10 QUESTIONS ABOUT PROGRAMMATIC BUYING

...and the answers marketers need

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Programmatic buying—at its peak—will enable the purchasing of advertising across all addressable media.

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INTRODUCTION TO PROGRAMMATIC BUYING

Programmatic buying is the most exciting development to sweep across the digital landscape today. IDC has projected that programmatic buying will grow at 53% per year in the United States between 2011 and 2016.1 Forrester believes that programmatic buying will ultimately capture the bulk of all digital advertising spending.2 Every marketing executive today needs a good understanding of programmatic buying to run successful digital marketing programs and advance their careers.

Rocket Fuel was founded on the belief that artificial intelligence and big data could radically change the course of digital advertising. Since 2008, our team has delivered programmatic-buying solutions for thousands of marketers across the world. In this whitepaper, we provide answers to the ten most frequently asked customer questions about programmatic buying to give marketing executives a good grounding in this brave new world.

As you begin your journey with programmatic buying, if you need additional information or are interested in sharing your experiences, please send your comments to us at pb@rocketfuel.com. We welcome your feedback!


“Every marketing executive today needs a good understanding of programmatic buying to run successful digital marketing programs.”
WHAT IS PROGRAMMATIC BUYING?

WE DEFINE PROGRAMMATIC BUYING AS THE ACT OF:

- Bidding on an advertising inventory source
- in real time
- for the opportunity to:
  - show one specific ad
  - to one consumer
  - in one specific context

Let’s look at these three elements one by one.

1A. BIDDING ON AN ADVERTISING INVENTORY SOURCE

With the advent of ad marketplaces, advertisers can leverage programmatic buying to bid on and procure digital media without having to pre-negotiate a price; sign up for a minimum number of impressions or a minimum budget; or generate an insertion order. Advertisers can buy digital media across publishers, (e.g. a 300x250 IAB standard ad unit on Yahoo! or a 15-second pre-roll video on YouTube), on demand and to the extent that they require to satisfy a specific campaign objective.

When a consumer loads a web page with an available space for an ad impression, the publisher of the page puts up the ad impression for auction in an ad marketplace. The ad marketplace then runs an auction among advertisers interested in the opportunity to serve an ad to that consumer. Dozens of advertisers may simultaneously compete in such an auction. Ultimately, only one of them wins the auction and earns the right to serve an ad to the consumer.

1B. BIDDING IN REAL TIME (RTB)

Imagine you had the opportunity to buy a television spot on any network, wherever you needed one, without going through the upfronts! With programmatic buying, advertisers no longer need to buy digital media from an inventory source (e.g. a web publisher) in advance. Instead, they bid for it on demand in an ad marketplace.

Advertisers now have access to several tens of billions of daily opportunities to bid and buy digital media on ad marketplaces. The marketplaces make these opportunities available via auctions and an entire ad auction takes place in a couple of hundred milliseconds or so.

Advertisers participate in “Real-Time Bidding” (RTB) within ad marketplaces and respond with their auction bids within the blink of an eye. The short duration of these auctions is essential for speedy web-page downloads and an improved end-user experience.

1C. ONE AD TO ONE CONSUMER IN ONE CONTEXT

The most revolutionary aspect of programmatic buying is that advertisers buy impressions individually, not grouped by the thousands or millions. Each ad marketplace auction allows an advertiser to serve one specific ad to one single consumer in one single context.¹

Contrast this approach with traditional segment-based buying, where advertisers can only serve one generic ad to a large and potentially diverse segment of consumers who consume the ad across a huge variety of contexts. Programmatic buying helps advertisers execute campaigns with fine-grained control and realize true one-to-one marketing at scale.

¹ In this paper, we define “context” as all the changeable attributes that are neither dependent on the consumer nor on the advertiser/campaign. Examples of “context” are: content that appears next to the ad, the device on which the ad is delivered, the time of day, the day of the week, the weather, the state of the stock market, or even significant news that has just happened.
Programmatic buying empowers marketers to move from broad, segment-based buys to very fine-grained individual buys. Just as Don Peppers and Martha Rogers professed in their 1996 book, *The One to One Future*, marketers can precisely determine which consumer gets to see which ad and when.

**Pay only for the consumers that you want, in contexts that generate impact**

Marketers can now pay only for the consumers that they want to reach, in contexts that generate impact. They can avoid payment for the wrong kind of consumer that happens to be visiting a certain content property, or even the right kind of consumer who may be visiting in the wrong context.

