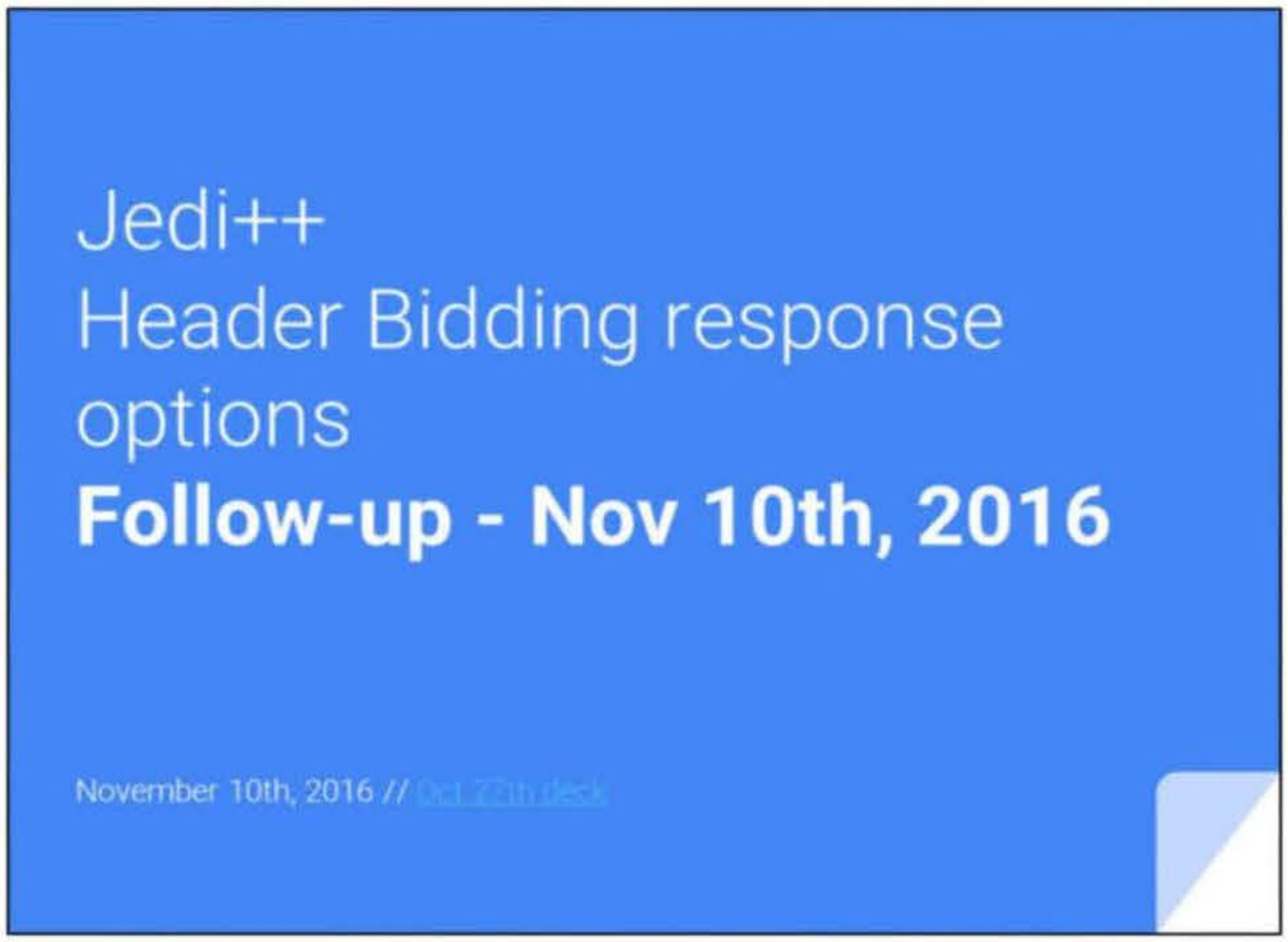
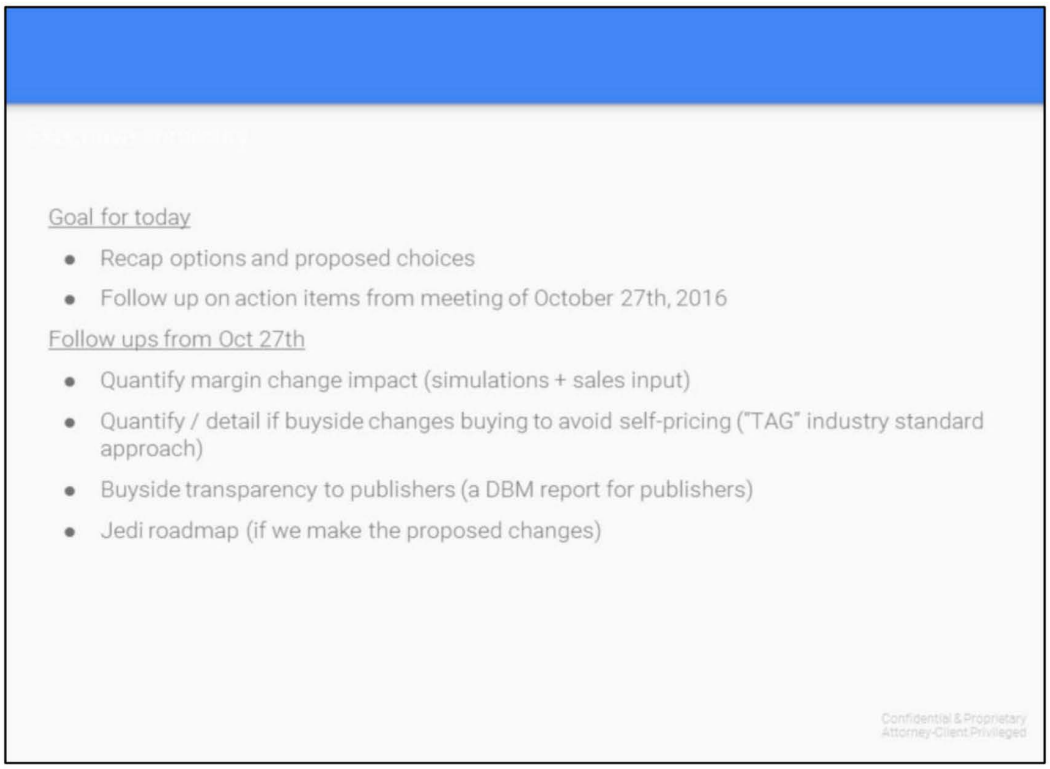


Jim

PTX0536
1:23-cv-00108


Goal for today
Recap options and proposed choices
Follow up on action items from meeting of October 27th, 2016
Follow ups from Oct 27th
Quantify margin change impact (simulations + sales input)
Quantify / detail if buyside changes buying to avoid self-pricing ("TAG" industry standard approach)
Buyside transparency to publishers (a DBM report for publishers)
Jedi roadmap (if we make the proposed changes)
Confidential & Proprietary
Attorney-Client Privileged

