

Advertise. Attribute. Act.



Merging the Best Offline and Online Techniques
A Bottom Up Approach to Offline Attribution

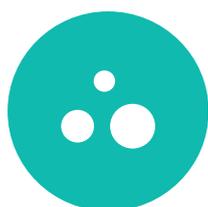
tvSquared[®]

White Paper Summary

With the rise in offline advertising driving through to online channels, it has never been more critical to effectively measure the impact of marketing channels and understand how to optimize them. This is most evident between TV and online, driven by the consumer trend to watch TV and use phones or tablets at the same time.

However, neither traditional brand measurement techniques commonly used in the offline world nor direct-attribution methodologies applied to online marketing channels can deliver the insight CMOs need – brand measurement is not fine grain enough and the user-level attribution data does not exist for the response to offline media.

This white paper outlines a methodology for using a bottom-up approach for attribution that solves this conundrum and allows optimization for response TV to both offline and online channels.



ATTRIBUTE • RESPONSE • ROI • OPTIMIZE • INSIGHT • CPA

Introduction

Leaders of e-commerce organizations face an interesting challenge as the marketing mix moves to include offline channels and TV, in particular. Their existing toolsets, deployed to great effect for targeting online media, lack the core referrer tagging on responses that underpin their operations.

Meanwhile, analysis of phone-call data – historically the mainstay of direct response TV measurement – becomes less relevant as responses move inexorably online.

Conversely, while traditional methods of econometric modeling can be extremely powerful in unpicking differing returns across the marketing mix, this approach has both shortcomings and limitations when used to replace online techniques of direct attribution

An Alternative Approach

The solution is to turn the approach upside down: to attribute as much as possible at the finest possible level of detail – which gives useful, tradable insight in the short term, and only then, to review the longer term brand impact across the mix once you have accounted for everything else.

This has been made possible by the ubiquity of the Internet and connected devices – laptops, mobiles or tablets – that has opened the door to a rich source of real-time data about consumer behavior.



Peeling the Onion

Rather than starting from the top and moving down, an alternative approach is to start by looking at what makes up the traffic to your website. There is no shortage of external impacts that drive traffic to your site, for example:

1. Bots and other non-human traffic
2. Direct, immediate response to marketing activity
3. Response to shorter term direct marketing efforts such as email campaigns
4. Highly active users that are not primarily driven by marketing as they are already loyal
5. Pay-per-click (PPC) search
6. Long-delay tokens
7. External events outside the paid-for marketing calendar (such as radio interviews, programs covering the topic/brand or other specific, time-bound events)
8. Seasonality

Once you have stripped away all of these effects (and you need quite a substantial data set to remove the effect of seasonality), you will be closer to seeing the changes in the longer-term trends in the true baseline traffic.

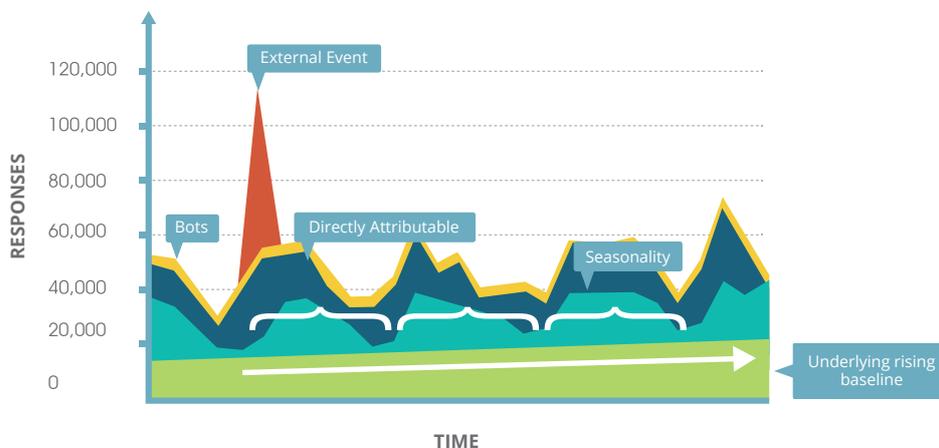


Figure 1: Peeling the onion of online response

Bots and Other Non-Human Traffic

Many sites use automated, external response-time monitoring to track performance and to alert administrators if the site fails to respond. These services usually perform a defined series of actions at regular intervals, usually from a consistent IP address. It is this coherent pattern that is the key to identifying these services so that they can be excluded.