**Enrich the consumer experience with more first-party data**

Programmatic buying can utilize many more data points about each consumer. Clickstream data, demographic data, behavioral data, and many other first-party and third-party data points serve to draw a fuller picture of the consumer who will view the ad. This means that the systems can decide with great precision if this consumer in this context fits the most likely prospect from the most desired audience.

Traditional segment-based buying may define segments with just five to ten attributes like age, gender, income, geography, education, mindset, and interests. In dramatic contrast, the best programmatic-buying systems can evaluate millions of data features all in real time.

**On many more properties than just a handful of sites**

Programmatic buying can reach the “ideal customer” on many more properties than just a handful of sites. Due to its real-time connection with many large inventory sources, programmatic buying can consider vastly more websites and digital properties than any manual media planner could. Many of these have
hyper-specialized content that drives a high propensity to convert for very specific groups. Only programmatic buying can uncover these millions of opportunities and match them with the ideal customer profiles for a given B2C or B2B marketer.

SCALING CAMPAIGNS UP TO VERY LARGE VOLUME

One of the most surprising results of programmatic buying is that it can aggregate high-performing audiences at mass scale. With automatic progressive optimization (see pg 11), programmatic buying can leverage not one, two, or three attributes of consumers to deliver campaigns, but instead can employ literally millions of data points to understand all the subtle variations of highly responsive consumer segments.

The outcome of these new kinds of approaches is the ability to scale campaigns up to very large volume. This is possible because marketers are no longer limited to the small number of people they can find with the one or two audience attributes that a marketer can learn through manual research. Automated modeling and buying systems also do not get tired and do not forget, so they can add together massive amounts of data to aggregate high-performing audiences at mass scale.

SHOWING MAXIMUM CAMPAIGN EFFECT, WITH THE BEST RETURN

Programmatic buying is also effective simply because it makes every individual impression, brand-attribute lift shift, click, and conversion measurable in real time. This makes it easy to set a clear and measurable campaign goal, and to optimize the campaign toward that goal as it is running. Whether the goal is brand lift, click-throughs, or conversions, programmatic buying can help marketers reach—and verify—the maximum possible effect at the lowest possible cost.
WHEN CAN I USE PROGRAMMATIC BUYING?

Programmatic buying is an ideal technique to move marketing from a fragmented campaign-by-campaign paradigm to an always-on paradigm covering the entire customer lifecycle.

Marketers use programmatic buying all across the funnel, from branding to conversions and from new customer acquisition to loyalty marketing.

BRANDING—FROM AWARENESS THROUGH FAVORABILITY, CONSIDERATION, AND PURCHASE INTENT

Marketers generally know about the effectiveness of programmatic buying for performance campaigns. But many large and experienced brand marketers, like Buick and Pinnacle Foods, have found that programmatic buying is equally effective and efficient for branding campaigns.

Programmatic branding campaigns can generate optimal audience composition and let brand marketers verify the composition of the reached audience in real time. Measuring against a control group not exposed to the campaign, they can also show scientifically and in real time what effect the brand marketing has on awareness, favorability, consideration, or purchase intent.

Real-time brand optimization results are robust enough to have the backing of traditional brand-research organizations like Nielsen or ComScore.

DIRECT RESPONSE FROM SOFT CONVERSIONS TO HARD CONVERSIONS

Campaigns with clear conversion goals (like number of acquisitions) are where programmatic buying made its first inroads. The simplest programmatic direct-response (DR) campaigns optimize toward a single goal, like number of signups or sales.

More advanced DR campaigns can take into account complex funnels that start with soft conversions like registering for an account; follow up with harder goals like an initial purchase, however small; and finally optimize toward repeat purchases or increased spending.

FOR LOYALTY MARKETING AFTER THE INITIAL CONVERSION

The more complex DR campaigns mentioned above show that marketers use programmatic buying for marketing to existing consumers as much as for marketing to new consumers. This loyalty marketing becomes especially effective when marketers can feed their programmatic campaign with some of their first-party data from CRM systems, marketing automation systems, and loyalty programs. Based on profile attributes per customer, programmatic campaigns can decide on the fly whether it makes the most sense to serve an ad designed to up-sell or cross-sell, focus on retention, or incite brand advocacy.