Jim

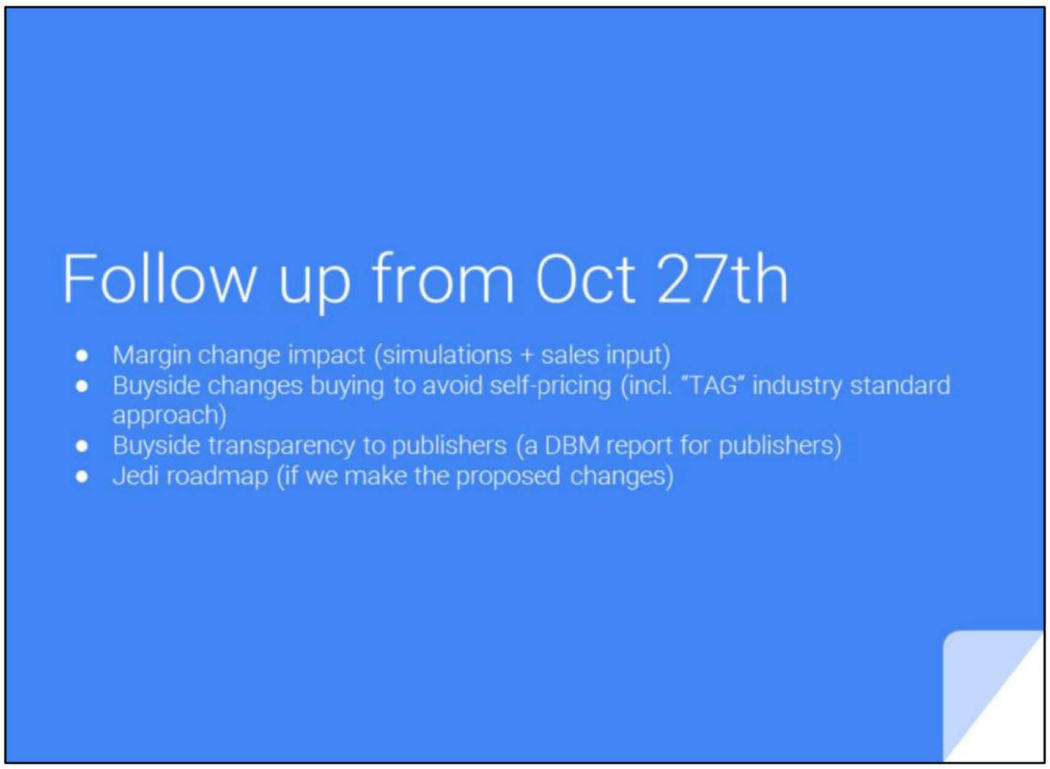


Jim

		Discussed 10/27 (green means Paul/Eisar asked us to investigate, red means no follow-up needed)	Executive summary of current assessment
1	**EB++**	Build more competitive JEDI product, fast track development	Jointly (buy/sell) think that it is important to keep moving on Jedi, consider making improvements but no need to do very expensive things like blocks/categories/floors across exchanges yet.
2	**Open Jedi**	Open up access beyond exchanges to networks and small SSPs, direct billing	We still think this is a bad idea. Better to give buyers incentives to be on ADX.
3	**Lower AdX revshare**	Reduce sell-side auction revshare	Based on simulation results and sales estimates, this no longer looks like it would provide enough benefit.
4	**Accelerate Deals**	Programmatic buying (PG and PNG, Guarantees w/ buyer decisioning) should support any deal that can be implemented via DFP tags	Planned for Q1/Q2. Enable standard line items with full priority control to plug into DBM/AdX buyers. No requirement for buyer to bid. Replicate HB setup with 100% programmatic.
5	**Full bid landscape**	Share GDN/DBM spend per exchange, domain with publishers	We still think this is not feasible except for cases where we offer first price/soft floor/hybrid auction.
6	**Prevent self flooring / TAG**	DBM/GDN do not buy ANY HB queries	Learned that it is not as simple as skipping other exchanges because of potential reach impact (not fully understood). TAG PaymentID not good option as it's gameable.

Redacted - Privilege

Jim


Follow up from Oct 27th
Margin change impact (simulations + sales input)
Buyside changes buying to avoid self-pricing (incl. "TAG" industry standard approach)
Buyside transparency to publishers (a DBM report for publishers)
Jedi roadmap (if we make the proposed changes)

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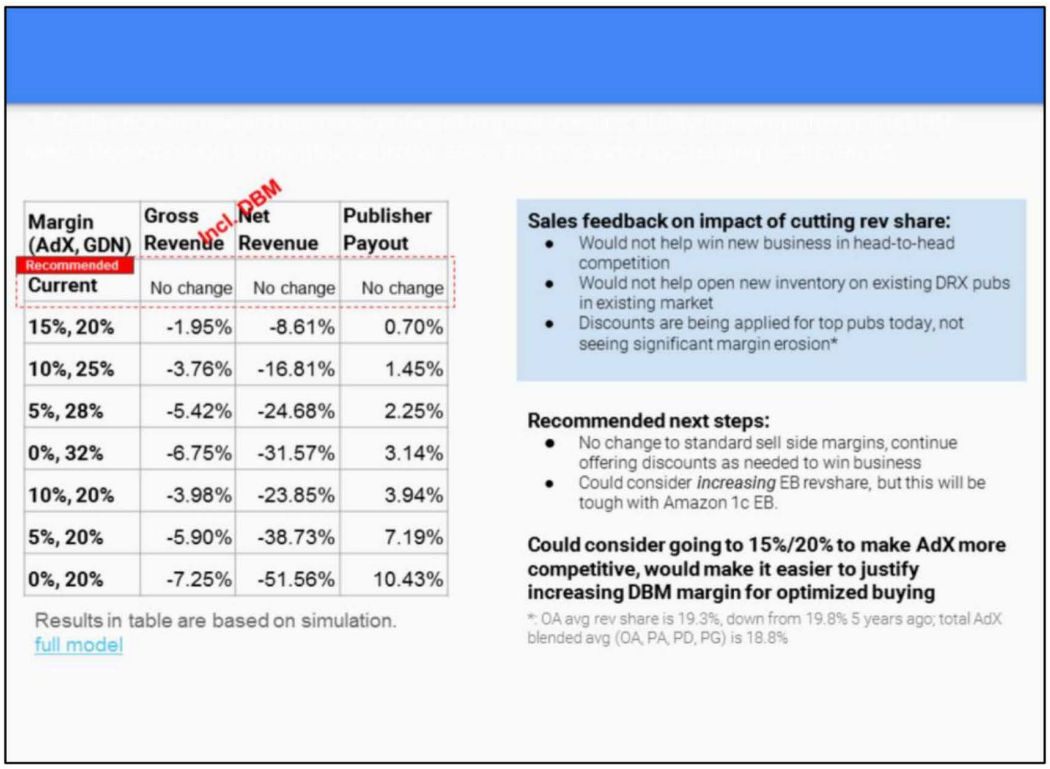

Margin (AdX, GDN)	Gross Revenue (Incl. DBM)	Net Revenue	Publisher Payout
Recommended / Current	No change	No change	No change
15%, 20%	-1.95%	-8.61%	0.70%
10%, 25%	-3.76%	-16.81%	1.45%
5%, 28%	-5.42%	-24.68%	2.25%
0%, 32%	-6.75%	-31.57%	3.14%
10%, 20%	-3.98%	-23.85%	3.94%
5%, 20%	-5.90%	-38.73%	7.19%
0%, 20%	-7.25%	-51.56%	10.43%

Results in table are based on simulation.
full model

Sales feedback on impact of cutting rev share:

- Would not help win new business in head-to-head competition
- Would not help open new inventory on existing DRX pubs in existing market
- Discounts are being applied for top pubs today, not seeing significant margin erosion*

Recommended next steps:

- No change to standard sell side margins, continue offering discounts as needed to win business
- Could consider *increasing* EB revshare, but this will be tough with Amazon 1c EB.

Could consider going to 15%/20% to make AdX more competitive, would make it easier to justify increasing DBM margin for optimized buying

*: OA avg rev share is 19.3%, down from 19.8% 5 years ago; total AdX blended avg (OA, PA, PD, PG) is 18.8%

Jim

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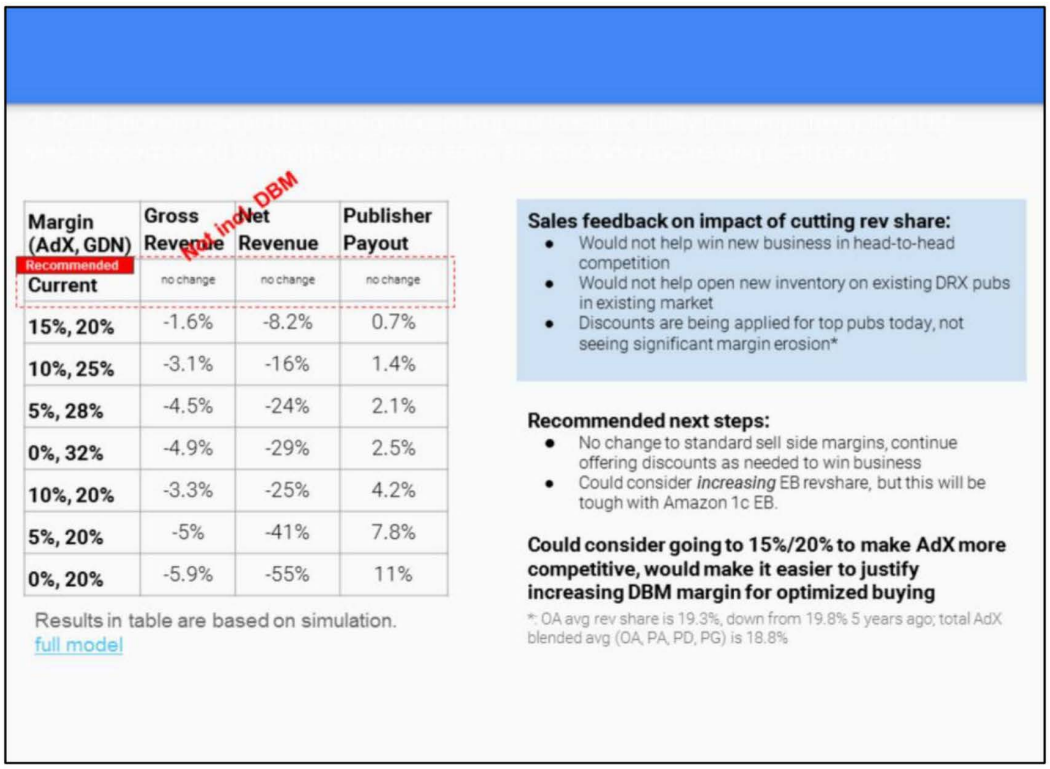
3) how much do we make up from new buy/sell opt changes



