

adMAX

AD Optimization Engine

Leveraging Data
for Improved Performance
of Online Ad Initiatives
and Campaigns

A White Paper
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Introduction

As publishers' revenues from online advertising continue to grow, optimizing the performance of display, video, social and mobile campaigns becomes increasingly important, particularly for large media companies. The raw dollars at stake are enormous. Untangling this daunting and complicated labyrinth has proved problematic in the past, however, because the online ad ecosystem has several layers of complexity. Getting a handle on real-time data flows, assessing actual campaign performance, forecasting needs, staying ahead of share-stealing competitors, and justifying CPMs have made optimization a Herculean, if not futile, endeavor. When the ecosystem operates at less than full capacity, as has been the case to date, the results have been consistent: frustrated advertisers and publishers with unrecognized revenues. In fact, one study suggested the standard deviation of publishers' forecasts ranges between 25-50% (Source: Think Equity, LLC, May 2009). That's a big miss. In this game, no one wins.

In the past, publishers managed their online ad operations either with the limited tool set from the ad servers combined with spreadsheets or by mere brute force. Intelligent guesswork was the norm as ad operation teams sorted mountains of aged data to deduce actual performance or forecast inventory. Even the most skilled professionals were often mired in the weeds, unable to substantiate their campaign adjustments and modifications but knowing they had to "do something." At best, these convoluted processes were merely arbitrary, at worse they caused harm.

Taking a page from the algorithmically-infused search engine optimization space, Maxifier developed a veritable "easy" button for publishers' online ad operations and

sales. In a single ad optimization engine called adMAX™, Maxifier gives publishers a streamlined, real-time window into actual campaign and network performance and an automated, intelligent system that recommends adjustments, projects results and maximizes performance. adMAX is the new "must-have" team member for large media companies' ad operations. adMAX is the world's first ad optimization engine and is already deployed at some of the world's largest publishers where it is optimizing many tens of billions of impressions each month.

In this white paper, we explore the march from labyrinth to AOE and what it means for publishers seeking to generate incremental margins from their online operations. In addition, we'll explore the specific inner workings of adMAX, its features, benefits and use cases. Finally, we present a brief case study of The Guardian Newspaper's website, Guardian.co.uk, the second largest English-language news site in the world after the New York Times. Complementing this white paper is a detailed PowerPoint presentation, available upon request, which reviews adMAX in even more detail.

Challenges

Few are unaware of the explosion in the online display ad space in recent years. Literally, trillions of ad impressions fly onto computer screens every year. There are no signs of slowing down. According to Comscore, the U.S. saw a 22% increase in online display ad impressions, while the UK saw a 34% increase in the third quarter of 2010. Many other countries experienced similar growth. As advertisers shift larger percentages of their total ad spend to online advertising, the current trend is expected to continue.

As with any wildly successful market, continuous growth

brings with it complications and a number of challenges that demand attention from ecosystem participants. For the online ad space, this includes publishers, ad networks and ad agencies. While each of these players face a different set of challenges, they have all long endured an “analog” management solution set in a decidedly more demanding digital world. Back-of-napkin calculations and even more advanced spreadsheet analysis are insufficient to properly manage and optimize the billions of transactions that pass through the ecosystem. It’s just too much data flowing in too many directions at every minute of the day. And even the best efforts take too long and are too inefficient. Likewise, single technology point solutions that slice historical data on different metrics offer only marginal benefits because the publisher still lacks context for optimizing campaigns. While a single tool may offer insight into Click-Through Rates (CTRs), for example, it may not have capability to show the impact on revenue, or vice versa.

Within this ecosystem, publishers recognize that the ability to meter clicks and engagement enables all campaigns to be measured against these performance metrics. Even those campaigns sold on a traditional CPM basis, are increasingly judged on CTR. Of all the participants in the ecosystem, publishers stand to gain or lose the most because it’s their content, pages and inventory that frame the market opportunity. Everything starts there. Selling every potential impression and then delivering them all as promised are constantly moving targets. No publisher can say with any specificity how much money is being left on the table every month, but all are left with the sinking feeling that it’s bigger than a breadbox. Quite frankly, it’s a broken system screaming out for a solution.

