%</b> [-10.58, -10.26] %	375,698 <b>-10.28%</b> [-11.15, -9.42] %	220,983 <b>-11.19%</b> [-12.16, -10.21] %	69,427 <b>-6.07%</b> [-9.41, -2.74] %	34,838,0716 <b>-1.34%</b> [-8.48, 5.79] %	151,396 <b>-13.35%</b> [-13.48, -13.22] %	
LastLookOverDfpRemnant::GlobalControl 246003051 <b>Dbm_Buyer * Adx_Only * Web</b>	108,676,700	1,164,124	287,571	62,827	20,883,3162	200,201	
ifPriceFromSettingWinnerCostExperiment 246003052 <b>Dbm_Buyer * Adx_Only * Web</b>	102,152,821 <b>-6.00%</b> [-6.18, -5.83] %	1,147,250 <b>-1.45%</b> [-2.59, -0.31] %	269,666 <b>-6.23%</b> [-6.43, -6.02] %	59,667 <b>-5.03%</b> [-5.32, -4.74] %	19,458,7367 <b>-6.82%</b> [-7.04, -6.61] %	187,530 <b>-6.33%</b> [-6.52, -6.14] %	

But allows bundling of other valuable changes, that can be positioned as pro-competitive (fairer platform for \*all\* buyers); Pub outreach to reduce HB boosts planned

\* This impact is measured in a 2P auction state comparing performance with and without last look; [Rasta source](#);

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## Unified Pricing meaningfully improves inventory access by leveling the playing field

	Impressions	Value Clamped	Revenue	Google Profit	Post Revshare Payout
nt::DBM1xWithLegacyRulesAppliedPublic 51390104 Adx_Only * Second price Private exchange * T	233,006,841	395,382	323,221	85,638	221,945
irstPriceAuctionExperiment::DBM1xPublic 51390103 Adx_Only * Second price Private exchange * T	248,115,966 6.48% [6.31, 6.66] %	409,350 3.53% [2.23, 4.84] %	336,966 4.25% [3.85, 4.65] %	88,778 3.67% [2.58, 4.75] %	230,618 3.91% [3.61, 4.21] %
nt::DBM1xWithLegacyRulesAppliedPublic 51390104 Adx_Only * Second price Private exchange * D	60,424,780	170,285	195,109	47,798	131,708
irstPriceAuctionExperiment::DBM1xPublic 51390103 Adx_Only * Second price Private exchange * D	83,970,264 38.97% [38.70, 39.23] %	186,442 9.49% [8.31, 10.67] %	210,711 8.00% [7.64, 8.36] %	51,519 7.78% [7.41, 8.16] %	141,660 7.56% [7.19, 7.92] %

### DBM impact:

- +8% revenue
- +9.5% value
- +39% impressions

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## Overall performance of 1P change positive for AdX Buyers

	Impressions	MatchedQueries	Google Profit	Value Clamped	Revenue
Experiment::ControlSecondPriceAuctions 51390102 <b>TOTAL * Adx_Buyer * Web</b>	210,260,985	239,725,984	40,037	369,810	223,883
cGDNStaticNonVBBFloorGlobalAlchemist 51390159 <b>TOTAL * Adx_Buyer * Web</b>	30,252,572 <b>23.33%</b> [22.98, 23.67] %	35,004,690 <b>25.16%</b> [24.79, 25.53] %	5,736 <b>22.80%</b> [22.27, 23.33] %	37,525 <b>-13.02%</b> [-13.36, -12.69] %	30,950 <b>18.49%</b> [18.02, 18.96] %
Experiment::ControlSecondPriceAuctions 51390102 <b>Adx_Only * Adx_Buyer * Web</b>	119,647,911	148,303,710	30,959	309,070	195,604
cGDNStaticNonVBBFloorGlobalAlchemist 51390159 <b>Adx_Only * Adx_Buyer * Web</b>	19,964,068 <b>43.02%</b> [42.57, 43.47] %	24,685,111 <b>42.67%</b> [42.14, 43.21] %	4,716 <b>30.56%</b> [29.96, 31.16] %	30,682 <b>-14.91%</b> [-15.26, -14.55] %	27,772 <b>21.70%</b> [21.19, 22.20] %