Margin (AdX, GDN)	Gross Revenue	Net Revenue	Publisher Payout
Recommended			
Current	no change	no change	no change
15%, 20%	-1.6%	-8.2%	0.7%
10%, 25%	-3.1%	-16%	1.4%
5%, 28%	-4.5%	-24%	2.1%
0%, 32%	-4.9%	-29%	2.5%
10%, 20%	-3.3%	-25%	4.2%
5%, 20%	-5%	-41%	7.8%
0%, 20%	-5.9%	-55%	11%

Results in table are based on simulation.
full model

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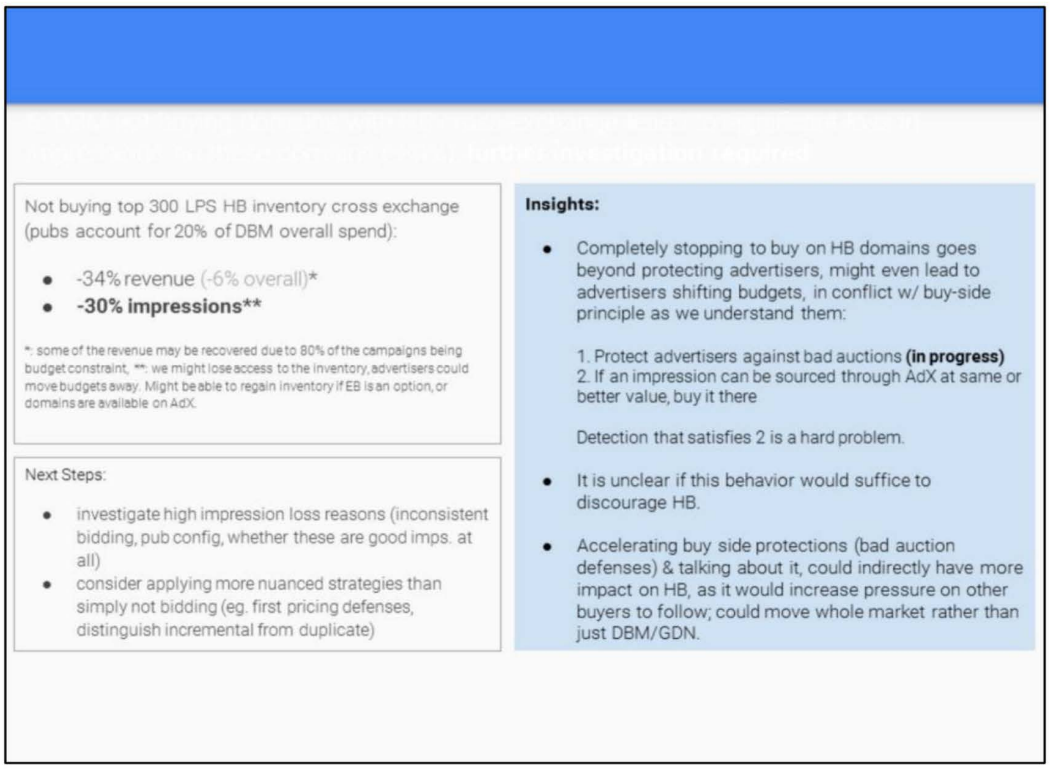
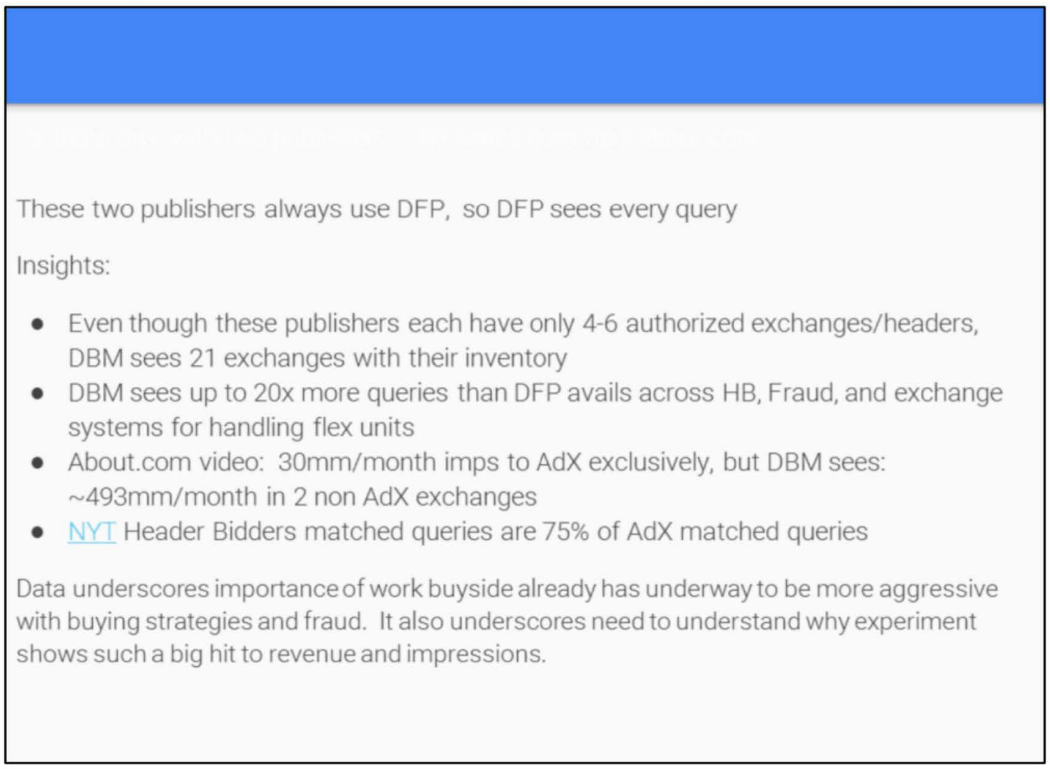
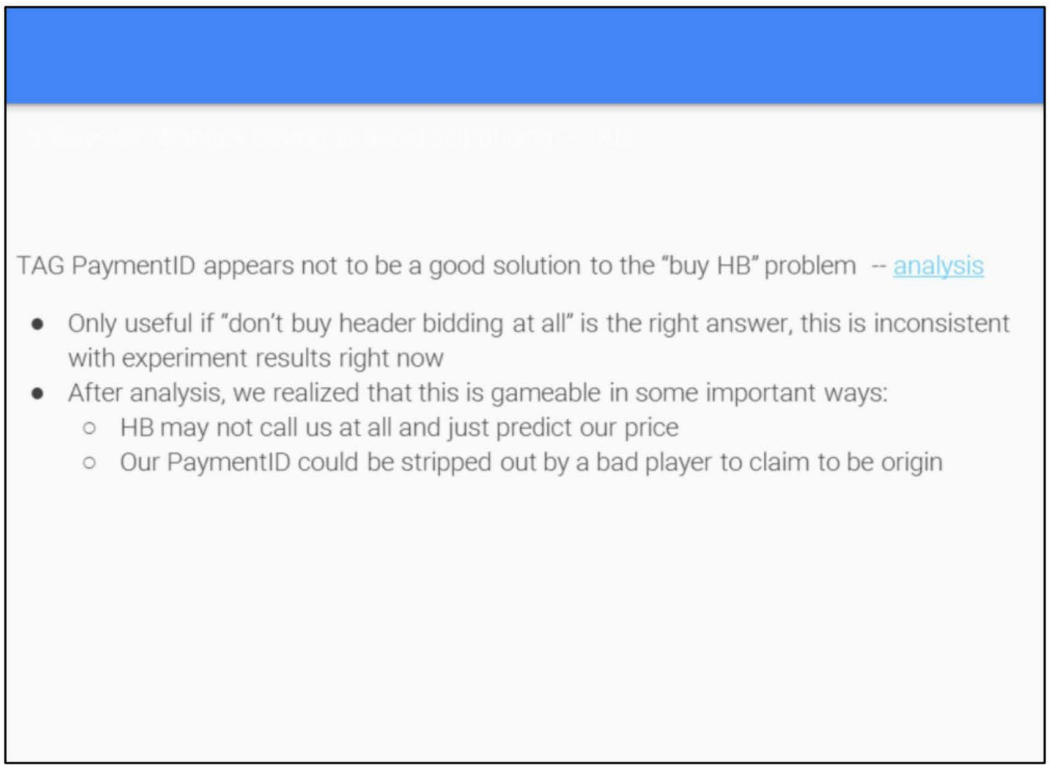


Tobias
https://docs.google.com/document/d/1XryiuPTrpPSDFfQ6TP90DfSCAOay9Z68UxOrvMLibXM/edit
Potential reasons: ADX floors at a different price, EDA price driven up by impression goals, incorrectly configured HB line item prices, inconsistent DBM bidding across exchanges, LI targeting only HB exchanges, inventory not real to begin with - eg toolbar and arbitrage

