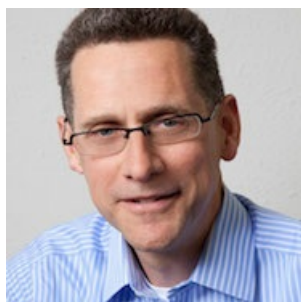


COLUMNS

Tiles, proxies and exact places: Building location audience profiles

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Proximity geo-targeting is just one of the ways to tap user and point-of-interest (POI) location data to target consumers in the physical world.

As mobile data management technology becomes more sophisticated, advertisers now have access to more types of contextual data that can be used in conjunction with user location and POI data to target more relevant and specific audiences.

This article dives into the main techniques used by data management platform companies to visualize the world and collect data for creating location-based mobile audiences. These techniques include category observations, heuristics and inferences about a place (known as "tiles") and the use of exact places.

Fixes and fences

First, let us talk about the basic principles of building an audience segment.

To put it simply, you match a specific user (ID #1234) to a specific place (McDonald's on Market Street), and you have a segment (fast-food diner).

However, doing this effectively requires accurate, precise, and detailed data about each user and each place, as well as the requisite consents by a consumer to use the data.

You have to understand each user's various attributes, including past behavior, intended behavior, actions and interactions in the real world, plus application and mobile Web usage.

This data can come from a variety of sources: apps that pass both active and background GPS data via an SDK, browser APIs, the bid-stream in a programmatic ad exchange, carrier cell towers and Wi-Fi.

In addition, an emerging set of providers is also starting to take in beacon data, but this is still nascent.

You also have to understand a user's series of location "fixes," meaning the latitude and longitude of a user with a time stamp, and what that location is (i.e. a store, restaurant, or airport). Knowing someone's coordinates is not relevant if you do not know what that location is.

As fixes enter a database attached to an anonymous ID, it becomes possible to categorize that user's behavior. You

can figure out where she lives and works, the stores she visits and her commuting route.

Over time, as you ingest and parse more data, you can construct reliable and refined profiles from hundreds to thousands of location fixes. The greater the number of location fixes, the higher the confidence-score of a profile.

Making the point

Once a number of location fixes attached to mobile IDs are collected, most vendors construct several different types of segments.

The first are basic geographic segments, meaning city, state, ZIP code and designated market areas.

Next, there are behavioral segments. This is where a string of logic is applied to a set of points-of-interest.

For example, we see an ID at 8 a.m. at Starbucks, 9 a.m. at the elementary school, 10 a.m. at 24 Hour Fitness and she lives in Walnut Creek, CA thus she belongs in a "stay-at-home parent" segment.

There are also brand-associated segments, consisting of consumers who have visited a particular category (fast food diner) or brand or store (Gap shopper).

Advertisers can also use specific places to construct a custom audience based on a particular behavior.

For example, by geofencing all the relevant conferences for a business-to-business software vendor and collecting mobile user IDs for everyone that attends, you build an audience pool of high propensity/in-market buyers that can be retargeted at a later point in time.

Lookalike segments are another option.

Once a segment is built and a pool of users is defined, you can look for other mobile users that exhibit similar behavior and add them to your segment. This is a common practice online, as well as now on mobile.

Some modelers are also building demographic profiles that cover ethnicity and predicted household traits such as income. These segments are usually created by matching home location to a ZIP code and appending a third-party data set such as Claritas PRIZM or census data.

Time out

Time is another factor in audience profile construction.

A user downtown in the financial district at 2 p.m. on a Tuesday is probably at work, or a business traveler and belongs to a different segment from the same user in the same place at 10 p.m. on Saturday night that might be a nightlife enthusiast.

The output of all these segments can take a few different forms.

An audience segment is a simple match of an ID to a particular segment. "This mobile ID is a business traveler" is a small, lightweight data attribute that can be easily passed for ad targeting.

Then there are user profiles, which is a heavy-lifting data exercise.

User profiles involve the entire set of all the data and profiles associated with an ID. It involves a lot more data, and is usually only useful for brands that have a CRM or DMP, and want to ingest the data themselves so they can do their own analysis.

NO MATTER how much data is involved, or from what source, a lot of data cleaning and normalizing is required to get accurate user location data and POI data.

Creating authentic mobile audiences requires getting a lot of things right and doing it at scale.

The better your data cleaning tools, the more accurate the underlying data can be, and as explored in the two previous articles in this series, inaccurate user location ([Challenging misconceptions in location data science](#)) and POI data ([Importance of good place \(POI\) data](#)) is a problem to avoid.

[Please click here to download an infographic on location precision in mobile advertising](#)

This is the third in a series of articles looking at the different components of how to effectively and accurately obtain, filter, profile and use location data to run successful mobile ad campaigns. The columns cover the different types of location data, accuracy and precision, the role of point-of-interest data, different ways of constructing audience segments and attribution.

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