### AdX RTB impact:

- +21.7% revenue
- +43% impressions

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## Buyers using Bid Translation service see improved competitiveness

	Impressions	Value Clamped	Revenue	Google Profit	GDN profit	Post Revshare Payout
ment:RtbSurplusMaximizerOffExperiment 263561114 TOTAL * Adx_Only * Web	432,803,661	1,358,981	557,220	118,764	37,909,0700	414,406
urplusMaximizerWithSmartBiddingControl 263561113 TOTAL * Adx_Only * Web	433,513,316 0.16% [0.04, 0.29] %	1,374,839 1.17% [0.56, 1.77] %	558,182 0.17% [-0.24, 0.58] %	118,029 -0.62% [-2.00, 0.77] %	36,720,4203 -3.14% [-7.26, 0.99] %	416,003 0.39% [0.15, 0.62] %
ment:RtbSurplusMaximizerOffExperiment 263561114 Adx_Buyer * Adx_Only * Web	56,279,098	94,383	81,054	13,526	0.0000	67,528
urplusMaximizerWithSmartBiddingControl 263561113 Adx_Buyer * Adx_Only * Web	57,950,269 2.97% [2.62, 3.32] %	98,275 4.12% [3.66, 4.59] %	83,777 3.36% [2.89, 3.82] %	14,068 4.01% [3.48, 4.53] %	0.0002	69,709 3.23% [2.77, 3.69] %
ment:RtbSurplusMaximizerOffExperiment 263561114 Demand_Syndication * Adx_Only * Web	39,150,319	53,609	53,594	2,791	0.0000	50,815
urplusMaximizerWithSmartBiddingControl 263561113 Demand_Syndication * Adx_Only * Web	38,951,665 -0.51% [-0.83, -0.18] %	53,378 -0.43% [-0.80, -0.08] %	53,363 -0.43% [-0.80, -0.08] %	2,777 -0.48% [-0.87, -0.09] %	0.0000	50,597 -0.43% [-0.80, -0.08] %

For AdX buyers, we maximize surplus in the BTS\*:

- +1.2% overall value
- +4.1% AdX buyer value
- +3.4% AdX buyer revenue

\* GDA/ DV3 are not using surplus maximizer; [Read source](#)

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## Bundled changes that simplify the product have near neutral impact

- Changes include unified protections, removing anonymous inventory, etc
- Rationale for these changes:
  - Significant product simplification: Clean separation of pricing from protections
  - Cleans up 'branding type' / removes anonymous inventory (not ads.txt compliant)
- Impact is [< 1% AdX web revenue\\*](#)

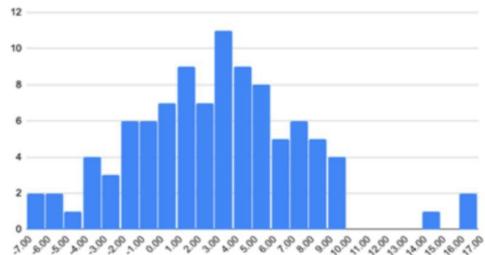
\* when simultaneously enforcing old + new protections

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## Indirect pub revenue impact

Histogram of overall indirect revenue\* impact for top 100 pubs



\*Includes revenue from AdX, Exchange Bidding and Header Bidding/ remnant line items

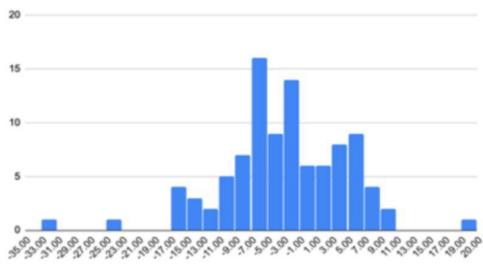
- Aggregate publisher indirect revenue\* impact of +1.4%
- 76 out of top 100 pubs have a positive impact on indirect revenue

