

Sell side BFM Deck

GTM/PSL talking points:

- AMS talking points (Bonita)
 - EMEA briefing
 - APAC talking points
 - OPG talking points (Scott)
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GLOBAL NARRATIVE (Chris - black text to be spoken,

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[SLIDE 6] OPENING REMARKS: As the first BFM for the sell-side our primary goal for today is to align on the framework for how we will manage the sell-side business in 2018. We will not discuss any deep dive topics (as is customary). Essentially our deep dive topic is to align on how we'll manage the business in 2018 in this forum.

Before we get into the details, let's level set on the principles that led to the decisions we made on what to track here.

- Primary goal is provide fair access to GDN/DBM to inventory so we can maximize adv spend
- Our approach for doing that is to
 - gain access (be the ads decision logic for pubs)
 - See: ensure GDN/DBM and 3rd party buyers have the opportunity to bid per query in real time
 - Win: optimize our chances of winning where Google inevitably drives revenue and margin with 20 to 32% sell-side take rates depending on whether Google demand wins or not
- Accordingly, we've chosen 6 product adoption metrics that are leading indicators of our ability to access, see and win.

[SLIDE 7] The sell-side is a \$4.1b business (trailing 90 days) and we will track progress by region and channel, as is customary. But a perhaps more important frame is to ensure we are looking at an 'inventory' view of the business specifically the 4 tranches of inventory that we seek to acquire and manage: Web, App, Instream Video and Search. These tranches of inventory have different industry and competitive dynamics, different types of partners with different business models and different technology challenges.

[SLIDE 8] Sell-Side revenue metrics slide

- **Display Web:** Our Web business is our largest and most mature , with a global growth rate of 7% y/y.
 - This is a tale of 2 cities as a business that is in transition from the desktop to mobile.
 - CT (\$1.2b) declining at -1% with most regions and channels declining or stagnating with the exception of EMEA LPS, which is seeing 14% growth Y/Y on the back of a growing News vertical
 - mWeb (\$.9b) growing at 20%. mWeb growth is strongest in AMS and EMEA in both LPS (~40%) and OPG (~20%)
 - APAC LPS declining at -6% YoY due to -15% drop in queries and -14pp drop in

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Fill Rate, with 70% of decline coming from Japan.

- Increased SSP competition (eg Rubicon, OpenX);
- Disproportionate impact of Apple's ITP (Intelligent Tracking Prevention) in Safari given high vol of re-marketing (60% of Rev) and high iOS share (51%);
- AMS LPS is lapping a strong election year, which is dragging down growth rates
- Summary:
 - Although 7% is reasonable we should expect to face headwinds as user preferences change (web to app) and as the migration from CT web to mWeb does not translate as a 1 for 1 replacement of revenue, in part because ad density is lower in a web environment and the mobile ad unit eCPMs tend to be lower than desktop.
 - The silver lining, is that we have an opportunity to win share as more of our publishers' inventory is made available to Programmatic (e.g. higher see, win rates, or Deals)

- **Display App:** Our App business continues to perform well, growing at 54% y/y on a large base of \$1.0b.
 - The apps business is largely an APAC driven export business (50% is APAC)
 - By "export" I mean driven by developers creating games and utility apps for highly-monetizing global audiences. A similar trend exists for large game developers in Europe, but not to the same degree as APAC.
 - A few other highlights worth noting
 - The recent policy decision related to "Lock-Screen" inventory will take about \$340M off APAC x-channel growth (mostly in CN), so we should expect to see lower growth rates in 2018

- **CPMs increasing (imp +27% vs revenue +54%)** as we continue to migrate off banners to higher CPM formats, interstitials, rewarded and native
- **Our primary growth will likely come from Gaming** is increasingly becoming a strategic area of investment for us in Apps and is proving to be highly monetizable inventory both in performance, but also increasingly becoming a brand opportunity for advertisers, with 15% of the revenue coming from video formats.
- **Our achilles heel is that we lack a presence monetizing 'social' inventory**, where users spend a large portion of their time. However recent deals with Twitter (\$100M+ in 2018) and Pinterest (\$50M in 2018) are foots in the door. Both are early in their implementation.

[here](#)

- **Premium Video:** We are taking an 'inventory' approach to this view and this column reflects 'instream' formats on 'instream' video content, the closest thing to a TV commercial experience we have. There are video 'ads' running alongside other non-video content that is included in both the web and app columns. Accordingly, this view will not match your buy-side 'video revenue' exactly.
 - This part of our business represents a large growth opportunity, but is highly competitive and difficult to make traction quickly. as much of the inventory is directly sold by publishers and not broadly available to programmatic buying.

