OptiMine

BID OPTIMIZATION SOFTWARE

MORE MATH.
BETTER MATH.
BEST ROI.

OPEN THE BLACK BOX

TRANSPARENCY AND CONTROL ARE THE KEYS TO MAXIMIZING SUCCESS IN BID AUTOMATION

WHITE PAPER: TRANSPARENCY AND CONTROL

BACKGROUND

For online advertisers running large, complex paid-search campaigns, automation is virtually essential for optimizing keyword bids on campaigns and ad groups that might involve hundreds of thousands or even millions of keywords. Optimizing such campaigns manually simply outstrips the ability and capacity of human analysis. Bid automation software typically employs highly complex mathematical algorithms that can analyze millions of transactions per second, producing scenarios for the best cost per click (CPC), return on ad spend (ROAS), revenue goal, profit margin, or other campaign goal or business objective. The best automation systems help advertisers optimize the 10 percent to 15 percent of head terms that drive most of their sales or revenues while improving performance from mid-tail and extreme-tail terms.

But most automation systems for paid-search advertising have limitations. For one, most are basically "set-and-forget" black-box systems. They don't provide business analysts or marketers insights into why the software bids the way it does. They do provide some control over campaign or ad group setup variables, but once these parameters are set, the process by which the software arrives at the bids remains a mystery to the advertiser. If these systems cluster keywords and bid on clusters as whole, any distinctions in performance among keywords within the cluster will be invisible. This means advertisers will inevitably spend too much on some keywords and not enough on others – particularly extreme-tail terms, which often have the greatest potential for performance gains if the optimal bid can be determined.

This lack of transparency leads to the second significant limitation of most bid optimization

CLUSTERING MEANS
ADVERTISERS WILL INEVITABLY
SPEND TOO MUCH
ON SOME KEYWORDS
AND NOT ENOUGH
ON OTHERS

systems: There's no functionality to enable human analysts to alter or override what the software does. Software automation isn't a replacement for humans applying their experience and domain knowledge to a paid-search campaign at a particular time. Often, analysts are aware of an upcoming event or market shift that will change the performance of a keyword or keyword cluster in ways that no algorithm can predict or react to quickly enough. At other times, businesses need to push inventory or manage fluctuations in stock levels through short-term offers. This requires transparency with regard to how bids are determined and the ability to override what the software is doing, based on both industry-specific experience and short-term business needs. As an analogy, consider the various computers in your car and how they monitor and regulate dozens of metrics related to fuel consumption, braking systems, etc. They are technological marvels, but someone still has to drive. The same is true in bid automation software.

The sections below detail:
- The need for transparency and control in bid automation systems;
- How transparency and control can only come through automation, but why automation alone isn't enough to guarantee them; and
- How to find a solution that strikes the right balance among all three elements

SEEING THE
CONTEXT

As noted, bid automation is essential for companies with complex paid-search programs, but with black-box bid automation systems (that is, most of automation systems), it's hard to determine the "why" behind their paid-search performance. The performance might be acceptable, but there's no way of knowing if it could be better.

The problem is especially acute with cluster- and rules-based automation systems, where individual keyword performance is lost because groups of keywords are treated the same. Does your system allow you to filter and sort individual keywords based on highest or lowest cost, sales, revenue, profitability

> THE PERFORMANCE MIGHT BE ACCEPTABLE, BUT THERE'S NO WAY OF KNOWING IF IT COULD BE BETTER

(and any other metrics you can think of), and drill down into the factors – such as day-of-week effect, or days until the next holiday – to determine the variables that are driving those individual keyword results? Some systems do provide bid values and results for individual keywords but limit access to the variables that were used to drive those results.

This absence of context might be acceptable to some advertisers, because set-and-forget automation is superior to manual bid optimization, but it will be inadequate for advertisers looking for the significant performance improvements attainable with systems that provide detailed and filterable data on individual keywords.