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## Some pubs see decline in programmatic revenue; Planning outreach to top impacted pubs

Histogram of AdX + EB revenue\* impact for top 100  
pubs



- Few strategic pubs with meaningful (>10% AdX + EB revenue) impact\*
- Most highly impacted pubs have neutral-positive overall revenue impact (AdX + EB + HB)
- Comms strategy: Outreach to pubs with >10% revenue impact, asking them to adjust floor prices and HB boosts

\*Notable ones include Daily Mail, Meredith and NY Post, Axel Springer, EA, Autotrader, MLB

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## Summary

- *Current results:* Near neutral (~1.5%) impact on revenue
- *Short term expectations:* Improved Google performance as (1) AdX buyers stop overpaying, (2) Publishers remove inefficient header bidding 'boosts'
- *Long term expectations:* Continued investments in optimizations across sellside and external + Google buyers should further improve performance. Unified auction which buyers can directly bid into should result in better positioning to compete against external 1P demand (eg. open bidding)

ASK: Approval to complete ~100% sellside transition to new auction model in 2 weeks

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- -1.5% Google gross revenue; neutral Google net revenue; -1.4% publisher payment from Google; neutral publisher payment overall

## Appendix

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## Delaying 100% sell-side launch to Q1

Advantages	Risks
<ul style="list-style-type: none"><li>Move short-term (~1%) AdX revenue loss from Q4 to Q1, and reduce loss as performance improves with bidding fine-tuning</li></ul>	<ul style="list-style-type: none"><li>Reputation risk: committed earlier to a 2019 launch; Could be interpreted in market as result of poor performance</li><li>Tech complexity: Will be pressured to share granular data with individual pubs; increases risk of some pubs wanting opt out</li><li>Potential need to scale back experiment traffic through Q4.</li></ul>

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## Sell-side optimizations like Target CPM will benefit revenue and pub payout

	Impressions	MatchedQueries	Value Clamped	Revenue	Google Profit	GDN profit	Post Revshare Payout
::TargetCpmModel1pSmartBiddingControl 262565705 TOTAL * Web * Adx_Only	2,843,139,557	3,232,910,780	9,345,931	3,483,150	696,453	175,400,8242	2,657,739
getCpmModel1pSmartBiddingExperiment 262565706 TOTAL * Web * Adx_Only	2,955,506,871	3,359,944,912	9,348,153	3,506,873	701,219	176,165,6062	2,675,474 0.67%
	[3.89, 4.02] %	[3.87, 3.99] %	[0.39, 0.43] %	[0.54, 0.62] %	[0.03, 1.40] %	[-2.49, 3.38] %	[0.60, 0.73] %
::TargetCpmModel1pSmartBiddingControl 262565705 Adwords_Buyer * Web * Adx_Only	1,528,048,587	1,635,945,651	1,886,021	1,080,390	270,398	69,009,4457	809,302
getCpmModel1pSmartBiddingExperiment 262565706 Adwords_Buyer * Web * Adx_Only	1,588,035,764	1,697,797,698	1,897,460	1,090,960	272,460	68,935,5453	817,833 1.05%
	[3.71, 3.88] %	[3.70, 3.86] %	[0.10, 1.11] %	[0.51, 1.45] %	[-1.13, 2.65] %	[-7.54, 7.33] %	[0.96, 1.15] %
::TargetCpmModel1pSmartBiddingControl 262565705 Dom_Buyer * Web * Adx_Only	639,453,533	779,332,870	6,483,542	1,497,290	311,179	106,391,3785	1,057,787
getCpmModel1pSmartBiddingExperiment 262565706 Dom_Buyer * Web * Adx_Only	659,160,439	803,691,010	6,470,987	1,507,078	313,532	107,230,0609	1,064,000 0.59%
	[3.01, 3.15] %	[3.07, 3.18] %	[-0.74, 0.38] %	[0.57, 0.74] %	[0.66, 0.86] %	[0.72, 0.86] %	[0.50, 0.67] %

