

Real-Time

Advertising at the Speed of Thought

Abstract

Consumers are getting used to immediate gratification when it comes to “needing it now”. Same day delivery from some of the online commerce gurus and even drone delivery for everything from pizza to packages is attempting to catch on.

So, advertisers are trying to keep up and technology is up there with them using programmatic tools for serving advertising, marketing and TV inserts on the fly.

Given the advent of DVR boxes in almost every household, never before have we been able to drill down to the individual household, unlike the 1500 black boxes of Nielson ratings past that were used to represent TV viewership for the entire population. Also, an element of the DVR is that it has created non-linear viewing, giving consumers more freedom over when they watch TV and even skip ads; a dilemma advertisers have been struggling with for some time.

Real-time advertising is starting to change the landscape of offering those experiences for the consumer and improve the targets for advertisers.

In addition, with iPhones, Androids, iPads, Tablets and the convergence of all those with traditional media, the need for serving converged content has never been greater. It is no longer singular content for each device, the content is being created once in some cases and transformed for the others. But with all the mobile technology innovations, the real mobility is with the consumer.

You can understand an advertiser’s challenge in determining how and where to place their investments.

With advancements in big data, analytics and technology, there is a growing practice, allowing for the placement of ads on a real-time basis, quickly determining trends in consumer behaviors, ethnicity, events, weather, consumer locations, flash mobs, breaking news and other socially occurring events.

There are even technology solutions allowing for the modification of a TV ad on-the-fly to change a voice over based on the demographic makeup of a neighborhood where the spot may be airing. This has also caused a change in production design with the need to allow for all the variances that are possible

Behind it all is the ability to slice and dice the data, with advanced algorithms.

We’ll take a look at the elements involved in Real-Time, how it works, the tools and the data scientists it takes to make it all happen.

About the Author

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Russ Stanton is a media veteran with more than 30 years in advertising, television, radio, and publishing. He is currently a senior media consultant in these verticals within the Global Consulting Practice (GCP) of Tata Consultancy Services (TCS). Russ began his career on-camera. His work has spanned the areas of camerawork, production, and direction. For his production work, he has received 13 Addy awards, four Tellys, and a Gabriel award. He spent almost a decade at the ad agency BBDO developing state-of-the-art digital asset management (DAM) systems and integrating/optimizing workflows across 9 agencies in North America. He also directed operations within JWTwo, the internal post-production facility at J. Walter Thompson NY. For TCS he led an effort in advanced analytics for Aegis Media building practical spend scenario applications. He has also worked in strategic IT operations for companies such as Simon & Schuster and Golden Books. Russ brings all this experience to consult with TCS clients.

Contents

Abstract.....	2
About the Author	3
RTB – Real-Time Bidding	5
RTA – Real-Time Advertising	6
RTM – Real-Time Marketing	7
From Mad Men to Math Men.....	8
Addressable TV	9
Conclusion.....	11

RTB – Real-Time Bidding

Real-time bidding refers to the buying and selling of online ad impressions through real-time auctions. These occur in the time it takes a webpage to load. Those auctions are often facilitated by ad exchanges or supply-side platforms and are typically selected by the media agency in conjunction with a creative agency producing the ads. These ads are created based on a campaign design and multiple selections approved by the client ahead of time.

As an impression or ad placeholder is loaded to a webpage, information about the webpage and the user is loaded to an ad exchange. They then auction this off to the advertiser willing to pay the highest price. The winning advertiser then loads its ad to the webpage instantly. Advertisers will use demand platforms to make their decisions based on several factors.

These factors typically consist of things such as the website where the ad will appear and user behavior. For instance, if a user is on Google and is searching for electronics, Best Buy might be interested in bidding high. Also, Best Buy may recognize that the consumer is part of its user base and recommend purchases based on their previous buy. The ad prices are based on the weight of the site, and what the advertiser might be willing to pay.