Given a magic wand to wave over this broken system and process, publishers would no doubt pull from their hat a long list of needs and wants. To perform optimally, they would most likely ask for real-time tools that do the following:

- Visualize what’s actually happening inside a campaign or set of campaigns. Publishers’ ad operations really cannot make informed decisions with respect to making adjustments without a clear, holistic and contextual view into what’s happening.
- Forecast available inventories based on an array of variables; recognizing the nuances between different types of inventory and its availability. It’s impossible to know whether online storm clouds are brewing and when to take cover without reasonably accurate forecasts.
- Optimize campaigns based on advanced algorithms and historical performance data. Underperforming campaigns need to be identified right away so they can be adjusted automatically and immediately to optimize revenue, eCPM and CTR.
- Simulate campaigns based on recommended adjustments. The human mind simply can’t calculate all the billions of permutations that are required to accurately simulate campaigns. In “If/Then” scenarios of this magnitude, there are just too many moving parts to consider.
- Report on campaign performance so both ad operations and sales will have the most up-to-date data to deliver to their advertisers or other constituencies. Proof of performance underscores proof of value, an essential arrow in any renewal quiver.
- Manage yields to ensure appropriate, maximum pricing for online ads. Without a way to ensure yields are properly managed, there is no way to ensure that the publish-

ers are garnering maximum CPMs.

- Display key performance indicators (KPIs) across different metrics in a crisp, intuitive dashboard. If hindsight is 20/20, then actionable foresight is even more precious and valuable.

This is certainly a long wish list. The ideal solution would be a platform – an engine – that ties them all together and drives the entire process forward. Aggregated, algorithmically-advanced tools integrated into a unified technology engine would enable publishers to reach their full revenue potential.

Ad Optimization Engine

In the mid-1990s, search engine optimization (SEO) hit the scene like a force of nature and quickly became the rage when Google launched in 1998. SEO is about optimizing web sites to increase their relevance to specific keywords. SEO engineers and web site developers, therefore, must constantly play “If/Then” scenarios to tweak their sites for better visibility in different search engines. Some days their listings will improve and some days they’ll fall. Without access to the underlying algorithms, they’ll always be at a loss for why.

Sound familiar? In the online ad world, publishers have had to play the same “If/Then” games with contracted display ads. It’s not uncommon for ad operations to wonder how changing a campaign’s ad placements onto different pages or sites will impact the results on totally different campaigns. Will this change improve or reduce the yield over there? Will that change increase revenue on this campaign? Without access to the underlying algorithms, it’s all a game.

With the launch of adMAX from Maxifier, the world’s first Ad Optimization Engine (AOE) that game is over. With

adMAX, publishers have a single, integrated platform with embedded, advanced algorithms that clearly and crisply show publishers how to improve the performance of their online ad operations and associated sales initiatives. Guesswork is eliminated, and clarity is the norm.

Recall the imaginary magic wand? adMAX is the result, a figurative rabbit that:

- Provides clear visualization of performance data
- Sets fundamental rules for performance
- Automates changes and recommendations
- Adjusts campaigns intra-cycle
- Offers holistic and contextual simulations across the board
- Provides accurate forecasting
- Streamlines operations and efficiencies
- Maintains complete transparency and provides users with as much or as little hands-on control as desired.

In the next section, we will review the core elements of adMAX and provide perspective on its many benefits.

adMAX: The Engine That Powers Publishers Online Advertising

Publishers use adMAX primarily for optimizing their premium campaigns. Simple-to-use and navigate, adMAX ushers users through a series of intuitive steps that make it easy to visualize actual campaign performance and measure it against the key metrics and objectives. Presented in a single screen, the adMAX data enables the publisher to have a complete control over campaign performance.