- **Search:** The traditional AFS business (e.g. portals, downloadable applications) is mature and in a slow decline at -2%, primarily driven by lower desktop queries, Google product/policy decisions and shifting priorities of large commerce players who are looking for vertical-specific formats like AFsh and solutions that complement their core transaction business.
 - This is a highly concentrated business, so at any given time a small # of large partners will drive fluctuations up or down.
 - Although this remains a material portion of the sell-side revenue, we have decided to **not make search a focus of this BFM**.

[SLIDE 9] Transitioning to an 'educational' section of this BFM, I'm sharing a purposely detailed version of our 'access, see, win" framework to demonstrate how see and win rates vary by inventory type and publisher front-door (DFP, AdSense, AdX Direct and AdMob)

Key Takeaways from this slide:

1. **When DFP is the ad server, we have the best opportunity to fairly compete with all other demand sources.**
 - a. We don't see 'everything' as some portion of a pubs inventory is held back for direct sales or given to other networks ahead of AdX (e.g. Criteo remarketing)
 - b. We see ~70% of queries and win ~40%+ (and both these rates have been increasing in recent years)
 - c. EXCEPT In the Video environment, see and win rates drop as more inventory is held back to be direct sold by pubs and there is more competition for the inventory.
2. **In the App environment, when AdMob is the mediation platform we see higher see and win rates** *(caveat that these are estimates from PM as we lack reliable dashboards for comparable comparisons to DFP)* as the typical AdMob customer looks different than the typical DFP customer, with less 'direct' advertiser relationships and a different demand mix - so it is not an apples to apples comparison.
3. **When AdSense or AdMob are the only demand sources called the results are self explanatory** - we see 100% and win nearly all the time.
4. **When AdX or AdMob are served through someone else's decision logic (represented as outside of a gray box in the slide) then we are disadvantaged.**
 - a. For Web, this is a relatively small % of the business
 - b. For App, depending on how you cut the data, 25% to 50% of our business flows through 3P mediation players like MoPub
 - c. And for Video we face a similar challenge with roughly 1/3 of our business through 3Ps, primarily FreeWheel as the dominant player
5. **Concluding point:** Although there is an opportunity to grow platform penetration, this slide also highlights that there is ample opportunity to **drive revenue growth by growing SEE and WIN RATES** on the inventory where we already have access.
- **Important to note here, these #s are not meant to approximate market share.** This is a known issue that we've been trying to solve for a while but has challenges given the requirement to leverage 3rd party data that is constantly in flux and suspect. We will continue to work on this heading into 2018.

[SLIDE 8] So with that intro and context, let's review the 6 product adoption metrics heading into 2018 that we believe are the most critical to track to ensure we make progress on driving access, see and win rates.

The first 2 Metrics (Prog Direct & Exchange Bidding) are tied to the evolution of the platform from 'old tag based technology' to new 'programmatic technology' to ensure we retain and grow FAIR ACCESS to inventory.