In the past web ads were placed on subject matter websites, such as Financial, Sports, News, etc., and were targeted to a general market most likely to be viewing that site. There was no instant transaction and certainly no individual targeting.

In the Real-Time way, the ads can be more targeted and take advantage of specific patterns in an individual's behavior. It can also take advantage of advanced analytics covered in a further section of this paper

This is very similar to the Amazon engine that recognizes a buyer's purchases and upsells based on that database internal to Amazon. RTB takes advantage of a more global internet database and online ad pricing for multiple advertisers.

The use of programmatic tools is becoming more the norm, allowing advertisers to automate much of this process. It merely comes down to configuring these tools and in most cases is tied to an asset database, which holds the ads themselves and can bid and serve all in one place. This calls for a concentrated effort in digital asset management (DAM), solid metadata modeling and administration standards with the tool.

According to eMarketer, automated ads accounted for 50% of the US in the digital display market in 2014, accounting for \$10-billion. It is expected to double by 2016.¹

¹ <http://www.emarketer.com/Article/US-Programmatic-Ad-Spend-Tops-10-Billion-This-Year-Double-by-2016/1011312>

RTA – Real-Time Advertising

Real-Time Advertising has generated a lot of hype lately as advertisers are trying to get traction for their products by inserting ads into TV programming on the fly. Obviously, this requires some real-time insight into what the viewers are watching, and even getting into where the viewers are geographically, their demographic data, trends in the news, entertainment and a whole myriad of other types of data. We'll get into this a little more in the section on Addressable TV.

In the print world, the lead time can be a little lengthier as publishers for Out-of-Home (OOH) and printed ads require more planning, but there are strides to get ahead of the curve. The publishers are trying to get that edge by deploying ad infrastructures that allow for ads to be dynamically published to kiosks and electronic billboards. This includes Jumbotrons at sporting events. If you have ever attended these events, you've probably seen fan video, with an advertisers logo superimposed over the video. There are also real-time ads inserted that may call attention to the score of the game or a player's stats at that particular part of the game.

Internet technologies probably have the longest history of being able to get real-time ads inserted on websites.

The beginning of this was with Amazon and Jeff Bezos' technology that studied a consumer's purchasing and offered additional items related to their first purchase in real-time, related to the term, "upsell". Amazon also tracked other customers' purchases and offered the phrase, "Other customers have also purchased these items." This revolutionized online purchasing and other websites quickly adopted the same idea.

Other internet ideas that came about years ago were banner ads, video prerolls, side panel ads that followed the customers search results. Google, Yahoo and other search engines were now able to monetize their sites which for several years were merely a convenience for getting information. Google has since become the world's most successful advertising company.

But probably the strongest utilization of the internet has come about lately involving Social Media. Advertisers have started using Twitter, Facebook and others to dynamically promote products in quite a creative way, especially during events.

"Real-Time Advertising has Come of Age"², published in Forbes, touted the innovation of advertisers during a blackout at the Superbowl on February 2, 2013. In the third quarter, half of the lights in the Mercedes Benz Superdome went out, sending the teams, stadium personnel and CBS into a tizzy

² <http://www.forbes.com/sites/roberthof/2013/02/04/real-time-advertising-has-arrived-thanks-to-oreos-and-the-super-bowl/>

The primary recognition of RTA came to Oreo, who inserted a simple single frame on Twitter with an Oreo cookie on the side of the image and a caption that read, "You can still dunk in the dark". This creative gem received 15-thousand tweets, 10-thousand retweets in 1-hour, while people went to Twitter to tweet instead of watching the blackout banter of the CBS commentators. It also received 15-thousand Likes in the same period on Facebook.

The photo was created in real-time and posted within minutes after the blackout began, taking advantage of the unusual occurrence. Audi, Tide and VW quickly followed suit with similar ads



This seems to be the nature of advertising for the production of the future and agencies are finding it necessary to shorten their turnaround times for creation and approvals in order to meet that demand for real-time advertising.