FROM INDIVIDUAL CAMPAIGNS TO ALWAYS-ON MARKETING

With these multi-goal optimization capabilities, programmatic buying is an ideal technique to move marketing from a fragmented campaign-by-campaign paradigm to an always-on paradigm, covering the entire customer lifecycle. It can transform individual campaigns for each stage of the funnel to an integrated, always-on solution that optimizes marketing across every stage of the funnel.

Programmatic buying can make it much easier, for example, to link the historic effectiveness of branding and engagement campaigns to the effectiveness of conversion campaigns. Models and machines generate data-driven suggestions for the best overall marketing mix.
TRADITIONALLY, IT IS MOST USED IN DISPLAY

Programmatic buying has its roots in display (or banner) advertising, and this is still where programmatic buying is most advanced today. Virtually all supply sources have inventory available for programmatic buying, are thus integrated into ad marketplaces, and are now working toward more advanced models such as private exchanges. But other channels are moving toward programmatic buying too.

ALREADY ENABLED ON VIDEO INVENTORY

Video inventory has made great strides toward programmatic buying since 2010-2011, when market leader YouTube enabled the bulk of its video inventory for programmatic buying. Marketers now routinely use programmatic buying for both pre-roll video and in-banner video, which is one factor contributing to the growth of programmatic-branding campaigns.

BECOMING WIDELY AVAILABLE ON MOBILE

Mobile inventory is available for programmatic buying through mobile-specific exchanges, generic exchanges, sell-side platforms, and networks and publishers offering programmatic-buying options. The absence of cookies on most mobile devices can pose some challenges to match anonymous profiles across devices, but programmatic buying has improved at inferring or approximating consumer profiles from a number of other attributes, such as smartphone browser settings.

SCALING IN SOCIAL WITH THE LAUNCH OF FBX

Ample social inventory from smaller social networks has been available for programmatic buying for some time. In the fourth quarter of 2012, Facebook gave an additional boost to programmatic buying in social when it launched its own FBX exchange.

PROGRAMMATIC OPTIMIZATION ACROSS CHANNELS

Being able to apply programmatic buying to different channels is one thing; optimizing one campaign across multiple channels is another. The best programmatic-buying solutions integrate silo campaigns into a single cross-campaign solution that optimizes, for example, from mobile to video if the campaign goal is engagement, or from Facebook to display if display ads drive conversions more efficiently.
The smartest programmatic buyers may see ROI improvements in the range of five to six times over traditional buying, because they pay only for the exact consumers that they want to reach, in contexts that work.

Third-party and first-party data are incremental ingredients for maximizing the value of programmatic buying, because they provide a vastly different and far more precise means of determining the value of each impression than does a manual placement on the front page of a popular property.

Different kinds of data work together to build a rich picture of the ideal customer. At a minimum, the campaign must have access to demographic and psychographic consumer data, combined with behavioral data such as the clickstream, as well as contextual data such as the content category, the weather, the time of day, or the stock market. This data is available from a variety of sources.

The most common first-party data is data about who visited the brand’s website, so the advertiser can keep trying to reach these consumers elsewhere with “retargeting.”

Much more importantly, marketers have already invested significant effort in gathering consumer data. The CRM system, the email database, the marketing automation system, and the website all contain valuable information about which consumer interacts with the company in which way and for what purpose.

Programmatic-buying companies can add this third-party data to their campaigns at a certain cost per 1,000 impressions.
Driving success in programmatic buying means taking advantage of the ability to optimize a campaign to learn and improve on results in real time. We can classify different forms of optimization along a spectrum ranging from the most sophisticated and effective of methods—automated, progressive optimization—to manual, cross-tactic optimization.

The system quickly learns which of these data points are best at predicting consumers’ propensity to complete the desired campaign objective. As it does, it shifts budget toward impressions with these characteristics, and thus improves campaign performance.

**AUTOMATED, PROGRESSIVE OPTIMIZATION**
Automated, progressively optimized programmatic-buying campaigns start with a broad campaign objective, such as conversions. The campaign manager simply enters this overall goal and how it is measured. She then starts a fully automated system that runs massive tests leveraging not one, two, or three consumer attributes to deliver campaigns, but instead can employ millions of data features to understand all of the subtle variations of highly responsive consumer segments.

The system quickly learns which of these data points are best at predicting consumers’ propensity to complete the desired campaign objective. As it does, it shifts budget toward impressions with these characteristics, and thus improves campaign performance.