How do these systems achieve such results? Consider the case of two keywords: "silver amethyst rings" and "sterling silver amethyst rings." Most automation systems would cluster such similar-sounding keywords and calculate an average bid amount based on the value per click for the cluster as a whole. Other systems apply the same rule to each, potentially masking unique performance attributes. A system that provides transparency into individual keyword performance might reveal these strategies to be sub-optimal and identify very different driving forces that make these keywords convert. One might be more influenced by a particular day-of-week effect, while the other is weighted more heavily on a one-week average cost per click. The reasons for these differences might be obscure or even unknowable, but the differences are nevertheless very real.

Software automation systems that employ advanced multivariate regression analysis modeling at the individual keyword level will pick up such differences and bid each keyword appropriately, based on a historical analysis of the factors that drive individual keyword performance. This feature is especially important in managing mid-tail and extreme-tail keywords, which often account for as much as 90 percent of a campaign or ad group keyword portfolio, to maximize whatever revenue is available in the tail – revenue that is typically lost with clustering or general rules.

Individual-keyword modeling can produce better performance than clustering, and in most cases, advertisers will be satisfied to let such systems work automatically. But at other times, they will want to take advantage of the keyword-level transparency built into such systems in order to take more direct control based on factors that the software can't predict. This is why transparency and control are two sides of the same coin, so to speak. Transparency is the ability to see and understand what the software is doing. Control is the ability to apply domain expertise in response to dynamically changing business and market conditions that the software can neither predict nor respond to quickly enough. The best software automation systems not only provide transparency but also anticipate what kind of control analysts will need, giving them maximum flexibility to respond to changing conditions as frequently as necessary.

A classic situation is inventory reduction. For example, a retailer has an excess supply of widescreen TVs and plans a big sale for the coming week. The promotion will of course affect clicks, conversion rates, sales, revenue, profitability and other metrics. The software will factor in these changes eventually, but it is likely to react over a number of days rather than immediately at the start of the sale – especially if it weights bid levels based on a seven-day moving average – missing revenue during much of the sale period and wasting money on excessive bids after the promotion is finished. The advertiser knows from experience that during sales of this magnitude, value per click changes by a certain percentage, so bids should be raised by the same percentage during the sale to capture more traffic without sacrificing efficiency or other campaign constraints. The advertiser also knows that after the sale, the software will adjust bids based on data inflated by the sale effect, and so requires the ability to push the bid levels generated by the software down a fraction in order to stay on target.

The ability to take control and "drive" the software is essential for many online retailers to account for short term discontinuities such as special offers and fluctuations in stock levels.

TRANSPARENCY IS THE ABILITY TO UNDERSTAND WHAT THE SOFTWARE IS DOING

CONTROL IS THE ABILITY TO APPLY EXPERTISE TO REACT TO CHANGING CONDITIONS

BOTTOM
LINE

Automation is crucial for large paid-search advertisers, but the type of automation matters greatly in terms of maximizing performance. Automated systems that do not (or cannot) treat each keyword uniquely and essentially as its own unique market will inevitably bid some keywords too high and others too low. This is inherently true for automated systems that use clustering, rules or simple modeling. The amount of money left on the table without the use of keyword-level modeling can be 25 percent or more of the true potential of a large paid-search program. For large advertisers, that can mean millions of dollars annually in lost revenue or excessive paid-search costs.

The best automated systems provide both transparency into how individual keyword bid levels are set and the ability to override these bids through the user interface when human analysts with industry-specific domain knowledge know of opportunities that no set of software algorithms can possibly predict. It is only through automation, transparency and control that keywords can be treated as the individual markets they are, allowing the performance of each to contribute optimally to the success of the whole.

LACK OF
TRANSPARENCY
AND
CONTROL
CAN MEAN
MILLIONS
OF DOLLARS
IN LOST
REVENUE
OR
EXCESSIVE
COSTS

ABOUT THE AUTHOR

Jerod Obbarius is an SEM Analyst for OptiMine Software. OptiMine's sophisticated bid optimization software forecasts the performance of each paid-search ad placement each day and automatically sets optimal bids. OptiMine analyzes the performance data of each keyword, individually, and selects the appropriate models and variables for each to predict individual performance to achieve the global goal.