RTM – Real-Time Marketing

RTM is similar to RTA, and is on-the-fly marketing to determine an appropriate approach to a particular customer at a particular time and place. It is a form of market research that seeks the most appropriate offer for a given customer sales opportunity

This is opposite of the traditional outbound marketing approach, which looks to acquire appropriate customers for a given 'pre-defined' offer. The dynamic 'just-in-time' decision making behind a real-time offer aims to exploit a given customer interaction defined by web-site clicks or verbal conversation. It is certainly more targeted than a mass snail-mail campaign where the typical return of 5% was acceptable.

RTM techniques have been around since the 1990s after the initial deployment of customer relationship management (CRM). Typically those techniques involved lengthy lead times of 10-14 weeks, but have evolved to the point where it is almost in real-time given the demand for instant gratification.

Today, social media plays into the mix quite heavily with Twitter and Facebook front and center. The best known of these are based around events like the Super Bowl, Oscars, Grammys, etc.

An example of this was the selfie Ellen DeGeneres took when she hosted the Oscars. It included Bradley Cooper, Jennifer Lawrence, Brad Pitt, Meryl Streep and Kevin Spacey plus several others. It turned out to be the most re-tweeted post on Twitter with more than 3.3 million retweets. The post also garnered 32.8 million impressions in its first 24-hours alone.

The center of the selfie was the Samsung Galaxy 3 which was prominently featured in the bit. Samsung claims that the incident was unplanned, but they were sponsors of the Oscars. Truth of the matter is that this one viral marketing play was probably more effective than the 5 minutes of



commercial time they purchased from ABC, and it cost virtually nothing.

The agency representing Samsung was Publicis Group and their CEO Maurice Levy stated that the tweet was worth about \$1-billion; possibly an exaggeration, but you get the idea.

Other television instant RTM is the immediate voting on *American Idol* and *The Voice*.

Typically two contestants toward the end of the show, square off with performances and the audience is told to call, tweet, text, etc., to vote for the one that should stay. This occurs toward the end of the show with about ten minutes remaining. What happens is that the results are gathered, tabulated and announced right at the end of the show. One of the contestants goes home, and one gets to stay.

Another trend in the marketing space is the growing landscape of mobility marketing, especially using video as the medium. In a BrightRoll survey, most agencies stated that they expect mobile video to be the fastest-growing category in terms of digital media spend this year, followed by desktop video.³

In addition there is convergence between RTM and RTB so that the delivery time is shortened considerably. This means the content has to be created quickly and in conjunction with whatever marketing plans are in place for a particular campaign. In this case, the approval workflow must improve and is usually the bottleneck in most marketing productions.

From Mad Men to Math Men

In the TV series *Mad Men*, advertising campaigns were created based largely on the creative treatment for a client's product. While today the emphasis still weighs heavily on compelling creative, where to place those ads has taken on a greater importance. In the TV series, there was some market research, however, it was highly manual, and based on a feeling or gut reaction. Also, there was more of a "shotgun" approach, sending the ads to the mass population and the ROI had limited returns and was difficult to track.

In all of the Real-Time elements outlined above, the norm is becoming more targeted right down to the individual consumer level, especially as mentioned in the RTB section. Also, given Point of Sale (POS) integrations with campaigns the tracking of the effectiveness of an ad campaign is greatly improved.

Also, Media companies are more and more engaging in highly advanced analytics to target more specific audiences based on behaviors, spending patterns, product interest, geography, ethnicity, demographic basics and many other criteria.

These advanced analytics can, in some cases, help drive the creative and versioning based on the criteria above. This can impact the production cycle and the analytics has to be in conjunction with creative treatments.

³ http://www.mediapost.com/publications/article/248885/programmatic-mobile-video-getting-its-legs.html?utm_source=newsletter&utm_medium=email&utm_content=headline&utm_campaign=82559

What this means is that media agencies are employing personnel that have very heavy math backgrounds with an understanding of the advertising space and a slant toward understanding personalities and trends in society.