Direct Attribution

If you can directly attribute activity to a particular source, get this done first. In many cases, particularly with very transient and time-bound activity such as broadcast advertising (radio or TV), the response to the activity is similarly transient and time bound. Isolate this first and attribute directly. More importantly, this activity gives results at a much finer grain, allowing for more directly tradable insight – down to differences between individual programs within a genre.

Email and Other Direct-Marketing Campaigns

Direct-mail campaigns can have a more persistent and long response profile compared with broadcast advertising. However, while the response may take longer to appear, it can often be isolated easily by tracking the referrer to the site. As it is also triggered by a specific outbound campaign, this traffic can – and should – be removed from the analysis both of short-term direct response and longer-term brand effects.

Highly Active Users

Within your customer base, there will be a number of loyal users whose use of your service is so part of their daily lives that they are no longer subject to marketing activity. While it is important to identify and understand who these users are and how they became customers, their use of the site should be removed since they are no longer truly responding to marketing activity.

PPC Search

PPC as a result of unbranded, generic search terms is a vital source of traffic for many sites but, in the absence of any other evidence, it is less likely to be a result of prior marketing activity. Where this traffic can be split out, it allows for subsequent analysis of brand activity to be tested with and without this component.

Long-Delay Tokens

While the analysis of coupons is becoming more complex as voucher codes “leak” onto the Internet, these transactions can be traced to sources and their effectiveness measured directly.

Other External Events

Significant news coverage on a closely related topic can have a dramatic short-term effect on visitor numbers, particularly if there are specific mentions of your brand. While it

may be almost impossible to react quickly enough to place new media activity to capitalize within the news cycle, heightened awareness could drive more response to a pre-existing campaign. Correcting for such external events allows the underlying effect of the campaign to be assessed more accurately.

Seasonality

Finally, it is essential to adjust for the effect of seasonality. In many cases, and for good reason, marketing spend can be concentrated at the point of greatest underlying demand. This adjustment requires significant professional judgment.

Extend Your Timescale as You Learn

There are different approaches that operate at different timescales. As you zoom in from true econometrics – at the scale of months or years – right down the real-time level of, for example, micro-level attribution to individual TV spots, finer-grain learning can appear that then inform higher-level analysis.

Progressively finer grain analysis			
Months/Years	Weeks/Days	Hours	Mins
Marketing Mix	Brand effect attribution	Deferred response attribution	Spot level Attribution
Policy and overall investment levels	Brand awareness impact on baseline and DR effectiveness Campaign planning	Impact of repeated exposure within a single programme	Picks out detail between genres, creatives etc.

Figure 2: Analysis at different timescales

Deferred response

At the level of a few hours, you can start to determine the effects of deferred response. There can be a variety of reasons why consumers respond quickly, but not immediately, to your marketing activity. In the case of radio advertising, peak listening times are when listeners are unlikely to be able to respond, like during morning or evening commutes. For TV, it may take a number of exposures over the course of an extended period of viewing before a consumer responds. In this case, the whole effect may be greater than the sum of its parts.

Brand Uplift

Even beyond the timescale of hours, advertisers often see a marked increase in traffic as a result of a campaign, with awareness turning to concrete action. This effect cannot normally be tied to specific spots or even stations but is dramatic in the extreme.

Figure 3 shows an example of the number of visits per week following the launch of a TV campaign. As the resolution is only at the weekly level, it is not possible to tie this effect back to specific activity, even at the day-part level.

