Collecting Consumer Data:
Measurement, Metrics and Analytics in the Digital World

By Alex Romanov, CEO, iSIGN Media

Collecting Consumer Data, How it All Began

John Wanamaker, an early Philadelphia department store owner (1875) and considered by many to be the father of modern advertising, helped bring into focus a common marketing frustration – then and now – with an often-quoted phrase: "Half the money I spend on advertising is wasted; the trouble is I don't know which half."

While some marketers may still acutely agree with these words, times have changed – into a digital world - and tagging along with them are new shopper data collection and analysis practices – practices that ultimately stand to benefit the shopper, offering them a-call-to-digital action, heightened loyalty, and greater interactivity with their preferred brands. More so than ever, web-based and mobile marketing campaigns rely on a bevy of shopper behavior measurements, including demographics, gender, the types of purchases made, price points, the level of loyalty program engagement, coupon redemption and click rates, and the real-time location of the shopper.

Making $ense of Data

This data – added to the digital universe whose grand total of bits and bytes reached a staggering 1.8 trillion gigabytes in 2011 – allows marketers the opportunity for the first time to truly understand what marketing campaigns work - and what doesn't work and for building out a successful and nimble business intelligence strategy and measurable return on investment. That is, assuming the voluminous data can be organized and processed and made useful. In other words, the "art" of human evaluation of marketing campaigns is increasingly becoming a science with verified, tangible and repeatable results.

While the 2012 global and US economic outlook appears healthier than previously thought, with US unemployment down to a three-year low of 8.5 percent, and economist predictions that 1.9 million jobs will be added in the new year (up from the estimated 1.6 million jobs created in 2011) shoppers and marketers remain in "cautious optimism" mode. Millions remain jobless, credit is still tight, and a Eurozone debt crisis, whose brushfire flames seems to have relaxed of late, is still smoldering as Greece continues to risk defaulting on its debt obligations. That means that in the US and abroad, every dollar spent on a marketing push and every dollar shelled out for that purchase by the shopper is being carefully tracked and managed. **Real-time data collection, used properly and respectfully, will help both population segments manage their dollars best.**

Where We've Come: From Surveys and Direct Mail, to Smartphones and the "Electron Cloud model" of Consumer Interest

As underscored by John Wanamaker's sentiment, prior to the digital sea change underway, marketers were left with relatively few tools in drilling down and measuring customer wants, needs, desires, and habits. Approaches included in-store surveys, mail-at-home questionnaires, directly asking customers for their opinions, telephone interviews, and backwardly deducing what marketing solutions worked (and what didn't work) from overall sales generated on a particular item or items.

Another Wanamaker contemporary, Aaron Montgomery Ward, (1843-1913) judged by Forbes.com readers and editors back in 2005 as the 16th most influential businessman, perfected that so-called "backward deduction" by launching the first mail-order catalog in 1872. The catalog was an easy way for Ward to collect one of the most important and earliest data metrics: response rate. Rather than trying to collect data from shoppers in a bricks and mortar store, or eliminating "window shoppers," Ward knew exactly who purchased what goods and for how much. An early promoter of the phrase "*satisfaction or your money back*," he was also skillfully collecting shopper emotional sentiment and not just whether or not they purchased a product.

But none of these methods are ideal for the modern digital age: they're slow, with physical mail having a several-day turnaround (or longer with the onslaught of "junk mail" that continues to clog American mailboxes – even with the advent of the Internet and mobile email) cumbersome on the shopper and most importantly, they do not operate in real-time and are unable to adapt to the sometimes-sudden changes in shopper interest.

Better Than A Bird's Eye View – Measuring Marketing in a Mobile World

Traditional measuring methods also lacked the ability or ease in linking a single store's collected data with another – even within store chains. Rather than supplying a bird's eye view of shopper sentiment, marketers were often left with a pinhole snapshot of a narrow population segment. While a step in the right direction for small mom and pop businesses, the then-new department stores needed something better. Telephone surveys in the 1960s were another step forward in electronic speed, but in the early 21st century, more was needed.