Target CPM helps pubs meet floors 'on average', rather than per-query

- +0.7% revenue
- +3.9% impr.
- +1% GDA revenue
- +0.6% GDA value

Continued investments in optimizations will further improve performance over time

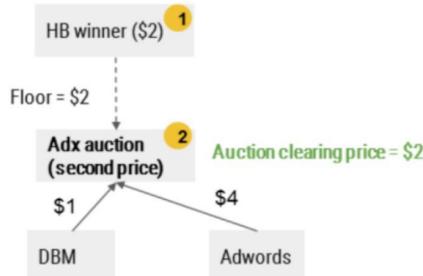
\* [Rasta source](#)

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Last look provides AdX/ EB buyers visibility into HB prices prior to bidding...

Example where last look impacts AdX auction



- Pubs call Header bidders first (compete in a 1P auction)
- This price informs the floor sent to AdX and EB, prior to bidding
- In this eg. Adwords wins the impression (2P bid of \$4 is highest)
- i.e. Adwords wins as long as "2P bid" > "1P bid" of header bidders

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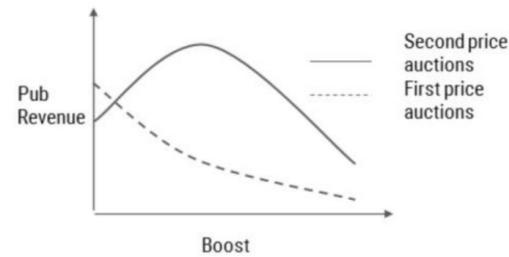
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... but incentivizes pubs to inflate ("boost") the floor sent to AdX

Example where last look impacts AdX auction



Comparison of boost and short-term pub revenue in 1P and 2P auctions



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## Key launch benefits for sell-side partners

### Simplicity



*Improved auction understanding  
Operational efficiency  
Focus on long-term value creation*

### Fairness



*All indirect demand competes on equal footing*

### Transparency



*Ensure fair auctions  
Gain improved insights*

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## App metrics

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## Updated App numbers

	Revenue	Impr.	Publisher payout	Google profit
All app inventory	Neutral	+0.09%	-0.45%	Neutral
AdX	-0.5%	+9.7%	+0.2%	-1.7%
Admob	+1.0%	-0.8%	+1.1%	+0.9%
Gmob across app	-2.7%	-7.9%	-2.9%	-2.5%
AdWords across app	-5.4%	-7.9%	-6.9%	-2.3%
DV3 across app	-3.5%	-5%	-2.5%	-5.4%
AdX buyers across app	+49%	+42%	+47.5%	+54%

Small increase in revenue, impressions, payout, Google profit

Overall results better on AdMob than AdX (*deeper dive on next slide*)

Spend shift from Google buyside to AdX buyers

- Mitigating factors:
  - Increased AdX buyers spend may not sustain when traffic ramps up (if they are overpaying)
  - ~ 50% of revenue loss is budget-constrained on each of GMob, AdWords, and DV3.

Source: [Fasta](#)

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## App impact ~neutral; GDN/DV3 can continue submitting 2P bids; some spend shift to AdX buyers

	Revenue	Impr.	Publisher payout	Google profit
All app inventory	+0.7%	+2.0%	+0.9%	+0.5%
AdX	-0.5%	+9.7%	+0.2%	-1.7%
Admob	+1.0%	-0.8%	+1.1%	+0.9%
Gmob across app	-2.5%	-7.1%	-2.4%	-2.8%
AdWords across app	-5.9%	-8.7%	-6.8%	-4.0%
DV3 across app	-4.4%	-5.8%	-3.6%	-5.6%
AdX buyers across app	+61.6%	+55.9%	+60.7%	+64.1%

Small increase in revenue, impressions, payout, Google profit

Overall results better on AdMob than AdX (*deeper dive on next slide*)

Spend shift from Google buyside to AdX buyers

- Mitigating factors:
  - Increased AdX buyers spend may not sustain when traffic ramps up (if they are overpaying)
  - ~ 50% of revenue loss is budget-constrained on each of GMob, AdWords, and DV3.

