

## MEDIA MIX AND PAID SEARCH

### Objective

The objective of incorporating media mix effects into your paid search campaigns is to optimize your spending and bidding strategy and tactics. Aside from obvious factors, like the coordination of ad copy and landing pages, it helps to answer fundamental questions like: What should be my campaign budget, and what should be my keyword bids, in light of my campaign objectives? Should I budget- and bid-boost during periods of heavy advertising? Or, should I lower my bids in the hope that lower ranked results will get high CTRs due to the ad campaign?

### The Rough Landscape

Data is the lifeblood of analytical and strategic integration of your media mix and online search. Without hard data on your media mix (what, when, how much?) and organic-paid search metrics, the marketing strategist is put in the position of generalizing findings from disparate industries, studies, and circumstances. Sometimes these findings attain the status of truisms, “obvious relationships”, and top-of-the-mind-to-dos. For example, media mix/search findings over the past several years yield the following generalizations:

1. A substantial number of online searches begin with exposure to magazines, TV commercials, and other elements of the media mix. <sup>1</sup>
2. Many online searches actually conclude with offline conversions (sales) (often at the brand locations that differ than the online search), <sup>2</sup> so a narrow focus on online conversions from search does not reflect true impact of the search marketing channel.
3. The combination of online display advertising and search exposure leads to higher offline sales. <sup>3</sup>

Other general findings uncovered by IMPAQT include:

1. Incremental search activity (impressions especially) increases during times of intensive advertising (especially coordinated media pushes, such as broadcast TV, cable TV, online, etc.). This is particularly true for branded keywords and somewhat less so for “on-message” non-branded keywords.
  - Note: By “incremental activity,” I mean activity that is above-and-beyond what is forecasted in the absence of the advertising. This term will be discussed in more detail below in a section on “Methodologies for Studying Media Mix and Search.”
2. Click thru rates increase during those time of intensive advertising.

3. Conversion rates fall during intensive advertising (indeed, upward shifts in search impression volume that can not be attributed to budget increases, etc., can be used as a surrogate to expect lower conversion rates).
4. Total conversions increase, albeit not as rapidly as click thru rates.
5. Cost per conversion increases during times of intensive advertising.

Now let's add some complicating factors and caveats:

1. Counter-intuitive results are not uncommon. In some cases, IMPAQT has observed search activity significantly decreasing after a media campaign launch. How is that possible? It is possible (and sometimes likely), because marketers oftentimes plan media launches during “slow times” ... hence, search activity is caught in a general downdraft of slow sales. If the media campaign fails to arrest that downdraft, it is difficult to observe any “incremental searches” during that time period, even with sophisticated forecasting algorithms.
2. For strong brands (with dominant share of mind), advertising does not seem to impact search activity at all. In fact, at least in the short-run, advertising does not even impact overall sales (offline and online).
3. There are significant lag times between an advertising campaign and associated search activity.
4. Related to the previous point, the “intensity of impact” associated with different types of advertising varies over time. Some advertising “hits the radar” very quickly, hangs on for a period of time, then fades slowly. Other advertising impacts build slowly, and then linger far beyond the conclusion of the advertising campaign.

Thus, simple truisms that report a relationship between media mix (advertising activity) and search activity are just the start in the exploration of the relationship. Your data (not that provided by secondary sources) is the best path for nailing down how to coordinate your paid search campaign in light of advertising campaigns.

### **Conversion Attribution, Media Mix and Search**

When you step into the morass of coordinating your (paid) search campaigns with other advertising, it is inevitable that someone (in the advertising department) asks – “So, how many search-related conversions are actually attributable to MY advertising campaign? Maybe I should be taking credit for that ...” (Unspoken, at least to your face, is the implication that search is not contributing as much to the bottom line as you've stated.) In this tug of war, it should be immediately pointed out that many online searches result in offline sales (which are often not attributed to search success; and should be, at least partially), much advertising that is not directly promotional and “immediate action driven” does not “seal the deal”, and that discredit-

ing online search is almost akin to taking away any key facilitator of sales (like cash registers).<sup>4</sup> Several studies support this contention:

1. The online-to-offline relationship varies by industry vertical depending “need for touch,” importance or expense of the item, seasonality, etc.<sup>5</sup>
2. Online versus offline purchases vary by the type of search (branded / product versus generic).<sup>6</sup>

Therefore, when attempting to “round the circle” that connects the inputs (media mix) to the outputs (conversions) via search, it is important that the final conversion is measured correct. That is, conversion measurement must include both online and offline metrics. But how?