Shoppers, thanks to a large extent on rapidly rising global feature phone and smartphone adoption rates, (edging toward 95 percent 29 percent respectively, and higher in some US

and other national segments) have matured into an always-mobile, all the time segment – a development which greatly enhances marketers ability to collect and make use of customer data. In addition, what used to be a linear customer engagement experience starting with a print ad or television commercial has morphed into an "electron cloud" model, where the specific order and location of customers' channels preference – like electrons orbiting an atom's nucleus – is harder to discern. **Today's shoppers aggressively shift between mediums, be it web, mobile, social media, or traditional throughout the engagement and product purchasing process, which makes the processing and collecting of relevant and timely data even more critical, especially so marketers can gain a better idea of which channels are delivering the greatest return on investment.**

Thanks to these developments m-commerce (mobile commerce) sales reached $6.7 billion USD in 2011, an increase of 91 percent, and is forecast to grow to $31 billion in 2015.

The Mobile Movement – Ringing in the Specifics

Not only do mobile devices allow shoppers flexibility for them to shop remotely or perform in-store price comparisons, but they are excellent at collecting vital shopper data related to buying trends, the types of stores they shop in, their price SIncreased data gathering (and the ability for marketers to access that data remotely) has allowed marketers to better drill down to customer specifics. In other words, long gone are the days where marketing analysts relied simply on gender and demographic basics. That ability to send highly customizable messages to shoppers coupled with location-based technology means the shopping experience has changed dramatically in store and nearly anywhere else a mobile phone is on a network.

Where We're Going: More Marketing, More Advertisers, More Brands, More Data and More Measuring

As 2012 gets underway, the digital marketing landscape is becoming very crowded and data gathering more complete, including opt-in, redemption rates, location-aware statistics, gender, age, purchasing history, and when it comes to the burgeoning arena of digital signage, customer view and dwell times. Forget latent concerns about Big Brother watching, today it's all about Big Data and how it's tracking and collecting consumers' digital buying habits and viewing behavior, and the requisite promises and pitfalls that that level of access affords.

In fact, recent research by IDC reveals that in 2010 the total amount of digital data on the web reached one zettabyte, or one trillion gigabytes for the first time and the size of the so-called "digital universe" is doubling every two years. Last year the amount of digital data stood at 1.8 zetabytes. Or put more poetically by John F. Gantz, IDC's chief research officer and Senior Vice President, "Within 10 years they'll be as many bits in the digital universe as there are stars in the physical universe." And you thought *your* hard drive was big?

Big Data in Action: A Case Study

"The 2012 data landscape isn't just about crunching more numbers, more often, or what metrics are left to be tracked, it's about which metrics, particularly location-aware, can be tracked better – without stepping on a customer's much-valued privacy."

Alex Romanov

Speaking of Big Data – or large data sets – iSIGN itself is an increasing player in the data-gathering marketplace, all of it carefully anonymous mobile analysis. In January 2012, we announced the activation of IMS software in 500 store locations equipped with digital signs at Mac's Convenience Stores chain in Canada. Later in the month some 900 additional stores were added, bringing the total number of store locations to approximately 1,400. As an example of the amount of potential data on hand for collection, on Thursday, January 19, 2012 at 2.12pm., for instance, iSIGN's interactive technology was already identifying 297,544 mobile devices, 75,000 of which were unique. And as of January 30, iSIGN's digital signage network had interacted with 517,000 mobile devices.

What this translates to is the ability to send messaging to about 750,000 mobile devices per day with each connection and count being confirmed for advertisers on iSIGN's enhanced digital signage network. Advertisers can measure the exact count of their audience in real time and receive message counts and redemption proof utilizing IMS software. The technology is also able to determine a shopper's digital sign dwell time, or the amount of time shoppers spend looking at the digital sign, which data suggests, stands at 243 seconds, or about 4 minutes. And when combined with Intel Facial Recognition technology, (using AVA, or Anonymous Video Analytics) gender and age can be collected too. And for all the promising data above, the good news gets even better when iSIGN's digital signage network expands into more urban locations, where a higher density of people –and their mobile phones – can pass within proximity detection of the IMS software technology.