Source: [Fastaa](#)

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## Performance across different segments

	Revenue	Impr.	Publisher payout
AdX	-0.5%	+9.7%	+0.2%
Admob	+1.0%	-0.8%	+1.1%
On-platform	+2.1%	-0.3%	+1.7%
Off-platform	-0.1%	-0.9%	+0.8%
Off-platform multi-calling*	+0.2%	-0.5%	+0.2%
Off-platform not multi-calling*	-0.2%	-1.0%	+0.9%

- Some impression shift from Admob to AdX (probably due to lower effective AdX floors & multi-calling across AdX and AdMob)
- AdX revenue impact worse (potentially due to last look removal)
- On-platform inventory performance better
- Multiple call inventory not performing meaningfully different than non-multi-call inventory

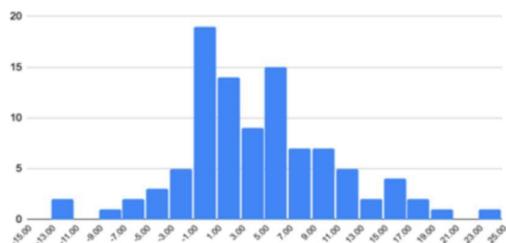
\*Multi-call is defined here as > 4 calls. [Source](#)

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## Most app pubs have low revenue impact

Histogram of overall indirect revenue\* impact for top 100 app pubs



- Most pubs in -1% to +7% revenue\* impact range
- ~5 pubs (in top 100) have >5% revenue decline
  - Impact mostly on remnant revenue -- remnant CPMs not always accurate
- 9 out of top 10 pubs with highest prog. revenue impact are on Ad Manager
  - Likely due to "last look" -- may/may not impact overall pub revenue (*investigation ongoing*)

\*For Ad Manager pubs, this includes revenue from AdX, EB and remnant line items

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## Top impacted pubs

Publisher	Estimated ARR revenue impact (\$ mm)	Estimated % revenue impact
Edmunds DFP	22	12.99
VIMN - INTL Network	11	12.14
Chinatimes DFP	6	1.83
9GAG	5	6.35
eBay IT - DFP	5	4.42
Viki	5	13.78
Flipboard	4	9.15
MXPlayer	4	3.66
Times Internet Limited India - DFP - APAC	3	7.55
Univision - DFP	3	9.68
DAZN Group	3	0.82
Major League Baseball	2	5.80
TV2/Danmark A/S	2	5.61
Teletel Communication Channels Ltd (Walla)	2	15.08
eBay DE - DFP	2	0.64

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## **Additional context slides**

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## Market Perception

- *Mar '19:* Positive press following initial announcement to re. the migration of Ad Manager to a first price auction, around the improved simplicity this change would bring to the ecosystem
- *May '19:* Negative press upon subsequent announcement around our intent to unify pricing across all demand sources (including header bidding) and disallow the ability to set buyer-specific floors
- *May-June '19:* Extensive partner education through individual (>20 1:1 PM/eng/pub meetings) and group engagements (US/EMEA User groups) around benefits of changes, reaching >400 pubs
- *May-June '19:* Positive feedback received from a variety of publishers, including the Washington Post, Vice Media, NYT, MailOnline, etc
- *Jul '19:* A few unhappy publishers (including NewsCorp and the Guardian) who we continue to engage
- *Jun-Jul '19:* Regional sales teams conducted multiple hands-on workshops with clients around the operational aspects of setting unified floors in a first price auction

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## Unifying floors (AdManager app & web)