These resources are typically called “scientists” and have their own departments that interact with account groups, planning and creative.

As an example, TCS engaged with Aegis Media to facilitate an application that would be able to determine how a budget should be allocated. This was called Spend Scenario Planning (SSP).

The Aegis advanced analytics group was made up of highly motivated mathematicians, all having PhDs in math, also with some experience in the advertising space. TCS also has an advanced analytics group and putting these two groups together, along with the business requirements, we were able to develop complex algorithms determining how effective a campaign might be over a period of time in the future. It primarily helped determine what the most effective split of the budget might be into channels, like TV, web, mobile, print, OOH, etc.

It took into account a myriad of criteria, such as GRP (Gross Rating Point), time of year, weather, events, holidays, target demographic and much more. This criteria was different for each client and campaign based on the desired outcome.

The algorithms even took into account what shifts in allocation might be necessary at some point during the campaign. This was a very futuristic kind of application, but is the wave of media planning that will be the norm to come.

To give you an idea of how this fits into the topic of Real-Time, the previous method of creating this kind of planning would typically take 2-3 weeks. With the SSP application, planning can happen in minutes and rerun to determine the validity of the plan at any point in time during the campaign.

Addressable TV

Addressable TV advertising technologies enable advertisers to selectively segment TV audiences and serve different ads or ad pods (groups of ads) within a common program or navigation screen. Through advanced analytics, you can target geographic, demographic, behavioral, ethnicity and (in some cases) self-selected individual household levels, through cable, satellite and IPTV delivery systems and set-top boxes.

Knowing what set top boxes are in which households allows an evaluation of what is being watched, how often and determine viewing trends in various households. This provides for the automation of specific ad placement targeting these various groups. This is known as programmatic TV

Programmatic TV advertising is still quite young due to limited buyer and seller adoption and lack of standardization of technology and infrastructure. Though it accounts for less than 3% of all TV ad spending, some predict it could be a multibillion-dollar industry within 12 to 24 months as both buyers and sellers use it to better understand their audiences. This is according to a new

eMarketer report, "Programmatic TV Advertising: Small Investment Today, Big Opportunity Tomorrow,"

Nielsen still plays a major role with their offering Ad Trends, plus other types of data depending on the advertiser or client. However, data scientists are developing advanced algorithms, as mentioned above that can effectively predict how a campaign will perform over time, allowing them to shift, adjust or change a campaign quickly.

Addressable TV plays into this mix in allowing advertisers to quickly react or proactively react to events, targeting specific audiences in the slices I mention above.

Advanced algorithms, play quite heavily into this and the more focused the target, the more effective this can be

There are programmatic tools available that can provide some automation in this space. One in particular is Visible World <http://www.visibleworld.com/>. Based on settop box information, this application can drill down to the zip code level and allow TV ads to be customized for a neighborhood, gender, age group and more.

Conclusion

Advertising has certainly changed over the last few years, at a rate that is rapidly becoming more of the norm.

According to the LinkedIn influencer Tim Cadogan, "programmatic advertising" is expected to grow tens of billions of dollars by 2020. It is outpacing paid search which grew to a \$58-billion industry and may eclipse paid search in the future.⁴

However, there is much that needs to be addressed in all of this upheaval. This means process optimization, production augmentation, integration between production types (TV, Print, OOH, etc.) organizational change, metadata modeling across all asset types, common digital asset management and much more.

The 3 elements of Real-Time, RTB, RTA and RTM can be converged as to the way ads are served and managed.

However, it is evident that advertising is in line with the way consumers demand their entertainment, and Real-Time elements are making the outlook for the media business quite optimistic.

⁴ <http://www.inc.com/john-boitnott/what-you-should-know-about-programmatic-advertising.html>