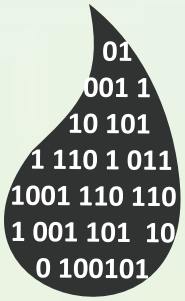
In this example, because the broadcast and interactive range is no more than 300 ft., we can know for sure that the customer is at this end of the mall, but the technology is not tracking his or her identity or even specific location. The technology zeros in on around 3 ft and 300 ft, (or rather up to 300-300,000 sq ft) of that [imaginary fence] which is no more than a proximity range, an estimation. We have no interest in specific location. All we want to know is the consumer's proximity range to a store or venue, and then there's a coupon or related offer received in real-time, that shoppers have actually asked for and that are tailored to their preferences. The information disseminated to the customer is spontaneous and relevant and simply meant to attract, transact and measure the results.

Data Collection & Shopper Privacy: Marketers' Dilemma or Opportunity?

As highlighted above, the continued advance of Big Data presents marketers with both a dilemma and an opportunity. The more that data can be collected and the greater fidelity (specific habits) marketers can uncover, the better the chances that new shopper trends emerge – and ones that might not have been discovered at all, but for the new technology.

It's natural then, to address the dilemma side of the equation too. To be sure, while both the younger generation, (Generation Y or so-called "millennials") and older population segments are embracing this technology, studies reveal that they are also concerned about how the data collected is used and if it's being distributed to third-parties. For instance, 49 percent of United Kingdom millennials and 48 percent of older populations said they are "very" to "extremely" concerned about overall data security and privacy. Similar numbers can be expected across North America as both regions are equally tech savvy.

Shoppers – 86 percent of them globally according to the above research conducted by the Australian Interactive Media Industry Association (AIMIA) – know the benefits of more data becoming more available to marketers – and themselves. But in return for relinquishing their shopper metrics, they will expect that their data is secure and not abused, demanding heightened transparency from the marketer about what data is specifically collected. They will also require the ability to back out of such collection the instant they feel their trust is betrayed.



Is Data the New "Oil"?

To this point, customer data has been rightly compared to oil. Once processed through metrics analysis, it's the fuel that powers successful marketing campaigns, driving loyalty, heightened engagement and increased return on investment, (ROI).

Ultimately the remedy (or at least the partial antidote) for the data collection conundrum can be tackled by addressing some of the greatest data privacy issues in 2012. As compiled by a recent Mobile Marketer analysis they include:

- *The continued wait and see approach from both marketers and shoppers over progress on a White House-endorsed data privacy bill of rights, which, if approved, will make it easier for consumers to opt-out of data collecting and tracking requests.*
- *Related, there's similar anticipation in the public sphere over whether or not the Federal Trade Commission, (FTC) will update the Children's Online Privacy Act, or COPPA, requiring parental consent for online data collected for children age 13 and under.*
- *Companies that track and collect location-aware data should not have the right to sell that data to third party distributors, or do so without the consent of the individual or individuals' information you've collected.*
- *App developers need to work harder at making certain their privacy policies are up front, transparent and easy to understand.*

Looking Ahead:

Mobile's Impact on Data Collection

Whether it's companies like Google, Facebook, and the thousands of others in an assortment of industries from travel to entertainment, to pharma, and retail, meaningful data measurement, collecting, analysis, and cloud storage of it all will continue to grow. In a very short time 1.8 trillion gigabytes of data won't sound like too much. With media company Nielsen already predicting the 50 percent US smartphone penetration rate barrier being crossed some time in 2012,(and at 44 percent in the US as of Q3 2011) a critical mass is rapidly being reached. And of those linked, synched and wired, in the US at least, Morgan Stanley has found that 91 percent of mobile device users are within arms reach of their phone 24-hours a day, 365 days a year.