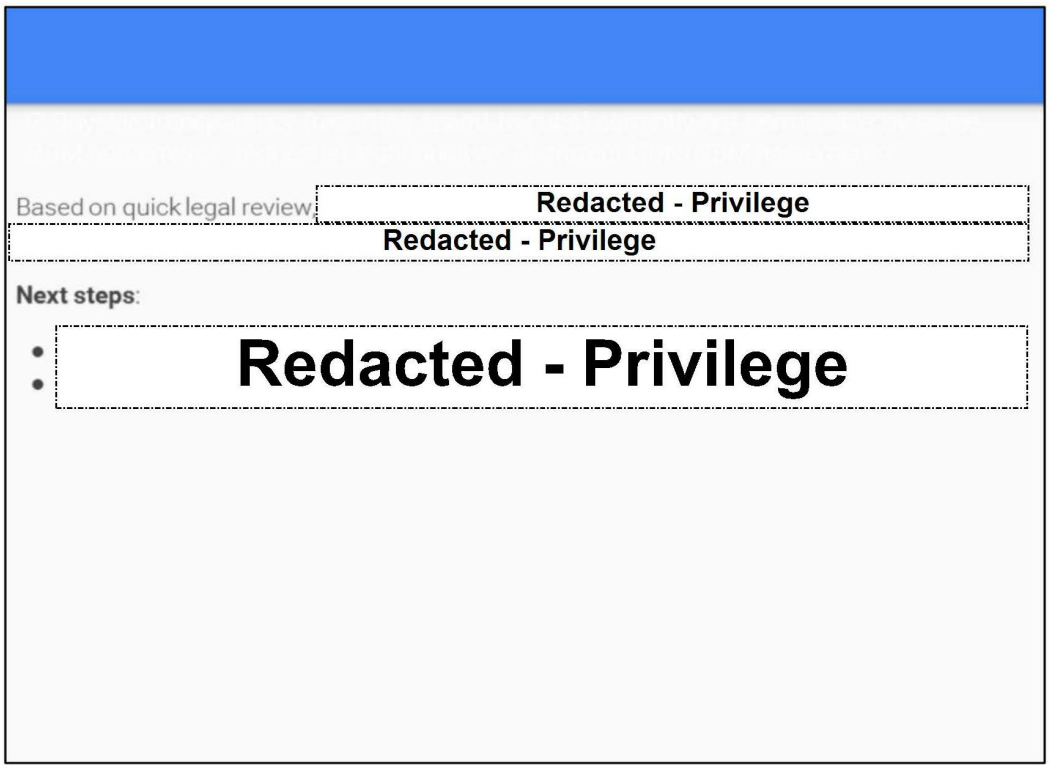

These two publishers always use DFP, so DFP sees every query
Insights:
Even though these publishers each have only 4-6 authorized exchanges/headers, DBM sees 21 exchanges with their inventory
DBM sees up to 20x more queries than DFP avails across HB, Fraud, and exchange systems for handling flex units
About.com video: 30mm/month imps to AdX exclusively, but DBM sees: ~493mm/month in 2 non AdX exchanges
NYT Header Bidders matched queries are 75% of AdX matched queries
Data underscores importance of work buyside already has underway to be more aggressive with buying strategies and fraud. It also underscores need to understand why experiment shows such a big hit to revenue and impressions.

Sam


TAG PaymentID appears not to be a good solution to the "buy HB" problem -- analysis
Only useful if "don't buy header bidding at all" is the right answer, this is inconsistent with experiment results right now
After analysis, we realized that this is gameable in some important ways:
HB may not call us at all and just predict our price
Our PaymentID could be stripped out by a bad player to claim to be origin

Jim

Id	Date	Text
1	11/10/2016 20:34:59	+jimgiles@google.com where are the various edge cases re what you are and are not allowed to buy when there is HB
1	11/10/2016 20:34:59	Two things: 1) we realized that whatever we do is gameable -- the HB may not call us at all and can just predict our price. Then we would never have an initial HB call and so not bidding on HB would have no effect. 2) the results from the experiment in slide 7 surprised us by how big of an impact it would be if we stop buying on other exchanges completely. Because of 7, we need to do more analysis to find out why the impact is so much, and then if the data shows that not buying on header bidding has a reasonably contained impact, we can figure out how to expand the corner cases from the analysis doc to a situation where the HB doesn't call us at all.



Deepti/Tobias

Id	Date	Text
1	11/08/2016 19:54:32	+deeptib@google.com +davidmay@google.com _Reassigned to Deepti Bhatnagar_
1	11/08/2016 19:54:32	+ozee@google.com

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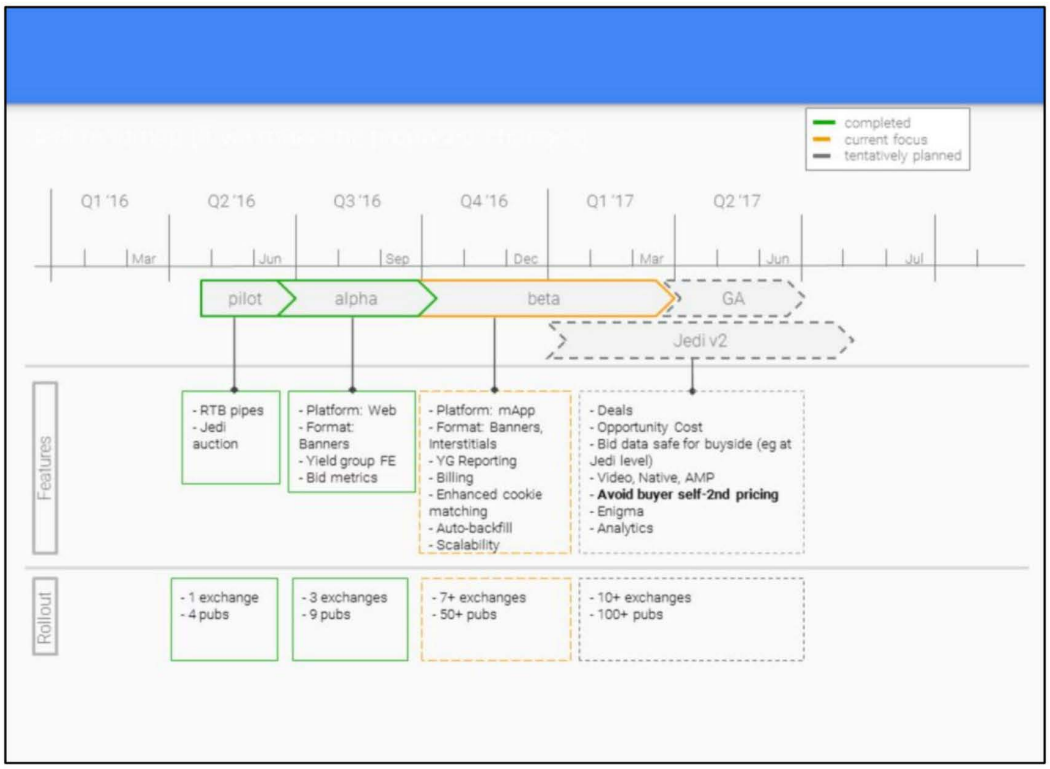
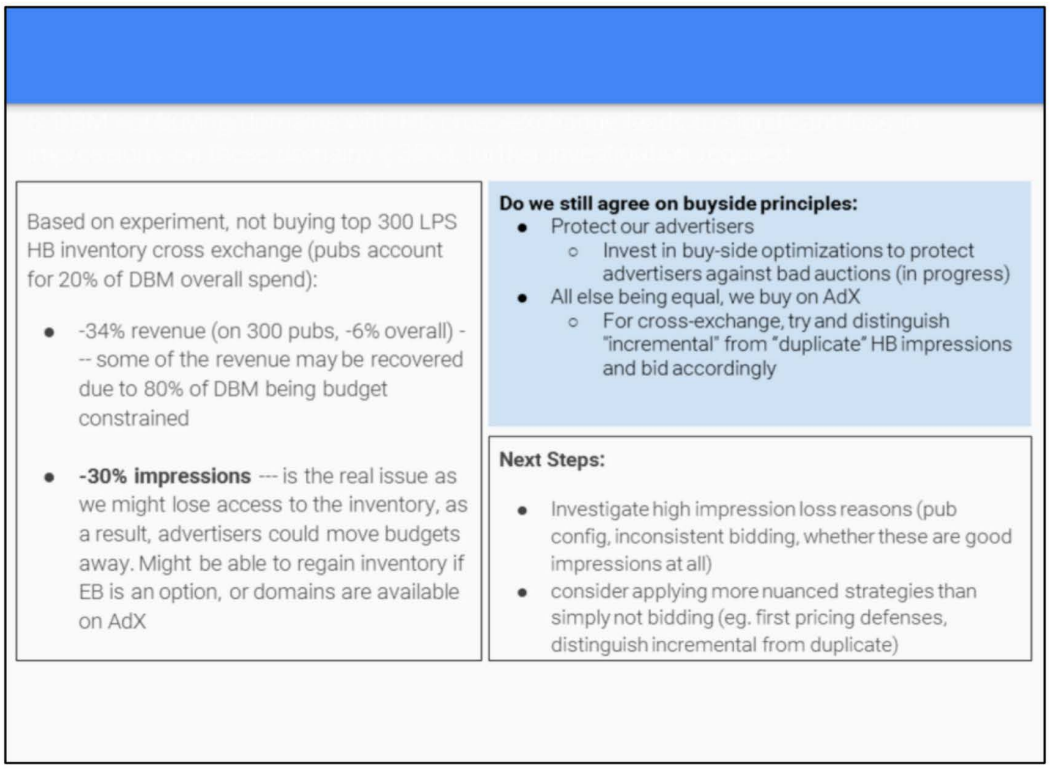