Top tier publishers that manage millions or billions of impressions on a monthly basis use adMAX. All of them value adMAX because it quickly provides increased effi-

ciency in ad operations, unprecedented insights to sales teams, and total control and certainty to management. As the size and complexity of publishers' inventories and campaigns increase, the optimization challenge grows exponentially along with the ROI increases.

Within a publisher's infrastructure, each of the following groups uses adMAX for different purposes and derives value at different points:

- Ad operations uses adMAX to streamline operations, eliminate inefficiencies, improve individual campaign and site performance, and more fully leverage premium inventories for higher CPMs. This transforms ad operations teams from task managers to decision makers.
- Sales teams use adMAX for improved forecasting and proof points with customers at renewal time regarding CPMs.
- Executive and financial management relies on adMAX for its aggregate reporting and dashboard functions. With crisp insights into actual performance on a rolling basis, executive and financial leaders are better prepared to make high level adjustments to their business and offerings.

Major Elements of adMAX

Comprehensive as a platform, adMAX jettisons the old ways of managing ad operations. Included in the platform are a number of significant elements each of which is briefly described below.

Visualize:

Pulling data from your ad server, adMAX automatical-

ly displays everything from general campaign views to ultra-granular information in a single screen. But unlike other visualization tools that merely dump data into some dumb depository, adMAX presents the data against your defined business rules, making it immediately actionable. This enables the publisher to easily see where individual campaigns are currently over or under performing.

Here's a partial list of what adMAX visualizes:

General campaigns view

- Unique campaign ID and name
- Advertiser and/or agency
- Ad trafficker responsible for campaign

Goals

- Target impressions
- CPM/CPC/DR
- Completion conditions (end date, number of impressions/clicks)
- Start and end dates

Delivery Statistics

- Delivered impressions
- Over/Under-delivery of impressions
- Clicks
- Acquisitions
- CTR from start to current; and CTR last 7 days
- Effective CPM

Forecast

- Cost Per Acquisition
- Forecast of impressions to be delivered by end date
- Impressions not yet delivered
- Days to end date

Daily Statistics

- Impressions and clicks delivered yesterday/today



- Forecasted impressions today
- Impressions that should be delivered per day per the system schedule
- Average daily impressions delivered during the last 7 days
- Impressions delivered during the last 7 days
- Forecasted impressions for next 7 days

After adMAX presents the data for viewing, it then automatically forecasts performance for the next 7/14/28 day period based on past performance. adMAX approaches forecasting from a unique perspective. adMAX looks at historical patterns at the individual page/placement level in order to create an overall inventory forecast. This allows for much greater insight into prospective campaign performance, allowing adMAX to forecast behaviors of individual campaigns across all applicable inventory. In looking forward, adMAX applies its forecast to each individual campaign and all campaigns simultaneously, thereby allowing publishers complete transparency of inventory. adMAX then predicts the performance of each individual campaign against its inventory forecast. The end result is a clear picture of what areas are most likely to underperform and what inventory is available by section on the site.

Optimize:

After visualization and forecasts are complete, adMAX throttles the optimization engine forward. This empowers publishers with complete control over their site and enables them to make informed decisions to optimize per-

formance. Using advanced algorithms, adMAX performs a two-pronged analysis: one focused on an individual campaign and one focused on all other campaigns running at the same time. adMAX then presents a series of optimization recommendations. adMAX optimizes based upon the cascade of the publisher's metrics and goals. In most cases, adMAX begins the optimization process by ensuring accurate delivery. Thereafter, adMAX optimizes campaigns based on other metrics, including:

- CPM
- CPC
- CPA
- eCPM
- Revenue
- CTR
- Other publisher-defined criteria

It is here the publisher can control the optimization process. The publisher can choose to automatically accept the recommendations from adMAX (all based on the publisher's self-defined business rules), in which case the changes are immediately effected on the ad server within seconds. Alternatively, the publisher can make custom adjustments to the recommendations from adMAX and actually see in near real-time what those adjustments will mean for the target campaign and the entire site. Importantly, adMAX looks at the entire site when a new change is requested so that the publisher can see clearly how that change will impact other campaigns. With adMAX, nothing happens in a vacuum and everything is controlled by the publisher. Decision support tools that drive a publisher's decision making might include sequential optimization based on:

Campaign Simulation

Sometimes a publisher's defined business rules may warrant another, different view, perhaps because of an unexpected event (e.g. plane crash or natural disaster) which is driving significant traffic to a site. In such instances, the publisher can perform various simulations based on additional or different business rules and immediately see the impact on a campaign and all others. Again, adMAX works in context so a publisher will always have a clear, crisp perspective on the impact of potential changes across the entire site.