A variety of online-to-offline tracking tactics have been proposed, such as downloadable coupons, unique landing pages for offline ads, using 1-800 numbers unique to online landing pages, and offline codes available for online transactions.<sup>7</sup> Each method is valid (and more appropriate for some products/services than others). Typically, however, they tend to cover a very narrow segment of the online-to-offline conversion process. (In IMPAQT’s experience, tracked responses account for only a small proportion of total response. This does not square with other research indicating substantial online-to-offline effects.) Additionally, these tracking methodologies do not capture the entire sweep of the media mix, and its impact on search. Therefore, our best practice in this area is to track all offline (and online) conversions, and to correlate those conversions with the media mix and search activity.

### **Methodologies for Studying Media Mix and Search**

Basic principles underlie the study of media and search. First, it is imperative that media mix / search activity associated with keywords (especially keyword clusters or keyword portfolios) must be done brand by brand, keyword by keyword. (As part of a search agency, I would also add industry by industry, client by client.) Keywords react differently to the media mix, and its’ content. For your particular situation, study those relationships and identify your unique set of predictors and impacts. (Start with branded versus non-branded keywords, then sub-divide them into keyword clusters based on semantic similarity and behavior (CTR, CPC, etc.)) Second, you must measure the “incremental activity” (impressions, clicks, costs, conversions, etc.) associated with media campaigns. There are trends, cycles and seasons to search independent of media effects. The difference between observed activity and forecasted activity is the incremental effect of the media. Third, any study or paid search analysis/strategy must incorporate offline conversions (sales, calls, etc.). Without offline conversions, paid search (as well as organic search) success will be misestimated, if not entirely under-estimated. The incorporation of the “last mile”

to the conversion is often not difficult. Fourth, use the appropriate methodologies (predictive modeling/forecasting, testing) that can disentangle causes from consequences, and spurious relationships from real ones.

It is difficult to over-state the importance of proper methodology when it comes to disentangling so many different pieces of data in the media mix/search equation. Simple analyses look at daily changes, daily week over week, etc., on the assumption that everything influencing the market between the two time points is the same except for the advertising campaign. Such an analysis must also rule out trends (up or down), intra-month cycles, competitive bidding activity, and so on. It's a start. But your confidence in inter-temporal comparisons should be low, as you might have guessed or experienced. Have you ever looked at such an analysis, and wondered – “Well, that could have been due to ...” X, Y or Z? Knowledge about trends, cycles and competitive activity, of course, lets you do some “mental adjustment.” Perhaps you even do some rough math ... “Let's see ... we're usually down at the end of the month; but during this end of month media blitz, we weren't down as much. Let me do some quick math here ...” Now imagine doing that rough math with trend, intra-month cycles, seasonality, shifts in competitive activity, etc., at the same time. Impossible? No, as we shall see. But it should be noted that second-guessing about “other influences” is an easy sport with inter-temporal comparisons, especially when the swings in search activity are not consistently gigantic.

Another, more vigorous and accurate approach, uses predictive modeling to forecast search activity (impressions, clicks, conversions, costs, etc.) and conversions (offline + online) in the absence of the upcoming media campaign. (This can be done by building the model using only pre-campaign search data, or by incorporating the effects of historical campaigns and “removing the campaign effect” from the predictions.) What data goes into the predictive model? Answer: anything you can get your hands on, including:

1. historical activity (trends, cycles, seasons, etc.) of your search metrics,
2. managed historical influencers, such as keyword content, as well as budgets and bids,
3. historical “shocks” or events, such as website redesigns and malfunctions, as well as news,
4. marketing initiatives (price, product, and distribution changes, etc.) for yourself as well as main competitors,
5. media mix of all major kinds, including broadcast (national, local) TV, cable TV, radio, print (newspapers, FSIs, magazines, direct mail, etc.), and online (display, email) for yourself as well (if possible) your competitors.

A long list? Yes. But most are not as difficult to compile as you'd think. As search

marketers, #1 and #2 should be readily available in your databases. Items falling into #3 should only be sporadic, and be monitored by your marketing staff in any case. Marketing initiatives (#4) and media mix (#5) are also items that should be available internally, although you might have to hunt through different silos to find it. (If you're lucky, you can even get your media buyers to do systematic media tests that enrich the variability of your data.)