Some marketers may be new to this approach and might need time to "trust the black box" to perform. Yet this automated, progressive optimization drives maximum impact and, through efficient use of the budget, generates more value. It can be argued that it is the only optimization method that takes advantage of programmatic buying to its fullest potential.

Every bid opportunity generates the optimal combination of consumer, context, and creative (ad message) to maximize the full potential of programmatic buying.

Machines can test thousands of variables in a fraction of the time required by humans to conduct the same tests.

Automated progressive optimization may avoid human biases that lead to irrational decisions.

**MANUAL, CROSS-TACTIC OPTIMIZATION**
Compared to automated, progressive optimization, a manual programmatic-buying campaign typically starts with the manual selection of segments (e.g., from third-party data providers) based on a campaign objective. The campaign
manager then distributes the overall campaign budget across these segments, and usually again between different tactics (for example, different channels) to reach each segment.

Once the campaign runs, the campaign manager compares the results of tactics against each other, for example on a weekly basis. She then shifts budget from the least-responsive to the most-responsive tactics. Manual, cross-tactic optimization is thus very much akin to traditional segment-targeting workflows.

Unfortunately, these tried and tested techniques rely too much on humans to take full advantage of the computing power underlying programmatic buying.

With millions of data points available about impressions and billions of impression opportunities per day, it is impossible for humans to make informed decisions without the help of computers.

The monolithic segment(s) as prescribed by the client may either be too generic to show much campaign lift, or too specific and small to reach the campaign objectives.

Without computer assistance, it is impossible to make the fine-grained decisions that exploit the full potential of programmatic buying: delivering the right ad to the right consumer in the right context at every single impression opportunity.

Human decision-making can lead to overly narrow requirements, for example that a campaign be run only from 6 to 9 p.m. However, there may be other people for whom the ad is perfect in the afternoon. These subtleties are too complex for manual optimization to take into account.
Programmatic buying generates volumes of “big data” each day from each bid opportunity, each impression bought, and each consumer action tracked. Marketers need not fear the data deluge, however; they may gain many compelling insights from intelligent dashboards designed to enhance their comprehension of the ideal customer.

CAMPAIGN INSIGHTS
The first insights that programmatic buying generates at large scale are campaign insights, for example:

- Comparative performance of the different tactics, line items, and flights that constitute the campaign
- What times of the day and/or days of the week the campaign performs better or worse
- Channel insights: Comparing performance between display, mobile, video, and Facebook
- Trends of key metrics associated with the campaign, such as spend pacing, clicks, conversions, cost per click or per acquisition, etc.

CONSUMER INSIGHTS
Programmatic buying also generates many univariate and multivariate insights on demographics including geographic region, lifestyles, and interests of the consumers exposed to a campaign.

Marketers learn in real time what characteristics make a consumer more likely to perform a given campaign objective, what kind of person they should consider their top customer, and which attributes matter most in defining their best segments.

CREATIVE INSIGHTS
Finally, programmatic campaigns with a variety of creative messages can provide many insights into what message works best, in what ad format the message is best delivered, where it is best placed on a webpage, and/or in what channel. When using multiple variations of the creative, programmatic buying can even:

- Automatically test multiple creatives to find the best for the campaign
- Go one step further and find the best creative for each sub-segment of a desired audience.
Programmatic buying and the superset of “online behavioral advertising” rely on large quantities of anonymous consumer data. Both consumers and advertisers may raise concerns about the proper use of this data and the protection of privacy. The Digital Advertising Alliance has developed important OBA guidelines that every responsible programmatic-buying company adheres to.

**FIRST-PARTY RESPONSIBILITIES**

The DAA defines “first parties” as organizations that “operate websites and/or exercise control over other affiliated sites.” Together with their programmatic-buying partners, first parties are responsible to provide notice that makes consumers aware that OBA is occurring on the website and provide consumers with a means to exercise choice regarding the collection and use of their data for OBA purposes. In addition, first parties should obtain consumer consent before materially changing their OBA data collection and use policies.

**CONSUMERS HAVE CHOICES AND CONTROL**

Under these OBA policies of the DAA, all compliant programmatic-buying companies let consumers:

- Find out about programmatic-buying companies and learn more about their advertising and privacy practices.
- Check whether they have already opted out from participating companies.
- Opt out of browser-enabled, interest-based advertising by some or all participating companies, using opt-out cookies to store preferences in their browser.