Green Data

While there are no doubt risks for data measurement and collection abuse, the benefits to the marketer and their ability to spot trends, and for consumers to feel like they've received a personalized relevant message for relinquishing that data, far outweigh the risks. Even the environment catches a break as the continued closing of the digital loop reduces the need for paper, cuts down on transportation fuel costs, and lowers a marketer's carbon footprint. Like any change, incremental steps add up to big results. Just by removing the 35 lbs of flight-check paper in American Airlines cockpits, for instance, and replacing that printed bulk with iPads saves the company an estimated $1.2 million in fuel costs. Analyzing and acting on today's wealth of consumer data is sure to have a similar compound multiplier effect on people and companies too.

Bits & Bytes and a Final Word

It's been 90 years since John Wanamaker's passing. And while there's no denying that in his lifetime he saw some amazing advances: the first cross-country flight from Florida to California, the first electric blender for milkshakes and President Warren G. Harding's installation of the White House's first radio, it's fitting, perhaps, that his life ended just as radios' was beginning, passing the baton to the next generation of electronic mass marketing technology.

If he were alive today, with smartphone in hand, you can be sure he would have eagerly opted-in to this latest data-driven technological advance.

- *The amount of data (measured in bits and bytes) collected in the digital world continues to grow and will soon eclipse the number of stars in the universe. But that knowledge alone is nothing to fear, it's a fact that should be embraced by marketers and consumers, assuming the data is managed properly and kept secure.*

- *Consumers of all age groups may be data security aware, but contrary to stereotype, no group or demographic is more concerned than the other. Transparency on the part of what the company does with the data and whether it's sold to a third party is paramount.*

- *To a great extent, it's the smartphone (and to a still-significant short message service-capable feature phone degree too) and it's rapidly rising US and global penetration rates, that is driving this data collection and acting change.*

- *Anonymous mobile analytics-focused technology that gives location approximation to within 300 ft. and not an exact location as evidenced by the C-store case study, should be a template for others getting in on data collection and analysis.*

About the author, Alex Romanov

Alex Romanov is CEO of iSIGN Media, a leading provider of interactive mobile advertising solutions that serves advertisers, manufacturers, retailers and advertising agencies throughout North America. Under his leadership, the Company has grown to become the largest owner/operator of in-store digital media in Canada with 5,600 digital signs in 1,400 locations. To learn more about the company's solutions or get in touch with Alex, please send an email to: alex@isignmedia.com.

About iSIGN Media

iSIGN Media is a North American leader in multiplatform advertising solutions that utilize Bluetooth™, Mobile, WiFi and Location-Aware technologies to deliver rich media, permission-based messages to engage consumers more deeply and cost-effectively. The resulting business intelligence and real time metrics, gathered through iSIGN's patent-pending advertising platform, deliver insights into emerging consumer behaviors that help advertisers measure their efforts and make better business decisions to increase ROI and customer loyalty.

iSIGN's solutions respect user privacy via opt-in functionality, and do not collect or require personal information such asmobile phone numbers or customer names. Information is instead associated with a unique technical identifier linked to aparticular mobile device, and anonymously analyzed for subsequent business purposes and targeted marketing campaigns. This translates into customer peace of mind, yet gives businesses the power to understand their customers' needs and interestsin unprecedented detail.

Delivering targeted, rich marketing campaigns to customers therefore involves less business risk and ongoing investment thanever before, while also yielding dramatically improved positive response levels when compared to traditional marketingplatforms such as mass-mailing or telemarketing.

Headquartered in Richmond Hill, Ontario, with R&D and customer support operations in Vancouver, BC and Tampa, FL, the Company has also grown to become the largest owner/operator of in-store digital media in Canada with 5,600 digital signs in 1,400 locations. Partners include: AOpen America Inc. and IBM, with solution distribution by BlueStar Inc

iSIGN is publicly traded in Toronto (TSX-V: ISD) and additional information can be found at www.isignmedia.com.

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