All of these effects should to be understood and accounted for before engaging in the wider analysis of the marketing mix. Clearly, this requires a firm grip of all elements of this “bottom up” approach, something to which TVSquared has given a great deal of thought.



Figure 3: The Brand uplift effect can be dramatic

An Approach to Micro-Attribution

Naturally, performing micro-attribution is a relatively complicated business as there are a number of challenges to deal with when you are measuring response to meticulous infinitesimal granularity.

Challenges

1. Busy schedules (cloud the ability to determine the short-term baseline)
2. Differing response behavior by type (web, text and phone all behave differently)
3. Time zone mismatches between spot schedules and server response timing
4. Local response to local media
5. Overlapping effects in crowded schedules



Busy Schedules

As outlined above, web responses can be driven by a number of factors. Isolating the baseline – the traffic you would have seen even if there had been no advertising activity – is key. The busier the schedule, the more difficult it becomes to determine this baseline at a given time of day as the number of quiet periods reduces.

Differing Response Behavior by Response Type

Where the call to action provides for different methods to respond – for example by sending a text message or calling rather than online – the speed with which users respond can vary dramatically. As a result, these response mechanisms need to be treated separately.

Figure 4 shows the delay difference between the user-response methods. SMS text responses are typically very short lived, whereas web visits take noticeably longer to appear.

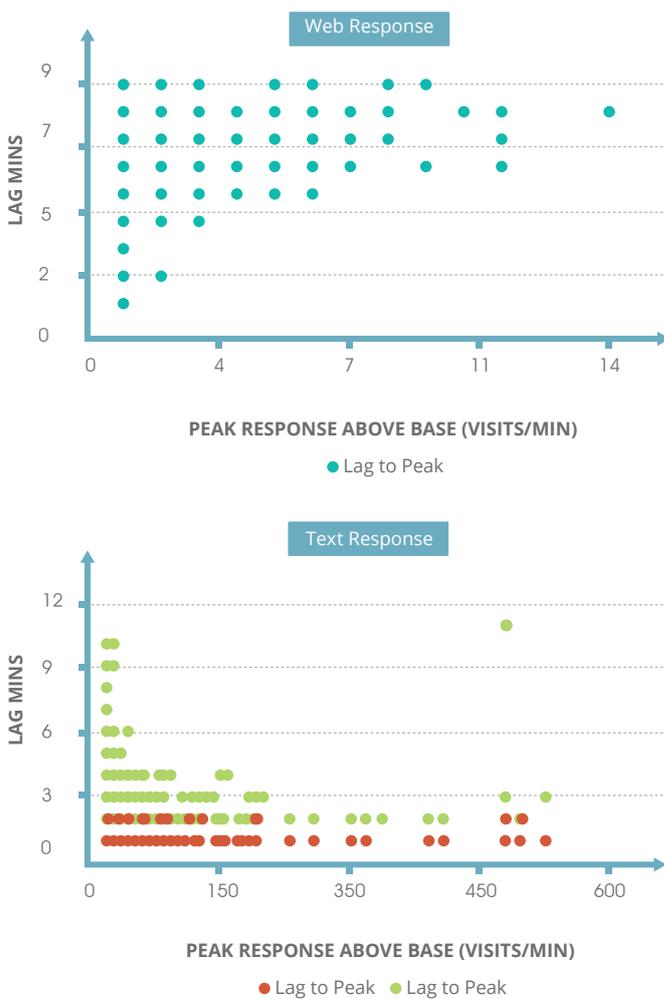


Figure 4: Text vs. Web response characteristics

Timing Mismatches

When merging together multiple data sources, and when accuracy is required down to minute-level granularity, it is important to ensure that the time clocks are synched. Whether it is simple discrepancies between GMT and BST, or broader time zone issues, ensuring that synchronization problems are spotted and corrected is key.