Advertising Intelligence Reporting (AIR)

adMAX also includes a series of tools to produce standard and custom reports on particular campaigns for various constituencies inside the publisher. AIR is a separate management dashboard that provides aggregated and detailed rolling metrics across the entire site. This dashboard feature provides penetrating insights into performance and enables publishers to take affirmative steps to further improve their overall online ad programs.

While adMAX is powerful, it's rather easy to get started. We have already successfully integrated adMAX with the three leading ad server platforms: 24/7 Real Media's Open Ad Stream, DoubleClick's DFP, and adtech's IQ. Literally within days a publisher can be up and running on adMAX and realizing all of the following:

- Rapid and painless implementation and "go live" process
- Significantly increases performance for individual campaigns
- Optimizes individual campaigns while simultaneously

addressing interdependencies between campaigns

- Meaningfully increases overall inventory yield
- Enables complete control over and visibility into proprietary data
- Rapidly streamlines ad operation
- Measurably increases revenue
- Buttresses sales strategies, including acquisition/ retention with advertisers

Case Study

The Guardian records incredible results with Maxifier's ad optimization and prioritization service!

Client: The Guardian Newspaper's website, Guardian.co.uk, is the second largest English-language news site in the world after the New York Times. It is an indisputable media leader in the UK and is globally recognized for its groundbreaking and highly innovative content and initiatives.

Challenges and Goals: Guardian identified several goals that, if achieved, it believed could significantly improve the performance of online advertising programs. These included:

- Managing digital advertising with new optimization technologies
- Increasing advertisers' ROI, still while allowing ROI to be demonstrated with increased clarity
- Maximizing revenue opportunities, particularly with direct response initiatives
- Empowering ad operations to streamline workloads, proactively improve performance, and support sales efforts with accurate reports

- Improving overall yields and revenue by prioritizing campaigns

Solution: To enhance its online advertising initiatives, Guardian selected 24/7 Real Media's Open AdStream as its ad management platform. Simultaneously, Guardian selected Maxifier's business intelligence platform to visualize, prioritize, optimize and maximize ad operations and revenue. The Maxifier solution was customized for Guardian, including a web access portal, new tools to help facilitate communication between sales and advertising operations, increased inventory structure and new security enhancements. In addition, Maxifier provided advanced revenue reporting for more granular examination of data.

Results: Overall, Maxifier enabled Guardian to clearly visualize metrics on a daily basis, prioritize adjustments on-the-fly, optimize performance and forecasts, and maximize an array of key metrics including CTRs, yields, on-time delivery and revenue. Highlights of the results mapped against Guardian's specific challenges and objectives include:

- Managing digital advertising with new optimization technologies: Maxifier enabled Guardian to better manage the targeting, delivery and optimization of display ads across its site, which enabled improved inventory yields and incremental revenues.
- Increasing advertisers' ROI, while allowing ROI to be demonstrated with increased clarity: With crisp insights and visibility into performance and advertiser ROI, Guardian experienced an incredible 30.44% uplift in CTRs across all display campaigns. As a result of reams of supporting data generated by Maxifier, Guardian was also able to demonstrate and highlight campaign suc-

cesses and service levels to its advertisers.

"Maxifier very quickly demonstrated its' value to our business. Within three months of operation we saw overall monetized impressions increase and a CTR uplift of more than 30% across all display campaigns. That figure alone is astonishingly strong and has helped us deliver improved ROI to our advertisers."

