



Verve Place Insights™ Audience Targeting Platform

A VERVE WHITE PAPER

PLACE-BASED AUDIENCE TARGETING

Mobile advertising continues to grow and evolve at a breakneck pace. eMarketer estimates that mobile ad spending will increase from \$8.4 billion in 2012 to almost \$37 billion in 2016 on smartphones and tablets. To facilitate this growth, advertisers need more effective ways to engage prospects for their goods and services.

Audience (or “Behavioral”) targeting, in digital advertising terms, holds tremendous appeal to advertisers. By aggregating together the many things that a consumer does over time, effective interest-based targeting can fulfill the dream of advertisers to reach the exact target customer they seek in a manner that is appropriate to the target market and the brand.

Desktop behavioral targeting uses cookies and tracks the things that a consumer does on their computer to infer interests. Mobile place-based audience targeting uses new technology to identify a consumer’s interests based on interactions with places in the physical world – a far more accurate predictor of interests.

Place-based audience targeting is a powerful new tool that allows brand advertisers to reach the right audience, wherever they may be in mobile cyberspace, wherever they may be in physical space, at a moment that maximizes the likelihood that they will engage with the brand.

PLACE INSIGHTS™

Place-based behavioral targeting relies on a powerful combination of two large data sets: a deep knowledge of the physical world around us and massive scale in reaching consumers interacting with their mobile devices in an engaged manner.

Verve’s place-based audience targeting platform is unique. We have mapped physical space to a scalable grid of hexagons. Each hexagon is then associated with a multitude of data sets – hundreds of millions of individual data points that allow us to learn things about a cell – socio-economic data, purchases, store locations, and events taking place in and around it. This data is then used to build a longitudinal model of each visitor as they move through physical space. The models we are able to build based on what people do in the real world are far more compelling than models built around what people click on when they are at their desk.

VERVE MOBILE’S PLACE MANAGEMENT PLATFORM

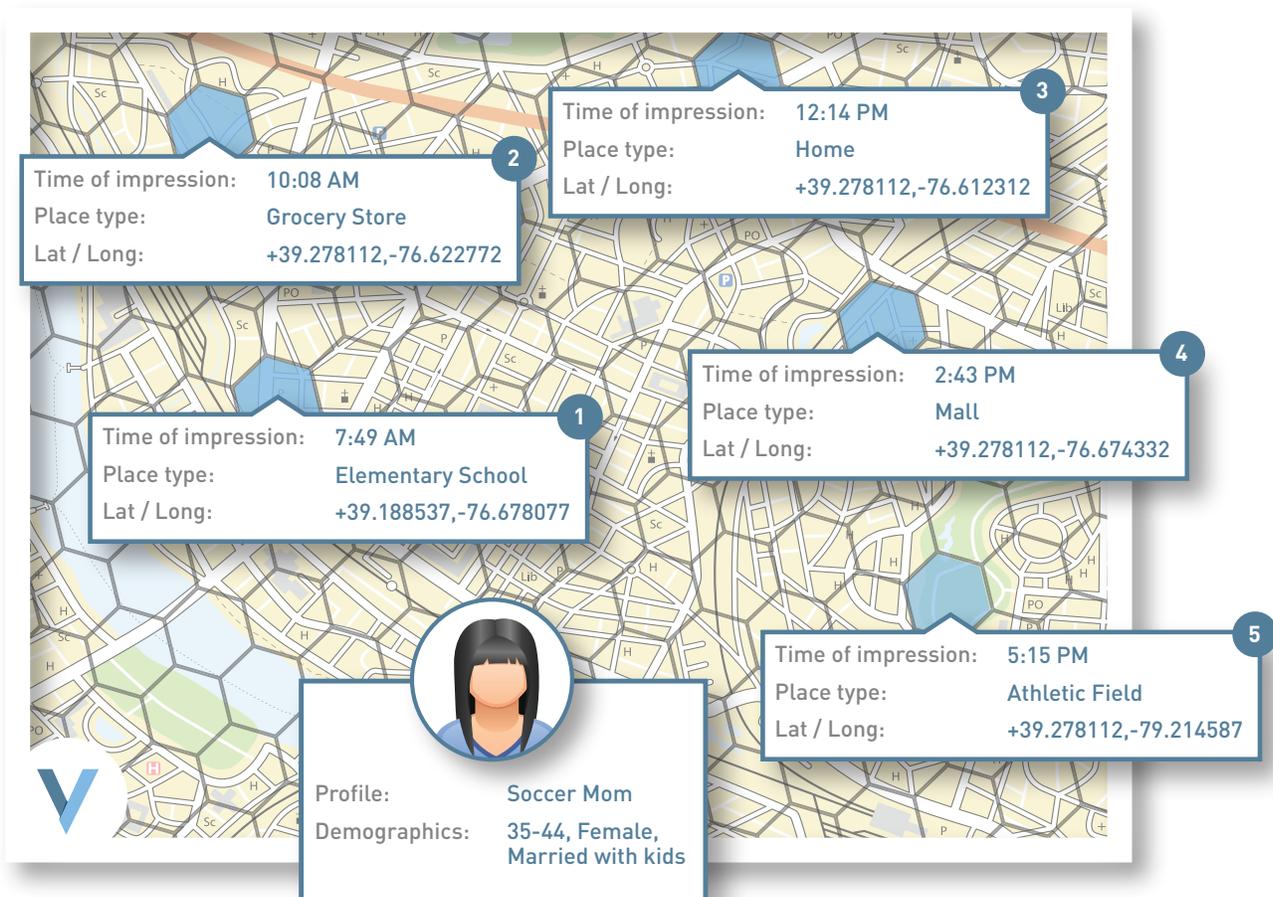
Place-based audience targeting is a very effective way to partner with advertisers to reach their audience by matching the message to an audience of the same intention at the right time and right place.