Local Response to Local Media

As well as the broad timing mismatches, in many cases media can be targeted to a particular area or, in the case of the United States and Australia, to a particular time zone. In this event, it is necessary to identify and run separate attributions for responses per geography.

Overlapping Spots

Finally, any micro-level attribution methodology must unravel the relative importance of spots whose effects overlap. Typically, almost half of TV spots have effects in the response that overlap. Figure 5 shows an example of a two-month campaign using a five-minute overlap window for spots. Unraveling these effects is key to determining which station or program genre is driving response.

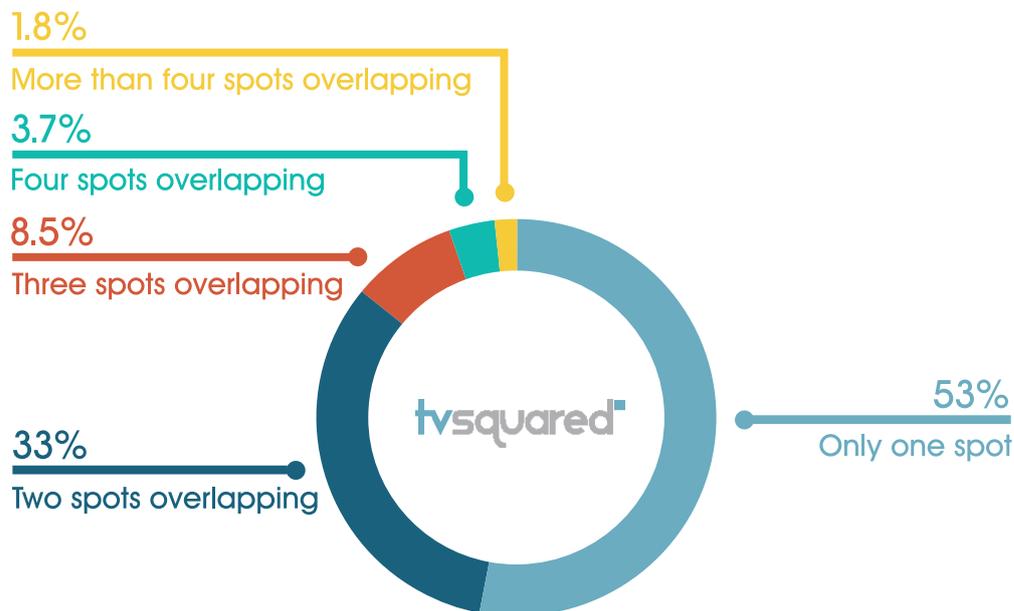


Figure 5: Proportion of time where spot effects overlap

In Conclusion

There is no one perfect system approach. The tendency to attempt to deal with and so potentially hide uncertainty is detrimental. “Vague-itis” and “guestimation” are dangerous algorithms. Identify, but do not attempt to guess a cause for the “un-attributable.”

The goal is to strip out what is ascertainable or known, so that longer-term econometric modeling is only required for those areas that are not known. Although this is a weakness in that it cannot simply deliver answers, it can also be turned into a strength in terms of the quality of results and subsequent buy in.

It is a short-term focus with a long-term view that we believe we deliver the best results overall.

About the Author

A recognized thought leader in data analytics and modeling, Hew Bruce-Gardyne leads TVSquared's technology development and roadmap as the company's Chief Technology Officer (CTO). Hew has spent the majority of his career finding new and innovative ways of making data analytics transformative for businesses that span industries.



About TVSquared

TVSquared is the most accurate, same-day TV attribution platform in the industry. Delivering improved campaign performance for advertisers, TVSquared's state-of-the-art analytics platform enables any brand or agency to increase ROI and proactively improve performance of TV advertising campaigns. TVSquared delivers spot-by-spot, minute-by-minute performance analytics on an easy-to-use web portal. The company's global customers can access their own campaign performance data from all networks delivered to them in near-real time.

For further information or to book a demo visit www.tvsquared.com



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