completed
current focus
tentatively planned
Q1 '16
Q2 '16
Q3 '16
Q4 '16
Q1 '17
Q2 '17
Mar
Jun
Sep
Dec
Mar
Jun
Jul
pilot
alpha
beta
GA
Jedi v2
Features
- RTB pipes
- Jedi auction
- Platform: Web
- Format: Banners
- Yield group FE
- Bid metrics
- Platform: mApp
- Format: Banners, Interstitials
- YG Reporting
- Billing
- Enhanced cookie matching
- Auto-backfill
- Scalability
- Deals
- Opportunity Cost
- Bid data safe for buyside (eg at Jedi level)
- Video, Native, AMP
- Avoid buyer self-2nd pricing
- Enigma
- Analytics
Rollout
- 1 exchange
- 4 pubs
- 3 exchanges
- 9 pubs
- 7+ exchanges
- 50+ pubs
- 10+ exchanges
- 100+ pubs

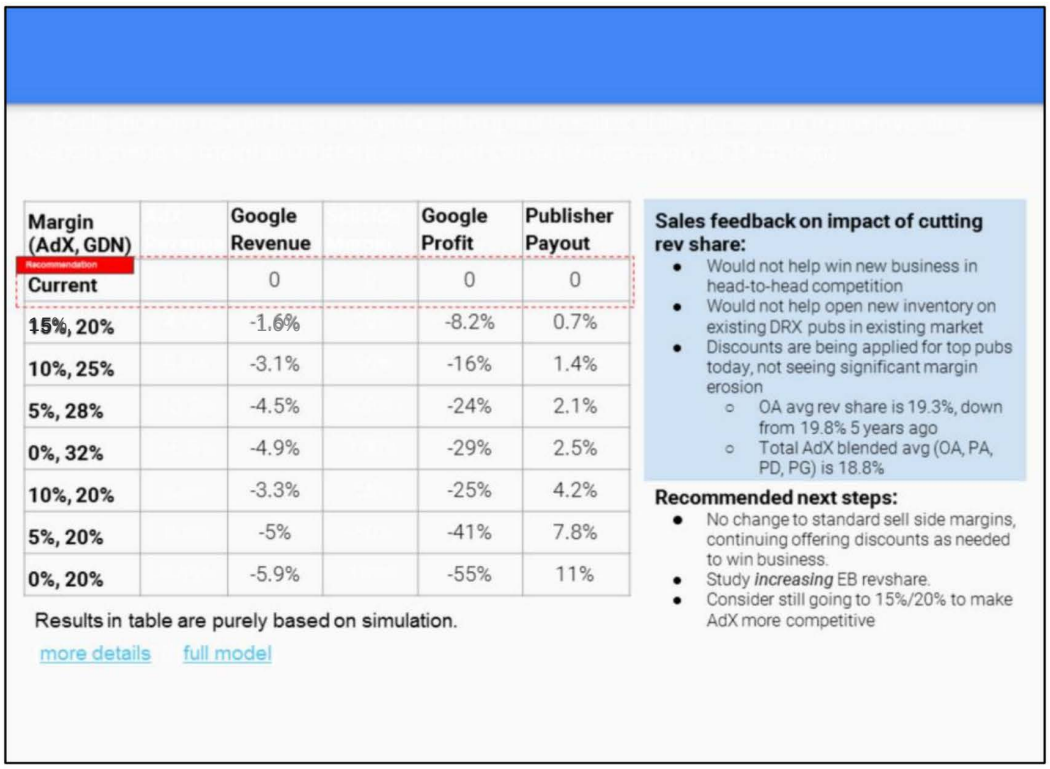
Jim

Id	Date	Text
1	11/09/2016 00:46:08	Also note this greatly impacts the extent to which buyers are at risk of self-pricing. So anything we might do to protect buyers from self-pricing is potentially blocked by this decision. -- sent via phone
1	11/09/2016 01:50:03	+1 for Jim's option #2
1	11/09/2016 02:04:17	Can we do something controlled on pub side? Most pubs do not seem to care as much about bid landscape, or I predict would not insist on it if it probably costs them money. But those that do care are pretty insistent. Buyers do not seem to have ever asked for this to my knowledge other than GDN. Exchanges want us to give up last look but do we have data that any resisting exchange would work with EB solely based on flipping this? Have any publishers told us they care about us having last look? Seems like a pub side choice makes more sense? -- -- Jonathan Bellack / jbellack@google.com Director, Product Management / Publisher Ad Platforms
3	11/09/2016 02:16:29	The pub choice option would be #3. Choose first price, and you can have bid landscape (but will probably have less revenue). Last look and bid landscape are basically tied together. If pub wants landscape and we want to give it to them, then if we want to maximize GDN bid impact we need to give up last look for that pub. I'm no longer arguing that the last look question is material for exchanges to join or not (though I do think it will help) -- it is really the question of do we want to give bid landscape (which has a direct relationship to auction dynamics and last look) and how we will attempt to solve the self-second pricing problem (which also has a direct relationship).
1	11/09/2016 15:39:18	+1 to option 3. Giving publishers the choice of what kind of market they want to run, and buyers the choice of what kind of bid they want to submit, seems to me to be in line with our informed consent approach that we're looking at for PNG and PG deal pricing.

Appendices



Potential reasons: ADX floors at a different price, EDA price driven up by impression goals, incorrectly configured HB line item prices, inconsistent DBM bidding across exchanges, LI targeting only HB exchanges, inventory not real to begin with - eg toolbar and arbitrage



Margin (AdX, GDN)	Google Revenue	Google Profit	Publisher Payout
Recommendation Current	0	0	0
15%, 20%	-1.6%	-8.2%	0.7%
10%, 25%	-3.1%	-16%	1.4%
5%, 28%	-4.5%	-24%	2.1%
0%, 32%	-4.9%	-29%	2.5%
10%, 20%	-3.3%	-25%	4.2%
5%, 20%	-5%	-41%	7.8%
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Results in table are purely based on simulation.

more details full model

Sales feedback on impact of cutting rev share:

- Would not help win new business in head-to-head competition
- Would not help open new inventory on existing DRX pubs in existing market
- Discounts are being applied for top pubs today, not seeing significant margin erosion
  - OA avg rev share is 19.3%, down from 19.8% 5 years ago
  - Total AdX blended avg (OA, PA, PD, PG) is 18.8%

Recommended next steps:

- No change to standard sell side margins, continuing offering discounts as needed to win business.
- Study *increasing* EB revshare.
- Consider still going to 15%/20% to make AdX more competitive

Things not modeled well here:
1) What is inventory access increase
2) what is increased ROI from DBM / 3p buyers and does this result in more spend.
3) how much do we make up from new buy/sell opt changes

			Nov 10th assessment
1	**EB++**	- More features for Jedi product with major eng investment. - Make it better than HB. - Give up revenue with last look.	
2	**Open Jedi**	- Allow networks (eg. Criteo, GDN) on Jedi - Give small SSPs access to all of DFP without pub contract - Buyer direct billing	✗
3	**Lower AdX revshare**	- Reduce open auction revshare from 15-20% to 9-14%	
4	**Accelerate Deals**	- Anything possible with DFP tags should be possible with programmatic buyers (PG and PNG, Guarantees with buyer decisioning)	✓
5	**Full bid landscape**	- Share all bid data with publishers including GDN, DBM, and AdX buyers	
6	**Prevent self flooring / TAG**	- Implement OriginId via TAG and publicize - **DBM and AwBid do not buy ANY HB queries**, only buy from origin servers (in effect prefers AdX on DFP sourced queries)	✗
7	**DBM Payout transparency**	- DBM leads industry push to disclose what buyers are paying SSPs to publishers, so they can see what the true revenue share is - Add DBM/AwBid payout reporting to DRX on DBM spend	