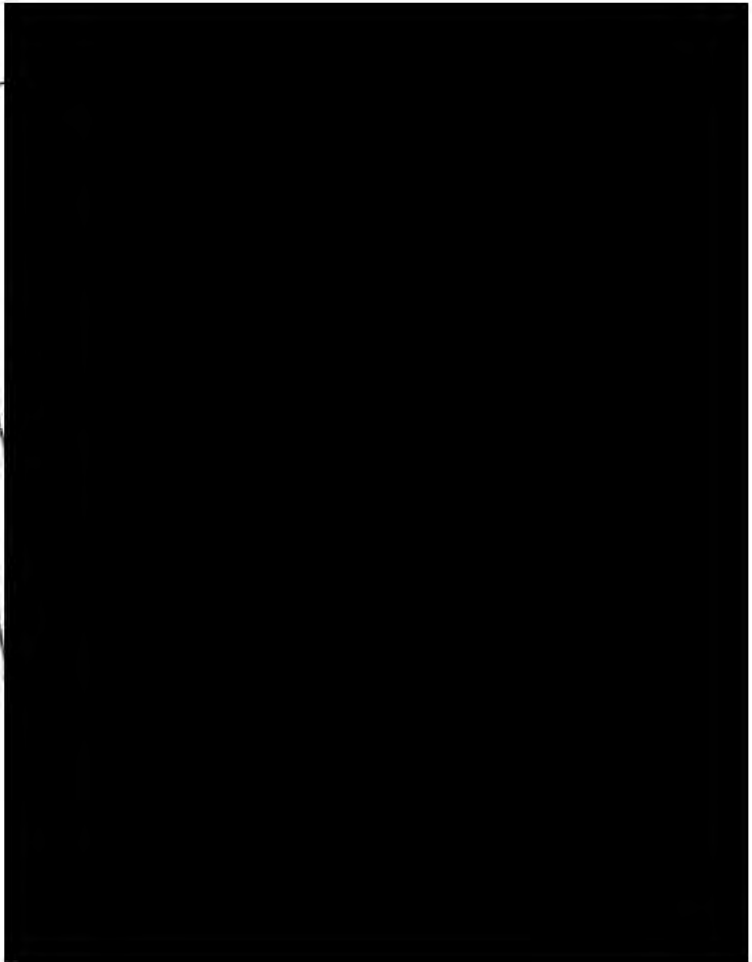
Programmatic Guaranteed

- **WHY? 2 reasons**
 - 1. If we move tag based transactions to programmatic, we increase our ability to buy it programmatically
 - 2. There is a revenue and margin play. We estimate that \$11.2B of direct sold dollars are currently running through DFP on the old 'tag' based technology. We currently charge an ad serving fee that approximates 0.5% of revenue (rev share equivalent). We have the opportunity to extract as much as 5% (sell-side only) on these high-value CPM campaigns. Even if the 5% pricing doesn't hold for the long term, there is room for growth.
- **HOW? Tracking % of a partner's direct business that is programmatic (depth metric) WHEN** a publisher is using PG, looking at the ratio of PG queries to all direct sold queries. Although we are early stages, we are interested in increasing PG share once a partner has chosen to transact this way.
 - **Goal:**
 - Ultimately: up to 70% (given part of the direct sales might not be addressable by Google (e.g. due to specific formats we will not support for example))
 - In 2018: 3% (\$301m PG target / \$11.2b addressable direct sales)
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Exchange & Network Bidding:

- **WHY?:** Similar to PG and direct sales, there is a large portion of inventory sold via networks and exchanges that is transacting non-programmatically in the ad server. There is ~\$5.8b of ad spend flowing through DFP that we believe we can become programmatic.
 - a. The rise of header bidding, when pubs call other competitive networks and exchanges, like AMZN, FB or Rubicon, outside of the ad server, is exacerbating this problem. This is an issue because:
 - when HB is used, we are NO LONGER the 'decision engine' as RTB decision starts outside the ad server, even when DRX is used, eliminating our ability to take a revenue share.
 - our ability to ensure AdX has a fair look at the inventory in real-time.
 - b. This is posing something of an existential risk on our sell-side business and there is a risk that **DSPs, in addition to networks and exchanges, ALSO bid in header tags**, putting much of our AdX revenue at risk.

Exchange and Network bidding is a product to allow pubs to put all of this demand - other exchanges, DSPs, networks - in competition with each other in real time which should drive auction pressure for pubs and maximize their yield.

- **HOW? Tracking publisher adoption rate (a breadth metric):** We are tracking pub adoption even though we are early in adoption, as we believe that we will need broad publisher adoption of EB to influence all exchanges to participate. So it is more important now to get broad participation than going deep with existing partners.
 - Goal:
 - Inevitably: 100% (we'd like all partners to start using EB)
 - 2018: 

The product adoption metrics to drive 'win' rates are primarily 'format focused' with 3 of our 4 specifically MOBILE FORMAT FOCUSED. For all of these metrics we are looking at depth metrics - specifically revenue from the format as a % of the relevant total revenue in the

denominator, which varies by metric.

Native Web:

- **WHY?** Our ability to remain relevant in the transition from desktop web to mobile web will be tied to our ability to capitalize on the migration from banners to native as ad formats that better match the look and feel of the content it surrounds. The near-term rough opportunity for native web is a combination of 'pure play' native networks (e.g. from native only networks like Sharethrough and Triplelift - \$300m ish) + incremental lift as we shift from banner to native (~\$700m ish). However, the real opportunity is much larger if all banners are replaced by native in the long-term.
- **HOW:** We are tracking the % of revenue that comes from native eligible inventory slots (depth metric) as a proxy for how well we are doing activating publishers to build for native.
 - **Goal:** Ideally, we could approach 100% of revenue from Native provided that native performed better than banners. 75% is appropriate goal for Native + Hybrid in interim as the supply/demand dynamics normalize.
 - 2018 Goal: [still WIP] We are estimating \$400-500M captured rev (vs. \$55M today/ Q4, or \$255M ARR).

a.

b.

c.

i.

ii.