The initial step in using audience targeting is to identify core demographic, lifestyle, transactional, and media attributes of the audience members. Once the audience member is well understood, it is possible to define geo-temporal attributes that characterize that audience member. Verve uses this location and time-based data to extract user attributes using machine-learning models. Those geo-temporal attributes are then expressed



over time by episodes of interaction with a user that tell a story defining the intent of the consumer and their relevance to a given audience.

For example, a Verve audience member might be seen at a location that, based on the time and day of the interaction, is hosting a professional conference. The next day, a business day, we might see this same anonymous audience member at a train station or airport. Just a few hours later, we see the audience member at a similar location in their hometown, the city where we usually see them on the weekends. Each of these “episodes” creates a detail in the story arc of a person that allows Verve to define the kind of audience member they might be. Simplistically, this person might be a good candidate for a business traveler message – as we continue to let their profile evolve, our machine learning algorithms will continue to more tightly define the interests of this consumer.



Unlike simply geo-fencing airports or train stations, audience-based targeting allows us to more fully understand the consumer and even apply our data set to predict when the best time/place to serve this consumer a message might be.

Using this information, we have been able to identify standard “brand personalities” that reflect unique combinations of characteristics that tie together communities of consumers engaged in the real world. Further, Verve can build custom audience targets to match the needs of advertisers using this same data set. This allows us to use location in a powerful new way to bring like-minded consumer audiences together in real-time as they demonstrate their affinity to products. This approach is also privacy friendly because attribute data is associated with locations rather than directly with users.

LOCATION POWERED

Not just any business can build such an effective place-based audience management platform. The hundreds of millions of geo-temporal attributes assigned to locations is only one part of the tools Verve needed to build Place Insights. To build effective audience models and convert raw location data into actionable intelligence requires accurate location data and targeting, an area which Verve has been leading for several years and in which our expertise is unparalleled.

Today, most location-targeting businesses are simply wading into the gray area of mobile advertising exchanges – an area noted for low quality inventory, a lack of real GPS data, and awash in false “centroid” or IP address-based location data. The result is inaccurate data about a consumer’s location. Further, other place-based audience targeting platforms are simply providing location data to these parties, uninformed by user visibility and unable to understand user behavior over time. Their access to data is limited simply to post-impression digestion of log data and inferred behaviors from the location associated with an impression at the time of the ad call.

Verve offers an advanced application platform to thousands of the finest local and hyper-local content sources in mobile. The result is that Verve is the first party to nearly one billion location rich mobile impressions every month. Our research has shown that the difference in quality of user data can drive 150%+ increases in CTR for advertising campaigns. Also, Verve can use this unique window into the marketplace to allow us to assemble a more comprehensive perspective into consumer interactions. This is also impactful in the context of attribution; by measuring the exposure of consumers to various physical and virtual activities and controlling the exposure of the consumer to advertiser messages, machine-learning can be applied to attribution models to better understand how different audiences respond differently to messaging.

Generally, and in the case of mobile targeting, the more information known about a consumer, the better marketers can engage them. Ideally, marketers seek a 360-degree view of customers. Verve believes that the constant connection of mobile represents a shift with how users relate with both the digital and physical world. This tether between the virtual and physical space that we move through redefines how marketers can learn about and target customers to improve the effectiveness of marketing activities.



SUMMARY

The mobile market is growing dramatically and Verve's Place Insights product is the beginning of place-based audience targeting redefining how marketers use mobile to reach their audience.

Understanding the geo-temporal attributes of locations and associating those back to consumers as they interact with those locations allows Verve to build longitudinal models of user behavior that provide the best performing advertising in Verve's advertising network.

A focus on unparalleled location targeting capabilities and billions of high quality location data points allows Verve to better understand the true location of users, resulting in more effective attribution of user data and better performing long-term models of consumer behavior.

The pre-built segments available today from Verve Place Insights:

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|----------------------|------------------------|
| Auto Intenders | Technology Influencers |
| Soccer Moms | Personal Investors |
| Outdoor Enthusiasts | Entertainment Lovers |
| Pet Lovers | Foodies |
| Business Influencers | Sports Enthusiasts |
| Affluent Consumers | Style & Fashion Mavens |
| Vacation Travelers | Home & Gardeners |
| Business Travelers | Medical Professionals |
| Health Nuts | |