Id	Date	Text
2	11/09/2016 18:18:21	+maxl@google.com
3	11/09/2016 18:52:36	There is no policy that controls how pubs use DFP LIs - they can book them however they like, including a 100% sponsorship with a Criteo tag. A policy change is possible - we could say a LI should be a 1:1 advertiser relationship, for example. However, this would provide an incentive for pubs to go back to old school mediation (SSP/network tag ahead of DFP tag), and fuel the rise of another ad server. Another ad server might not be such a bad thing (costly to build for a competitor), but I think the customer goodwill is the larger problem - I think most pubs would hate this change and resent how they are forced to behave. I think our best path for this is showing opportunity cost of high priority network deals using 100% Sponsorships, and that is part of the planned work for Q1/Q2.
1	11/09/2016 19:19:38	Just so i understand this slide. What is the color coding and what is the cross and tick?
3	11/10/2016 14:42:54	There is one item missing from last meeting: is HB tags being booked as sponsorship compliant w/ current policy - or should there be a policy, other way to prevent this usage. The point here is that line items that were meant to be used by pubs to deliver on their direct advertiser commitments are being used in an unintended way. Is anyone on DRX side following up on that?
3	11/10/2016 14:42:54	max - tobias is specifically referring to the question eisar asked in the meeting which said - can we ask for advertiser name in the 100% sponsorship - can we be creative here and offer two kinds of sponsorship - one for "real" advertisers and one for those that you are not really doing that kind of deal with and open to the idea of DFL competing

NOTE: Sales estimate (8%) and payout (11%) is only a placeholder based on prior placeholder data and will likely change.

Margin (AdX, GDN)	**Total revenue**	change	**Total payout**	change	**Total profit**	change
Current	$129,502		$96,232		$33,270	
15%, 20%	$127,410	-2%	$96,863	1%	$30,547	-8%
10%, 25%	$125,479	-3%	$97,534	1%	$27,945	-16%
10%, 20%	$125,242	-3%	$100,256	4%	$24,985	-25%
5%, 28%	$123,697	-4%	$98,265	2%	$25,431	-24%
5%, 20%	$123,176	-5%	$103,652	8%	$19,524	-41%
0%, 32%	$122,069	-6%	$99,082	3%	$22,987	-31%
0%, 20%	$121,215	-6%	$107,044	11%	$14,172	-57%

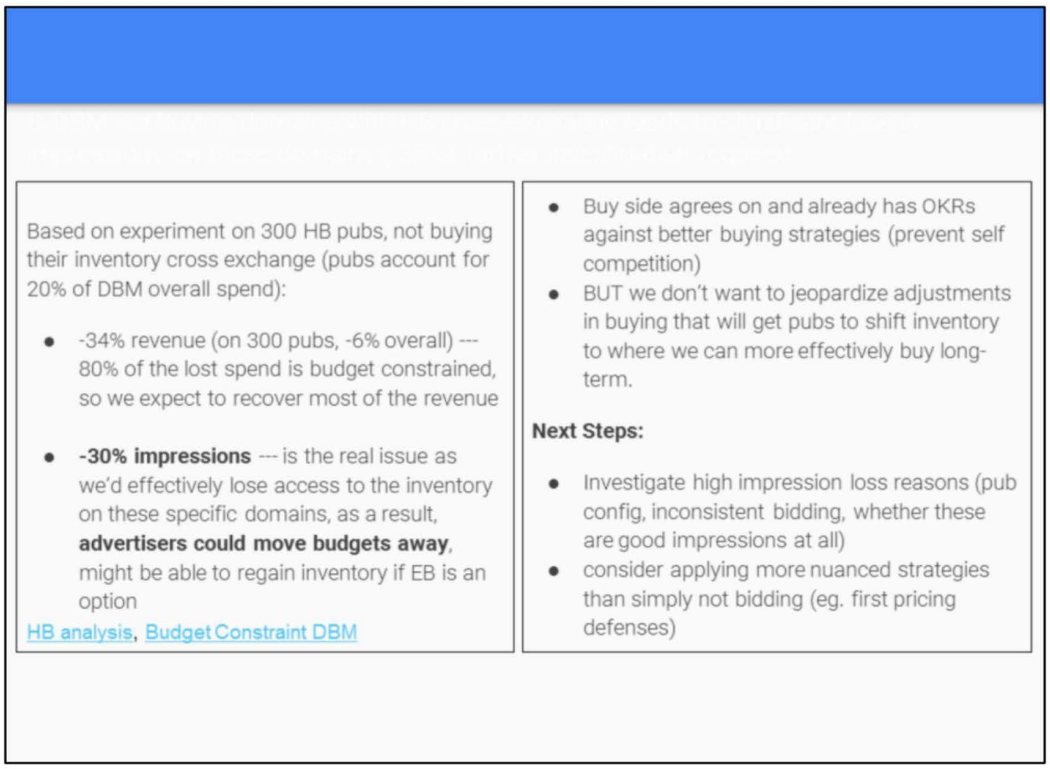
Results in table are purely based on simulation. more details full model

Things not modeled well here:
1) What is inventory access increase
2) what is increased ROI from DBM / 3p buyers and does this result in more spend.
3) how much do we make up from new buy/sell opt changes

Can we just stop buying from other exchanges on header bidding domains?
Answer: Possibly not based on experiment results

- **Experiment**: For top 200 LPS publishers who do header bidding, .1% experiment stopped cross-exchange bidding and found -30% revenue on that publisher subset (-3% impact overall if we only treat these pubs). Consistent across geo and domain.
- **Potential reasons:** ADX floors at a different price, EDA price driven up by impression goals, incorrectly configured HB line item prices, inconsistent DBM bidding across exchanges.
- **Caveats:** Effect might be smaller because of budget constraints (in fact, since 80% budget constrained will get most back), but also advertisers may move spend due to reach concerns making effect larger. Also doesn't take into effect buying through other exchanges in EB which would help if ADX floor or inconsistent bidding is reason.
- **Next Steps:** Further analysis to understand which of the reasons

Id	Date	Text
3	11/08/2016 20:51:42	~Yes. Will update the numbers based on the new 1% experiment results.
1	11/08/2016 21:35:00	yes. Ad Nitish said, we can fine tune this estimate tomorrow. Also, 80% of this is budget constrained, so we expect a vast majority of the revenue to come back. The only questions is do we care about the 30% impressions we lose on these domains
4	11/08/2016 22:04:25	can we note that we expect revenue to come back? That seems to materially change the meaning of the 30% number
2	11/08/2016 23:06:25	yes 80% of the loss should. but pls note that the revenue may not come back on the same domains (it will get spread out), so we may still have reach concerns on the HB domains.
7	11/08/2016 23:19:48	added some notes to this effect in caveats
9	11/09/2016 00:59:39	What do you mean Matthew? We should get it regardless right?
1	11/09/2016 03:01:01	Under potential reasons, isn't another possible big one simply that HB isn't ubiquitous enough yet to account for significant duplication of requests?
2	11/09/2016 03:01:01	How sure are we that we really see it regardless? It's just an assumption that HB results in DBM seeing the exact same ad request multiple times through different exchanges. Maybe that isn't a large effect yet because HB simply isn't used on a large enough percentage of inventory or with enough fanout to multiple exchanges. In other words, maybe there really is a significant amount of inventory that's only available through other exchanges. Of course, a lot of it may be spam, but DBM is not currently very good at avoiding buying that.
4	11/09/2016 16:49:10	+whlin@google.com pointed out another caveat
1	11/09/2016 17:45:58	Not sure this has been brought up, but if some DBM campaigns target ONLY HB exchanges (not sure how much), stopping buying on HB exchange experiment will show heavy rev and matched impression drop for these campaigns. That does not mean DBM lose the inventory access completely. The inventory can be still available on AdX, it's just those campaigns could not spend due to limited targeting.
6	11/09/2016 18:28:16	+nirmaljayaram@google.com +nitish@google.com +tmaurer@google.com Does this capture correctly?
8	11/09/2016 18:28:16	Ok I'll add that to the slide that we are using above as another thing to check for



Potential reasons: ADX floors at a different price, EDA price driven up by impression goals, incorrectly configured HB line item prices, inconsistent DBM bidding across exchanges, LI targeting only HB exchanges, inventory not real to begin with - eg toolbar and arbitrage

