@ PM Artifacts (Q1'18-Q1'19)

Summary of Core Role

Sole Product Manager for Search Ads 360 (SA360) **automated bidding**, a feature area that optimizes bids across multiple search engines (Google, Bing, Baidu, Yahoo! Japan, etc). The technology platform currently optimizes Confidential in ad media which represents confidential of Search Ads 360 spend for over Confidential advertisers. The scale of this platform has the capability to drive significant increased revenue for Google (e.g. Confidential) but it also carries significant risk as any widespread bugs can result in reduced revenue and lost customer trust.

- Product lead for cross-functional team of engineers, UX designers, Sales, and Services.
- Define multi-year vision for SA360 autobidding, including alignment with Google Ads teams.
- Drive features through full design cycle (roadmap rationalization, PR, UX, design, commercialization).
- Collaborate with Sales leads & strategic customers to drive feature adoption and long-term strategy.
- Review support tickets to identify poor user experience, aggregate feedback for future product improvements. Build gTech debugging tools to streamline troubleshooting processes.
- Partner with Eng and gTech TPE for escalation management (hotfixes, comms, and refunds)

Contents

Auction-time Bidding (Myx)
Amalgam Autobidding
Bid Strategy Insights
Grow Autobidding Adoption
Google Marketing platform

Details

Auction-time Bidding (Project Myx)

Drove design and launch of auction-time bidding in Search Ads 360.

Artifacts

- Myx Default Conversion Goal [PRD] (author)
- Myx Shopping Conversion alignment [PRD] (author)
- Myx Testing Plan [doc] (co-author)
- Ad Group Override [PRD] (author)

EXHIBIT PSX00419

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- Amalgam/Myx Shopping Bidding [deck, deck, deck] (co-author)
- · Auction-time Bidding Internal Pitch [deck] (co-author)
- Default Conversion Goal [UXR] (co-author)

Contex

Search Ads 360 and Google Ads bidding have historically been built on different technology stacks with unique features available for end users. Merging them resolves longstanding product inconsistencies that made it challenging for Sales teams to drive adoption, and it has provided a contained increase in advertiser ROI.

Scope

Auction-time bidding has launched globally for all customers optimizing to CPA, the most popular autobidding strategy. ROAS will be launched by the end EOQ2.

Impact

- Confidential
- Simplifies Amalgam migration (referenced below) by allowing customers to experience Google Ads autobidding technology within SA360, while subtling encouraging advertisers to migrate to a more forward-compatible configuration

Key Contributions

- PM lead for partnering with Engineering to drive design and implementation
- Developed Sales commercialization strategy and led Services trainings
- <u>Designed</u> and led performance testing and validation efforts over the course of 8 months. This
 required extensive customer engagement to run 50% customer-driven A/B experiments to measure
 performance uplift.
- Launched <u>dashboard</u> (co-author with
 (co-author with
- Acquired executive approval for a series of proposed critical changes to product requirements during
 beta period to address a major performance blocker: machine learning cross-learning issues. Solving
 this problem required a high degree of technical depth on SA360 autobidding algorithms, Google Ads
 conversions infrastructure, Search & Shopping autobidding algorithms, and Shopping features &
 infrastructure. I successfully negotiated with PM and Engineering leadership on Search, Shopping,
 SA360, and Conversions teams to update roadmap and vision to align with Myx.
 - Completed quantitative & qualitative analysis of adoption and core user needs [details]
 - Proposal ratified by Product executive leadership team at steering review
 - Ensured compatibility with Amalgam [autobidding rationalization PRD, deck]
 - Completed requirements for 2 key features to offer best-in-class performance on Shopping:
 - Myx Default Conversion Goal [PRD, UXDR, Design]
 - Shopping Myx Floodlight/AWCT Alignment [PRD, Design]

Amalgam Autobidding

Lead for rationalization and defining requirements for Automated Bidding features in Amalgam.