### **Material reduction in effective floors, which will improve Ad Manager inventory access for buyers**

- 56% queries have non-zero Unified Pricing floors vs. to ~80% queries with legacy floors
- When a UPR is set, it is ~72% (median) of the corresponding legacy Pricing rule floor.
- For AdWords, the avg. publisher floor reduces from \$3.31 under legacy floors to \$1.01 under UPR
- Estimated 6.4% increase in value of impressions won by AdX, that are currently blocked due to high legacy floors

### **Negative effect on 3P SSP spend, since HB/OB demand previously had no floors applied on Ad Manager**

- Prior analysis showed 16.8% of HB impressions had a higher AdX bid, which was blocked due to a higher floor for AdX

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## Last look removal (AdManager app & web)

**Reduced visibility into competing HB prices results in a material revenue drop for Ad Manager**

- On second-price traffic, this results in a 8% decrease in AdX revenue and impressions
- There is an increase in spend on 3P SSPs (DV3 is a large buyer of header bidding)
- Neutral impact on AdMob, since HB traffic is less significant on app

**Reduced incentive to inflate HB prices in Ad Manager is not easy to measure in the short-term**

- Pubs have no incentive to inflate prices in new HB setups
- Plan to educate pubs around strictly negative revenue consequences of HB price inflation, to correct for existing setups over time

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## Graveyard

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## Why make this change?

- Pro-competition
- Publishers 'compensate' for this through boosting Header Bidding (this also increases short-term revenue in the second-price world)
- Allows us to pair this up with other valuable changes to create a fair buying platform for all buyers.

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Why make this change?

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Id	Date	Text <b>PRIVILEGED AND CONFIDENTIAL</b>
2	09/01/2019 18:25:27	Also, product-wise, clean-up / simplification. (Unified Protections, removal of branding types, no per-buyer floors.)
1	09/03/2019 09:25:00	<p>+rahulsr@google.com</p> <p>Could you add some content about the key benefits here?</p> <p>(Level playing field, improved buying efficiency when a final 1p auction exists, Pro-competition)</p>
1	09/03/2019 09:25:00	we're covering this in slides 6 and 7

'Last Look'

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Id	Date	Text
3	09/03/2019 09:29:32	+rahulsr@google.com Could you please describe how last look works today?
2	09/03/2019 09:29:32	we've described this on slide 5

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## Agenda

- Recap of auction changes
- Google impact expectations
- Initial results
- Top impacted pubs
- Next steps

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## High level summary

Objective: Update on initial experiment performance (focus on app traffic)

- **Product launch:** simplification of display auction (incl. move to 1P) across Ad Manager and Admob
- **Timing:** Currently live on 10% of traffic; Aiming for a 100% launch in early September, with option for buyers to continue submitting second-price bids
- **Initial results:** Near-neutral overall revenue impact when Google demand uses Bid Translation service on app, with some spend shift from Google demand to AdX buyers
  - *Mitigants:* Increased AdX buyers spend may not be sustained as traffic ramps up; ~50% of Google demand revenue loss is budget constrained

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## GDA/DV3 using Bid Translation (AdManager app & Admob)

Performance on apps (Ad Manager + AdMob) is neutral overall, with some spend shift to AdX buyers

- Small increase in revenue (+0.7%), impressions (+2%), payout (+0.9%) and Google profit ([x]%)
- Overall results better on AdMob than AdX. Small decrease in impressions for AdMob (-0.8%), (likely due to impressions shifting to Ad Manager). ~+1% Google revenue, profit and payout to app pubs
- Spend shift from Google buyside (GMob -2.8%, AdWords -5.8%, DV3 -4.5%) to AdX buyers (+ 68.9% revenue, +33.4% impressions)
- Mitigating factors:
  - Increased AdX buyers spend may not be sustained when traffic ramps up (if they are overpaying)
  - ~ 50% of revenue loss is budget-constrained on each of GMob, AdWords, and DV3.

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