300 pubs inlucdes 131 OPG, rest LPS

Id	Date	Text
6	11/09/2016 16:41:57	+ghh@google.com +nitish@google.com Guillaume should have this from the analysis that produced the list of pubs
1	11/09/2016 20:08:07	57% of those publishers use HB. The best proxy to look at inventory is % of queries coming from networks with identified header bidding on total queries from all networks for those pubs
4	11/09/2016 20:16:18	Can you summarize what percentage that is? Or is there a link to the analysis somewhere?
2	11/09/2016 20:22:45	57% of the publishers in the top 300 have one or more DFP accounts where we detected HB line items
3	11/09/2016 20:23:04	The details are here https://docs.google.com/spreadsheets/d/1zZX9rh3fudeIDcarAGDGLK7EQoYTmenlYUPXYqQSN4g/edit#gid=1933142090&vpid=A1
5	11/09/2016 20:40:21	It looks like the D column on the data tab would be the numerator but the denominator isn't anywhere in the spreadsheet and would require another query to retrieve. Correct? Could you make the two scripts linked from the methodology_and_query tab readable?
5	11/09/2016 23:18:49	+tmaurer@google.com +samcox@google.com The pubs Sam talked to say these queries should be available on AdX, which supports the need for further investigation.
4	11/09/2016 23:51:54	Of course, this is contingent on all our other discussions around whether this is real etc
3	11/09/2016 23:53:52	We recover revenue, but not necessarily on these domains. In terms of access, this means we may win more impressions overall (strcitly less than 100% recovery) but not on these domains. So, an advertiser might see a 30% drop in impressions on NYTimes and not like it.
4	11/09/2016 23:54:22	+nitish@google.com did we subject all 300 pubs to the treatment or only the 57% that were confirmed to use HB?
5	11/10/2016 00:00:48	Marked as done

Options from Oct 27th

1) Make exchange bidding more competitive versus HB
2) Compete more aggressively with other exchanges (DRX and Buyside changes)

November 10th, 2016

	1. EB++ (More Features faster)	2. Open Jedi (Different biz model)
Description	- PG & PNG support to address Type 3 HB - Creative verification enhancements - Pub controls (Floors & Rules) - AdX gives up last look	- Allow SSPs to buy without a pub contract with Jedi fees - Allow buyers (FB, AMZN, Criteo, GDN, etc) into Jedi directly - Allow buyer direct billing
Pros	- Better than HB, seen as fairer (last look) - Strengthen DFP "must call" status with BI	- Seen as most open by exchanges, increases demand we aggregate
Cons	- Major investment - Still not seen as fair & open - Won't win FAN/Amazon - Loss of revenue (last look)	- Huge investment - Won't win FAN/Amazon - Loss of margin - ADX collapses - Props up exchanges (they get all DFP inventory)
Next steps if we do it	**Develop resourcing plan and timeline from Q1+**	**Develop resourcing plan and timeline from Q1+**
	NOT Recommended	**NOT Recommended**

Recommendation: do neither, just continue developing existing EB roadmap

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	3. Lower AdX revshare	4. Accelerate Deals	5. Full bid landscape
Description	Reduce open auction revshare from 15-20% to 9-14% - lower rates for high CPM (eg DFL)	Anything possible with DFP tags should be possible with programmatic buyers (PG and PNG) Buyer's choice	Share all bid data with publishers including GDN, DBM, and AdX buyers
Pros	- Price-competitive with other exchanges - Reduces financial benefit of HB and ADX/Jedi gap	- Make "DSP-into-DFP" superior to "DSP-to-SSP-to-HB-to-DFP" - Convert tag deals to revshare	- Market parity with every other exchange (who offer no-opt outs) - Returns trust in AdX
Cons	- DBM probably can't raise rates to compensate - AdX buyers more competitive against Google	Pubs could hurt themselves and Google by doing bad deals (but they're doing this anyway with HB deals)	GDN could be gamed given bernanke Downstream negative impact
Next steps if we do it	**Build a financial model with intent to change price in Q1**	**Eng plan to accelerate PG GA and PNG Beta+GA**	**Experiment in Q4 with goal to roll out in 1H 2017**
	Recommended	**Recommended**	**NOT Recommended**

Recommendation: do #3 and #4, wait and see on #5

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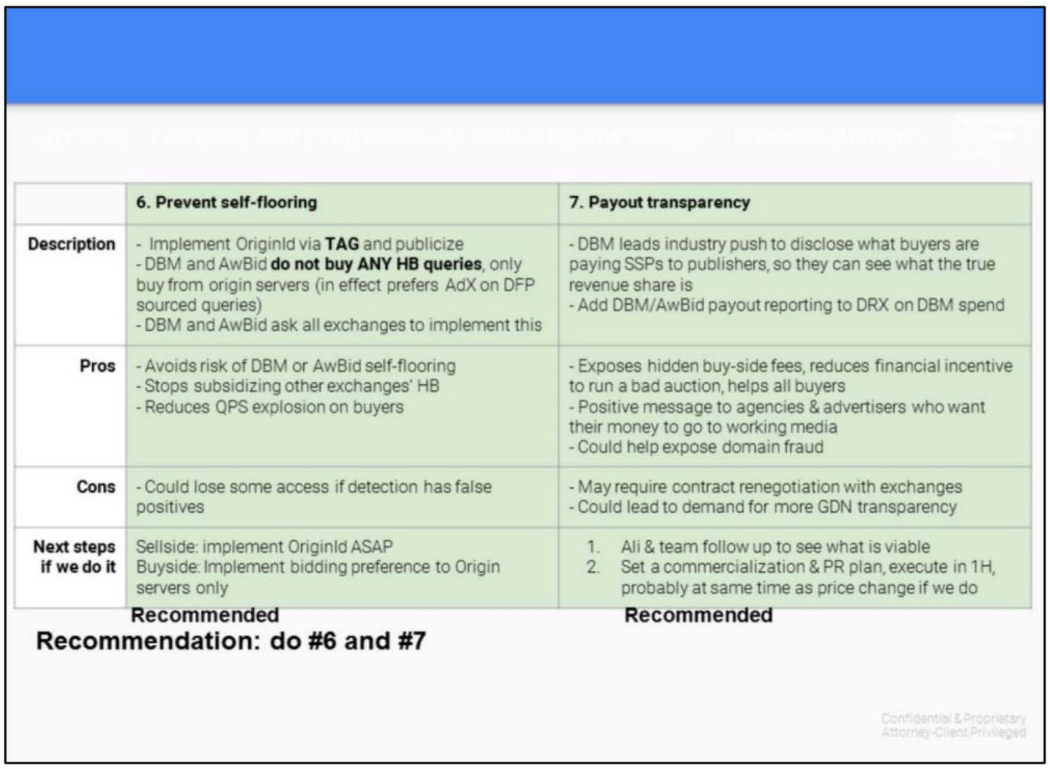

	6. Prevent self-flooring	7. Payout transparency
Description	- Implement OriginId via **TAG** and publicize - DBM and AwBid **do not buy ANY HB queries**, only buy from origin servers (in effect prefers AdX on DFP sourced queries) - DBM and AwBid ask all exchanges to implement this	- DBM leads industry push to disclose what buyers are paying SSPs to publishers, so they can see what the true revenue share is - Add DBM/AwBid payout reporting to DRX on DBM spend
Pros	- Avoids risk of DBM or AwBid self-flooring - Stops subsidizing other exchanges' HB - Reduces QPS explosion on buyers	- Exposes hidden buy-side fees, reduces financial incentive to run a bad auction, helps all buyers - Positive message to agencies & advertisers who want their money to go to working media - Could help expose domain fraud
Cons	- Could lose some access if detection has false positives	- May require contract renegotiation with exchanges - Could lead to demand for more GDN transparency
Next steps if we do it	Sellside: implement OriginId ASAP Buyside: Implement bidding preference to Origin servers only	1. Ali & team follow up to see what is viable 2. Set a commercialization & PR plan, execute in 1H, probably at same time as price change if we do
	Recommended	**Recommended**

Recommendation: do #6 and #7

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Asking for DBM to follow thru on the OriginServer buying regardless of ROI. on opt campaigns. Theoretical use case here of a buyer specifically asking for a fixed CPM on a specific exchange for OA buys - follow up to see if this is real

Radical options

Redacted - Privilege

Redacted - Privilege

Id	Date	Text
11	11/09/2016 00:44:23	+jbellack@google.com new radical idea. Instead of working around the ways that publishers can "misuse" the ad server and exchange, close those holes directly. A reservation is a real reservation period. Everything else is price competitive and we get fair access (I think this would also require us to resurrect the Jedi Floors idea, which drags with it several other complexities). This would not be popular as maxl notes, and it might even result in competition, but it would be expensive for whoever takes that on and keeps others from freeloading off of our work.