**Daniel Spears, Performance Optimization Manager,
Guardian News & Media**

Maximizing revenue opportunities, particularly with direct response initiatives: Guardian's performance-based campaigns showed an 18.91% sell-through rate (STR) increase on the direct response business following implementation of Maxifier. The direct response eCPM for performance-based campaign also increased by 13.73% over 3 months. The Guardian was pleased with the improved performance of its premium inventory and continued to see excellent results that satisfy advertisers. This data was instrumental to the sales team's efforts to successfully pitch and secure additional business. Empowering ad operations to streamline workloads, proactively improve performance, and support sales efforts with accurate reports: With the additional support and increased visibility enabled by Maxifier, Guardian saw an improvement of on-time delivery efficiency by an average of 37.31% for all under-delivering campaigns. This improved Guardian's ability to deliver against clients' expectations and to strengthen business relationships. The uplift in performance metrics provided a higher service level to agencies, and new A/B testing reports demonstrated optimized performance.

“Before Maxifier, ad operations were running pretty blind, and it was unknown whether our efforts would produce the results our advertisers expected and our sales team needed. After implementing Maxifier, we not only knew with high probability that we were making smart adjustments, but we also empowered our teams with relevant data to support renewals. With such increased and increasing pressure on campaign performance, this integrated solution has, to us, become essential.”

*Carolyn Strolin, Ad Operations Manager,
Guardian News & Media*

Improving overall yields and revenue by prioritizing campaigns: With a focus on increasing overall campaign performance and revenues, Guardian was able to better schedule campaign delivery according to the overall yield resulting in millions of additional ad impressions delivered and a 3.08% increase in revenues achieved. These results are directly attributable to Guardian’s prioritization, optimization and maximization initiatives inherent in Maxifier.

“Maxifier has met and exceeded all of our expectations of their technology and has been enormously helpful in developing bespoke functionality to ensure that we have an edge in the market. Maxifier is central to all our campaigns, ensuring advertising on guardian.co.uk delivers superb performance. Our partnership has been an important part in driving our success in over the last year, where our revenues are up over 50% year on year”

*Tim Gentry, Head of Optimisation and Effectiveness,
Guardian News & Media*

About the Guardian



The Guardian is a unique voice with an international reach. The newspaper is one of the UK’s leading daily titles, and the Guardian.co.uk website - voted the best newspaper site in the world - now delivers the Guardian’s liberal journalism to a global audience.

The paper’s fierce independence stems from its ownership by the Scott Trust, which reinvests profits into the Guardian and exists to protect its editorial freedom. Guardian writers are free to present the truth as they see it, without interference by shareholders, a proprietor or a political party. The result is a reputation for serious, trusted, independent journalism.

The Guardian grew from regional roots in Manchester to become a leading national newspaper. Following the international success of its website, the Guardian now aims to become the world’s leading liberal voice.

About Maxifier

Media companies and top tier publishers rely on Maxifier's adMax, the world's first ad optimization engine, to optimize the performance of their premium campaigns. Ad operations and sales professionals leverage adMax's campaign yield management tools and real-time engine to measure and optimize campaign performance, forecast and manage global inventories, and increase sales and renewals. Maxifier's customers report impressive results, including increased CPM, CPC, CPA, eCPM, CTR and revenue. With offices on three continents, Maxifier is growing rapidly and proudly serves an ever-increasing portfolio of top tier media interests. For more information, visit www.maxifier.com.

Summary

With billions of impressions to manage and billions dollars in play, publishers need solid, proven tools to manage their operations and improve their financial results. As the world's first Ad Optimization Engine platform for large media companies, adMax is certainly worthy of consideration because it is:

Easy to deploy

Intuitive to manage

Elegant in its presentation of mountains of data

Remarkably intelligent with automatic recommendations

Incredibly accurate with forecasts

Entirely flexible and empowering

Useful for different constituencies, including ad operations, sales and executive management

Proven to generate meaningful results with large publishers

If it's time to step up
your online ad game, we
welcome the opportunity
to discuss adMax.

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Selected Customers