The model building effort, of course, is not for the faint-hearted or the non-statistician. Isolating the independent and interactive effects of all the predictors is a complex programming task. (Here at IMPAQT, we use SAS/ETS (ARIMA, PDL) procedures running against a relational time series database of the predictors and metrics.) From the results, it is then possible to do several powerful things:

1. Estimate the impact of a historical media campaign on your search results (by measuring the difference between a “media versus no media” scenario).
2. Forecast the impact of an impending media campaign on your search results.
3. Run simulations of different search management tactics (budget and bid scenarios) in the upcoming media environment, in order to pro-actively adjust your campaigns to meet your objectives.
4. Calculate the “base impact” of search and the incremental impact of the media campaign on your online (and hopefully offline) conversions.

Each of these results is not easy to come by. Rigorous data management is required, as well as statisticians who understand marketing and forecasting. It is time-consuming to do the studies, and set up a system for pushing out recommended budget and bid levels. The search campaign managers also must buy off on the approach (as do their marketing managers oftentimes). But the payoffs can be enormous. Very small gains in efficiency (10% or less, although better results are certainly possible) add up to large savings in search budgets and/or higher conversion levels. In our efforts at IMPAQT, we have implemented optimized budgeting that yielded decreases in CPA while simultaneously increasing the number of conversions (as the budget was spent more efficiently).<sup>8</sup> Of course, the law of large numbers comes into play – in large markets, even small improvements in efficiency yield substantial returns ... returns that far outweigh the costs of pulling the media mix and search together.

## Summary and Conclusion

Studies by IMPAQT strongly support the premise that media mix and search interact in very complex and often contradictory ways. There is no one “best strategy” for coordinating search with other paid media (TV, etc.), except in the most obvious and narrow cases (e.g., in support of unique brand extensions and promotions).

Therefore, it is important to:

1. gather the entire sweep of data available – media mix, search activity, online/offline conversions,
2. devote the resources, time and personnel to untangling the data,
3. use the appropriate methodologies for identifying the impact of each media channel on search, and that in turn translates into conversions,
4. clearly identify your goals and objectives – that’s when analytics can best help you,
5. ensure that results from the studies are continuously actionable – that is, they yield continuous recommendations for adjusting your search campaign budgets and bids,
6. be prepared for counter-intuitive results and incremental implementation of the recommendations, in order to build confidence in the marketing staff.

Taken together, each of these elements are necessary for a forward-looking, continuously improving paid search campaign. In the future, it will become more and more obvious who is leading the market with innovative campaign planning, and who is lagging behind (stuck in their silo).

<sup>1</sup> EMarketer (March 14, 2007). [http://ebusinessforum.com/index.asp?layout=rich\\_story&doc\\_id=10313&title=Online+product+searches+begin+offline&categoryid=9&channelid=3](http://ebusinessforum.com/index.asp?layout=rich_story&doc_id=10313&title=Online+product+searches+begin+offline&categoryid=9&channelid=3)

<sup>2</sup> An excellent summary is provided by Forrester (May 8, 2007), “The Web’s Impact on In-Store Sales: US Cross-Channel Sales Forecast, 2006-2012” (authored by Tamara Mendelsohn with Carrie Johnson and Brian Tesch).

<sup>3</sup> Yahoo! and comScore (July 30, 2007). “Study Finds Online Consumers Who Pre-Shop on the Web Spend More In-Store.” <http://www.comscore.com/press/release.asp?press=1547>

<sup>4</sup> The need to integrate offline success metrics into search campaign management has been made before. For example, see Matt Naeger’s (Nov 4, 2004) article “Adding Offline Data to Online Search”, <http://www.imediaconnection.com/content/4535.asp>

<sup>5</sup> comScore (March 21, 2006). “The Importance of Search in Influencing Offline Buying”. <http://www.comscore.com/press/release.asp?press=796>

<sup>6</sup> Jeff Morris (Dec 15, 2004). “Online Searches Lead to Offline Purchases.” <http://multichannelmerchant.com/opsandfulfillment/advvisor/online-searches-purchases/> quoting research by comScore (Dec 13, 2004). “The Impact of Search Engine Usage on Consumer Buying”. <http://www.comscore.com/press/release.asp?press=526>

<sup>7</sup> Grant Crowell (Oct 27, 2004), The ClickZ Network. “Search Online, Buy Offline: How to Tell?” <http://searchenginewatch.com/showPage.html?page=3426621>

<sup>8</sup> This analysis and campaign effort involved a mid-size retailer with both an online and offline presence.