First parties should obtain consumer consent before materially changing their OBA data, collection, and use policies.”
DO I ENSURE THAT MY ADS ARE SERVED IN BRAND-SAFE CONTEXTS?

A wide range of inventory is available for programmatic buying. Some marketers may find some of these sites objectionable, but programmatic-buying companies have put in place many safeguards to ensure that ads are placed only in brand-safe environments.

REAL-TIME BLOCKERS
Real-time blockers are software filters that ensure in real time that every ad impression is a quality impression, every impression is compliant, and every ad was served and displayed exactly as intended, providing:

- Correct geo-targeting
- Competitive separation
- Correct ad placement
- Fraud detection
- OBA compliance

AVOIDING INAPPROPRIATE CONTENT
Blockers use crawlers and human panels to pre-classify and evaluate millions of content properties, so programmatic-buying entities have real-time recommendations on which content properties to avoid. In the rare case that a bid does go through, the blocker can still intercept the placement of the ad and redirect the ad request back to the publisher for an alternative placement.

PRE-SCREENED INVENTORY
Every programmatic-buying company maintains a blacklist of inappropriate content properties, to which the client can add additional inappropriate content properties, such as sites controlled by direct competitors. None of the properties on the blacklist will ever be considered for any bids.
Sometimes, programmatic-buying companies also maintain white lists of hundreds of content properties that are generally deemed good-quality content, perhaps separated by vertical. Clients can choose to bid only for these properties and to exclude all other properties by default, although the limited supply of properties may impact buying efficiency.

In addition, publishers have started to generate pools of brand-safe inventory in sell-side platforms and private exchanges. Typically positioned as a premium product, this inventory may be more expensive than the average programmatic-buying inventory. But it can give extra assurance to marketers that their ads will only appear in brand-safe environments.
We hope this white paper has given you a solid introduction to programmatic buying and why it matters for marketers. Maybe it has even persuaded you to try out a programmatic-buying campaign for your own brand. To do so, consider the following:

**A PROGRAMMATIC BUYING PLATFORM**
A programmatic-buying platform offers advertisers the technology and service to run programmatic buying initiatives across a variety of inventory sources.

- It is connected to a large number of public and private exchanges so it can guarantee access to enormous amounts of available inventory.
- It has established integrations with many aggregators of third-party data, so any data source can easily be added to an advertising campaign.
- It can onboard first-party data or interact with a first-party data platform so that advertisers can take advantage of all of the data internally collected over the years.
- It features a bidder that can decide in real time which advertising opportunity—out of hundreds of thousands per second—maximizes the success of a campaign, and at the optimal cost per impression.
- It contains optimization tools, whether manual/cross-tactic or automated/progressive, so campaigns can adapt to changes in consumer behavior, inventory availability, and competitive activity.
- It offers full-service teams that can run campaigns on behalf of marketers, and/or a self-service interface by which marketers can run campaigns themselves.

**A SKILLED PROVIDER, EITHER INTERNAL OR EXTERNAL**
As this paper has made clear, programmatic buying is a new, advanced skillset that is very different from traditional marketing skills.

In order to take full advantage of the power of programmatic buying, it is crucial to acquire these skills somewhere, whether internally, from an agency, a consultant, a marketing-services provider, or directly from a programmatic-buying vendor.

**A CHANGE AGENT**
A “change” mindset requires a change agent. Precisely because programmatic buying is a dramatic change from segment-based buying, whether in digital or traditional media, many marketing organizations discover significant internal resistance to embracing programmatic buying. In practice, this means that they need a change agent in the organization to teach marketers why programmatic buying matters.

The change agent could be a Director of Online Marketing, a Director of eCRM, a VP of Analytics, or any other function. Regardless of his or her own functional responsibility, this person needs to generate the buy-in that motivates the company to build or buy the new skill sets and run successful pilot programs to inspire organizational confidence.

Like any paradigm shift, programmatic buying makes the best inroads in a marketing organization when the cost of change for marketers and their agencies is perceived to be lower than the cost of not changing. That time is now.

**Rocket Fuel is the largest and fastest-growing programmatic media-buying company in the world. Thousands of great and growing brands have used Rocket Fuel’s programmatic-buying solution for some or all of their digital display, video, mobile, and Facebook advertising.**

For more information on how Rocket Fuel optimizes programmatic buying with artificial intelligence and big data, please call us at 888-717-8873 or email sales@rocketfuel.com.