Native App:

- **WHY?:** FAN is the market leader in 'native app', as their network ads are mostly 'native' (component based) and app inventory is more likely to be 'born' native, hence growth in this format will be a driver to grow app market share for buy and sell sides. Excluding O&O inventory, the estimated market oppty is \$2.9b of 'native app revenue' flowing through networks
- **How:** Similar to Native Web, we are tracking the % of revenue that comes from native inventory (depth metric) as a proxy for how well we are doing activating publishers to build for native, although the calculation is slightly different.
 - **Goal:** 30% in 2018 (= 2018 native target / 2018 (native + banner) target).
 - In the long term, we aim for this metric to hit 50-70% depending on the portfolio of partners in each country/region and how aggressive/tolerant their markets are with regards to user experience and ads embedded in content)

Rewarded Ads:

- **WHY?** Our apps network business is heavy in gaming inventory and we are placing a big bet on mobile games as a means of remaining relevant in apps and to ensure reach across multiple demos (gaming not just for men 18-34 anymore as casual gaming is on the rise). The Rewarded ads market is a \$1.9b opportunity and a growing. A strong rewarded ads offering can get gaming apps to create *new* inventory, where they might be just relying on in-app-purchases today
- **HOW? Similar to Native, we are tracking the % of revenue coming from rewarded (depth metric)**
 - **Calculation:** We will benchmark ourselves against our 2018 goal and against the industry benchmark,
 - **Goal:** In 2018 we are expecting to generate \$391M in rewarded out of a total \$4.9B in apps - this is 8%. The current rewarded market is estimated in 1.6B (source: project Contra) out of an apps addressable business of 12B (source: OPG analysis) - this is 13%.

And lastly...

Video Instream:

- **WHY:** The instream video opportunity in 2018 is estimated at about 11B (\$9B from OTT and \$3B from addressable TV).
- **HOW:** We will look at the % of revenues from video content for those partners using AdX Video.
 - **Goal:** The ideal # depends on the mix between partner types (broadcasters vs news, for example), so no one target will work for all regions. However, what is important to track is growth rates across regions - are we gaining more access to this premium inventory or not - it should be higher CPM and impact the numerator positively. Rough estimate is that should be between 10-20%

[SLIDE 9] COMMENTARY ON ACTUAL PROD ADOPTION METRICS

- **Programmatic Guaranteed**
 - Globally 4% of the direct business runs through PG, for those partners that are using PG (so excluding those partners that are not)

- These are relatively low rates given early adoption, which is partly why we chose this metrics.
- LPS Brazil/CA (5%): Early adopters in large part because of the tight buy/sell coordination in smaller markets
- LPS APAC (10%): China is a bit of an anomaly as there are not many pubs with PG adoption, and one pub is skewing the metric (Douyu - eSports that is selling international inventory via PG)
- OPG APAC (9%): Small sample size
- OPG EMEA (18%):
- 2018 growth will require:
 - From Sales: Buy/Sell coordination and continued buy-side commercialization to sell the value that programmatic provides to reservation buying entities. Focus should be on premium video
 - From Product: continued evolution of audience buying in PG and giving more flexibility to buyers (PG with buyer decisioning) to ensure buyers have value beyond efficiencies

- **Exchange bidding**

- EB is in open beta and adoption currently varies significantly by region/country. Penetration rates are highest in countries where there is broader exchange participation, high header bidding penetration (e.g. US, UK)
 - Low penetration in APAC as this is a stage II roll out market.

- BR - throughout LATAM the dominant Exchange aside from Google is Rubicon who, while testing with EB, has stalled its roll-out with us.

- DE - in Germany we are not covered by alpha/beta protections. We have

intentionally held back on working with any publisher on a contract associated with Germany for this reason. We consider the product to be fairly stable at this point and are discussing EB more regularly in Germany.

- OPG: Numbers are diluted by a large number of DFP SB publishers which reside in the Torso of the business and the open beta only applies to DFP Premium.

- **Native Web**

- Native-eligible inventory growing fastest in EMEA due to aggressively pitching hybrid (native+banner) and optimized implementations

scorecards

Native

- **Video**

- As stated several times today, video remains a competitive environment driving low %. In OPG legacy reseller channels driving instream revenue in OPG (under

review for quality concerns) which might impact this metric negatively going forward.

- FR high → France has the large DailyMotion as a partner, which also explains negative trend as it's not growing. The Broadcast part is still relatively small, but FR team and is very active with deals and innovation tests, e.g. STB AI.
- AU/NZ high → AUNZ leading adoption via Yahoo. All other markets at <10% due to scarcity of the Video inventory and high likelihood of it being sold via direct sales. AUNZ seen success off the back of successful PG deals - especially in Yahoo.

- **Native app**

- **Note:** BR and CN are already very high given these markets are more tolerant with regards to the user experience and how aggressive developers are with embedding the ads on the content. CN has seen strong growth since August due to FAN removing their support for Lockscreen ads. Google play will remove support Jan'18.

- **Rewarded**

- Generally: small numbers but growing as the opportunity is a blue ocean.
- Mostly driven by APAC both LPS and OPG (as apps business in general is bigger)