Artifacts

Amalgam Autobidding Rationalization [PRD, deck, deck] (author)
Amalgam Autobidding Migration [PRD] (author)
Amalgam SSC in Portfolio Bidding [PRD] (author)

Context

Confidential

Scope

Amalgam is expected to launch for all SA360 customers in Q2'2020, supporting confidential in ad spend per year

Impact

- Increased engineering development velocity by reducing redundancy in supporting the same feature in SA360 and Google Ads and eliminate the need to resolve stats discrepancy and latency issues
- Simplified product position for Sales and customers by guaranteeing that all features are supported in Amalgam at the same time it launches in Google Ads.
- Eliminate confusion for Sales teams. For over 8 years, Sales reps have had to make tough trade offs
 when deciding which features to pitch since some features were only offered in Google Ads, and
 SA360 often had a slightly different capability set.

Key Contributions

- Defined project vision, scope, and feature categorization for Amalgam Autobidding features
- Negotiated with PM and Eng across SA360, Search, and Shopping to align on core requirements, ensuring alignment with each team's vision, feature roadmap, capacity, and core user experiences.
- Developed comprehensive rationalization roadmap for over 80 unique Autobidding features, outlining in <u>detail</u> how each feature should be incorporated into the AP stack, worked with PM/Eng stakeholders to gain alignment, and presented to executive leadership where my proposals were successfully ratified.
- Partnered with Engineering on key design decisions, such as <u>advanced reporting features</u>.

Grow Autobidding Adoption

Artifacts

- Bid Strategy Sales Events [PRD] (author)
- Target Position to Impression Share Migration [1P] (author)
- Bid Strategy Creation Flow [PRD] (author)
- Impression Share Bid Strategy [PRD] (author)
- Prominence Metric reporting [PRD] (author)
- Bid Strategy Debugging Tool [PRD + instructions] (author)
- Initial Mu Bug [post-mortem] (author)
- Mu2 Internal training for Sales / gTech (deck)

Context

Core Features

Automated bidding is a feature that optimizes bids across multiple search engines. Our product team is dedicated to building new features to drive adoption and alignment with advertiser business goals,

Mu₂ Algorithm

Bid automation tools deliver tremendous improvements in ROI when they function properly, but when they break there can be a lot of damage to customer accounts. Trust is hard to gain, but easy to lose. I was the PM for the first end-to-end bidding algorithm overhaul since DS3 launch (2011).

Confidential

Confidential

Grow Top Customers

Confidential

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Confidential

Scope

SA360 automated bidding currently optimizes confidential in ad media which represents of Search Ads 360 spend for over confidential advertisers.

Impact

Mu2

- confidential in annualized spend for confidential customers migrated onto a new algorithm over 8 months.
- Global increase in conversions/revenue for the same ROI [details]
- Confidential reduction in prediction error

Key Contributions

Core Features

Drive each feature through roadmap rationalization, costing, PR, design, and UXR

Confidential

Mu₂ Algorithm

Prior to the migration:

 Partnered with engineering and TPE on a daily basis to manage customer escalations to reduce churn.

- Drafted and signed off on all p0 customer comms, facilitated refund requests, and aggregated customer concerns and needs into our core design.
- Met with 20+ strategic customers confidential annual spend) to personally explain the root cause of the issues and collect customer feedback.

During and after migration:

- Led weekly communication updates to Sales and Services
- Met with 20+ strategic customers (confidential annual spend) to rebuild trust by personally explain the improvements that we made and encouraged them to test our new system.
- Aggregated customer feedback to engineering
- Led effort to build a ew debugging tool that empowered gTech teams to explain algorithm behavior
- Partnered with GPL and POM to revamp pitch decks and implementation guides

Develop Top Customers

Confidential

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Confidential

Keynote speaker at events

- SMX West (Seattle)
- Google Marketing Live (San Jose)
- Google Marketing Platform Partner Summit (San Francisco)
- Autobidding Summit (Amsterdam)

Support Sales and gTech

- Drove effort to build a <u>debugging tool</u> for services
- Confidential
- Lead weekly office hours meeting for global Sales teams. Responsible for routing issues to relevant engineering and PM leads
- Present at various internal meetings, such as LCS "Meet the PM" sessions and SA360 Product meetings. Attendance up to 200 individuals per session.

Bid Strategy Insights

A new framework for customers to evaluate their Autobidding performance within SA360 with the mission to align user's measurement of bid strategies closer to how the algorithm optimizes.

Artifacts

Bid Strategy Insights [PRD] (author)
Bid Strategy Insights [UXR] (contributor)

Context

Confidential