From:	Nate Morgan (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=4BA8C0B45D25431F9EF338B2BC57341F- NATEMORGAN>
То:	Sean Ryan
CC:	Alvin Bowles; Andy Berman
Sent:	10/9/2019 12:05:58 PM
Subject:	Re: Update - Call of Duty - AN Performance and Optimization Strategy

Sean,

I've added you to our Call of Duty Strike Force workplace chat.

We suspect Ironsource is getting the last look and outbidding us.

On the chat we have PSM/Tech Ops, Partner Engineering as well as John Wren who is working to get out bidding partnership with Ironsource closed.

Best,

Nate

From: Sean Ryan <sdr@fb.com>
Date: Wednesday, October 9, 2019 at 10:36 AM
To: Nate Morgan <natemorgan@fb.com>
Cc: Alvin Bowles <alb@fb.com>, Andy Berman <andyb@fb.com>
Subject: RE: Update - Call of Duty - AN Performance and Optimization Strategy

Let's have regular updates here, even as much as daily, given the explosive growth in the game, and my concerns about how Iron Source is managing this. Do we have a team looking at this, including Tech Ops?

From: Sean Ryan
Sent: Monday, October 7, 2019 4:56 PM
To: Nate Morgan <natemorgan@fb.com>
Cc: Alvin Bowles <alb@fb.com>; Andy Berman <andyb@fb.com>
Subject: RE: Update - Call of Duty - AN Performance and Optimization Strategy

Please confirm with our PE/Tech ops team that what Iron Source is doing makes sense, and is consistent with what they do on other apps – I just don't trust them on this type of activity and I have seen mostly IS ads so far, which would be annoying. I want to confirm that IS is calling us only when they have a FB logged in user, and not for every user?

From: Nate Morgan <<u>natemorgan@fb.com</u>> Sent: Monday, October 7, 2019 2:30 PM To: Sean Ryan <<u>sdr@fb.com</u>> Cc: Alvin Bowles <<u>alb@fb.com</u>>; Andy Berman <<u>andyb@fb.com</u>> Subject: Update - Call of Duty - AN Performance and Optimization Strategy

Sean,

Thanks for checking in on Call of Duty! Hope to see you in there for a multi-player match soon. (a) I'm happy to provide these updates at a regular interval for the foreseeable future. Please let me know if you would find that useful.

CONFIDENTIAL TREATMENT REQUESTED BY FACEBOOK, INC DTX-813 Page 1 of 2 As you know, the game launched globally on 10/1 and was live with AN ads at the time of global launch. **Heath Schindler** helped prepare the following brief, and has done an outstanding job building the relationship with this hey publisher.

We're seeing **decent revenue performance** out of the gate, but there is a much larger opportunity here. We are aggressively pursuing this.

Revenue:

- ~\$15k per day
- iOS 2x more than Android working on understanding and unblocking Android

Optimizations:

Here is what we are focusing on in very near term (this week):

- Low fill rate ~7%
 - Due to the extremely high, arbitrary CPM Targets that were set from the start. My team advised them against this, but they only met us halfway on most of the changes. Now that we have data that backs up our recommendations, we are again asking them to set price targets that will inflect revenue contribution.
 - We are recommending that they use Country Groups for price targets (rather than Global Targets). Adding Country Groups can increase fill for lower performing countries.
- Low show rate ~2.5%
 - This is due to their caching strategy and the way IronSource requests ads from all networks at the same time (regardless of priority level).
 - We believe they cache 5 ads on app load (waiting on confirmation) because of this, the total ad request numbers in MoMa are tremendously inflated.

Next Steps:

Heath Schindler is meeting with the Activision monetization team later this week to advise them on the following:

- New price target recommendations by country group.
- New caching strategy we are recommending they cache when user clicks to watch a video, or closer to the trigger point to avoid throttling and to increase overall performance
- Ad Frequency we'd like to experiment with increasing the amount of ads each user can watch per day
- Ad Placements we'd like to recommend testing additional placements (ex double points, new weapons, etc)

Additional Info

• Our day to day contact Dennis Chan has admittedly said that he lacks optimization/waterfall experience, so this is a learning process for them. Heath met with Gerard Tully from the King side last week, and Activision and King will help drive internal adoption of our optimization recommendations.

Best,

Nate

Nate Morgan | Vertical Lead, Games | Audience Network Facebook | 1 Hacker Way, Menlo Park, CA 94025 mobile: 415-902-8843