Header infra types and threat

	(1) Remarketing/Big Buyer	(2) Auction Pressure	(3) Deals (new since last time)
Use Case	High-CPM / low fill buyers see 100% of publisher queries	Multiple exchanges compete on per query pricing to help increase publisher yield.	Run guaranteed and non-guaranteed programmatic deals that compete at any DFP priority, any custom format
Value Prop	Buyers: Increased match rate, increased user exposure, increased win rate. Pubs: yield	Increased match rate/user exposure, up to 50% yield increase (likely self-pricing)	Deals with buy-side decisioning, direct pub payment, fee transparency
Drawbacks	Users/pubs: Latency, reduced auction pressure, value to buyer not transparent	Pub: Latency, operations, non-transparent payout, AdX last look	Pub: Latency, limited forecasting Buyer: limited distribution
Users	Criteo, Amazon, FB	OpenX, Rubicon, Index, Pubmatic, Sonobi	Omnicom, Merkle, Publicis (working through other SSPs+DSPs)
DRX offering	DFL is growing fast for Criteo & smaller buyers (data) BUT **Red** for Amazon & FAN who have strategic+trust issues	Exchange Bidding is still beta, publishers are excited but big exchanges are resistant for strategic+financial reasons (data)	DFP doesn't have PNG (programmatic non-guaranteed) Deals yet, and DBM+AdX won't let agencies/buyers pay publishers directly.

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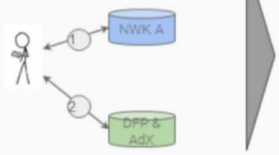
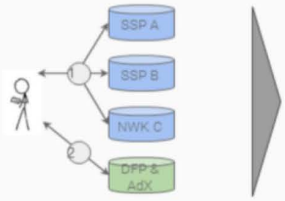
Basic header bidding



Pro: simple to work with one partner

Con: separate code per SSP, latency, passbacks

Client-side wrapper

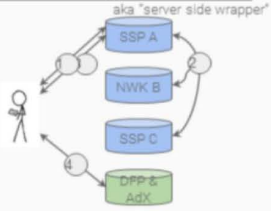


Pro: easily add several SSPs, open source

Con: heavy on the client, latency

3P Exchange bidding

aka "server side wrapper"



Pro: add demand partners without latency, log all events

Con: cookie matching

- Amazon is launching exchange bidding starting with 1c serving fee, no revshare, direct billing & no rules
- Facebook has agreed to at least buy through client-side wrappers

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With server-side wrappers, we lose control over inventory access and ad selection. For example:

1. Facebook demand is already "must have" for publishers, FB wants inventory access and is building HB infrastructure
2. Publishers add FB Header infrastructure to their pages - it just adds yield
3. FB tags spread, allowing FB to develop the functionality/infrastructure to take control of ad selection and develop it into a DFP replacement

Possible "end game": steady state where there are 2-3 "must-call" server side "wrappers" like Jedi++. We need to remain one of them.

- Amazon wrapper already in the works
- The more demand we have, the better chance we have to be one of those 2-3.

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Back to EB options

all details

less value than HB
similar value as HB
better value than HB

	Header Bidding	EB++ / Open Jedi feature options	Pubs	Exchange	DSP	User
(1) Deals	- PMPs given same or better priority than AdX - SSPs make all current transactions programmatic with opp cost to help inform the seller of cost of the deal	(1a) parity between AdX & Jedi PA/PD				
		(1b) allow AdX and Jedi buyers to recreate current deal types/goals (note: need 5a before we will allow 1b)"				
(2) Demand Sources	- any SSP or network can build support - buyer gets own cookie and privacy sensitive data on 100% of calls for client-side HB	(2a) encourage top networks to join ADX at favorable terms, keeping GDN on equal footing.				
		(2b) "trial mode" for SSPs on AdX				
		(2c) cookie match optimization/match all DFP impressions				
(3) Transparency / Fairness	- pub gets all bids & bid times via analytics - buyers can’t opt-out of bid transparency - AdX gets “last look”	(3a) stop letting AdX/GDN/DBM opt-out of bid data sharing				
		(3b) expose bids from Jedi & AdX to pubs in DFP UI & DT				
		(3c) stop giving AdX last look (in Jedi only)				
(4) Configurability	- configurable floors and blocks/rules per SSP, but pub must work with each SSP separately (highly fragmented) - many SSPs allow some level of demand to transact before verification	(4a) configurable floors per SSP (DFP enforces/UI)				
		(4b) configurable blocks/rules per SSP (DFP enforces/UI)				
		(4c) allow limited serving before verification (up to N per creative) and protection for everything				
		(4d) support all formats				
(5) Business Intelligence	- SSPs offer limited analytics and integrations with GA - nobody shows opportunity cost of everything	(5a) show opportunity cost of line items & deals				
		(5b) show opportunity cost of latency				

DRX roadmap will be affected to build all of the above: new big projects or lower priority (eg. s2s, ad blocker thwarting, mediation).

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4c: doing malware checks but then allowing limited serving before categorization.

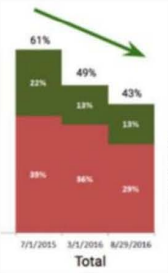
Appendix A: Header infra data for 3 types

back to types of Header infra

DFL intended to improve on Type 1 Header infrastructure

Observed change in Criteo presence, A9/FB still threats

- Criteo change Q1 to Q3 :
  - HB impressions **-16%**
  - Networks using Criteo HB tags +19%
  - % of DFL revenue from 6.2% to 18.5%
- ~40% of Criteo HB imps are in guaranteed space globally, but declining
  - 70% in EMEA



% of Criteo Impressions Booked as Guaranteed Line Items

	7/1/2015	3/1/2016	8/29/2016	13 month change
Criteo HB as % of Total DFP Impressions	0.92%	0.83%	0.7%	-23%
AdX as % of Total DFP Impressions	22%	22%	21%	-5%
DFL as % of Total DFP Impressions	0.29%	0.26%	0.2%	-31%

Source: DFP data, Global LPS partners

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back to types of Header infra

AdX impact

steal: HB/Jedi wins impression AdX would have won

price pressure: HB/Jedi 2nd prices AdX

steal : price pressure ratio

- HB: 1.5:1
- non-HB remnant: 1.82:1
- Jedi: 1.16:1

→ Jedi looks better for AdX than HB or average price remnant LIs

Pub revenue lift

- HB: 8-20% (50% from media reports)
- Jedi: 3-8%

→ HB performs better than Jedi from pub perspective in Alpha, but on *very limited experimental data with a very small number of exchanges participating in Jedi vs HB*

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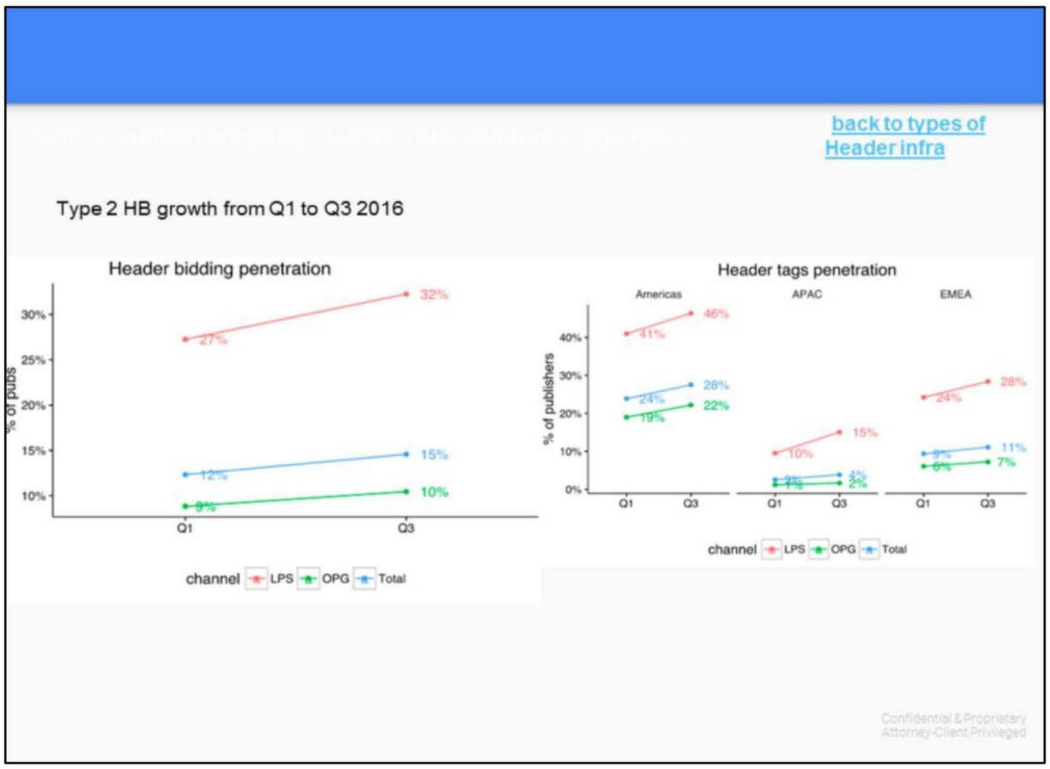

used for the detection:
Bucketing: similar enough line items with different rates
KeyValues: looking at known HB keyvalues + when the rate is appearing in the values of KeyValues

The difference with LPS AMS was coming from different things. The main one was that I was looking at DFP accounts whereas the publisher team was looking at publisher parents.

The gap is now much much narrower, ~46% penetration for LPS AMS.


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