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COLUMNS

Cutting through the noise around location accuracy

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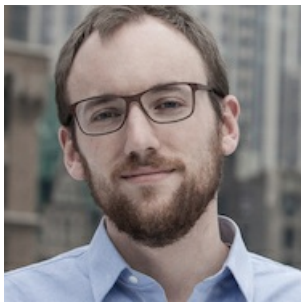

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By Drew Breunig

Location technology is powerful stuff. Movement data reveals audience behavior, allowing brands to better deliver mobile ads, measure advertising, plan billboard campaigns, place new retail stores and understand audience affinities to solve core business challenges.

With any evolving technology, the cost of early adoption is dealing with a learning curve. One element of location technology which is particularly noisy is the location accuracy of mobile devices. How accurate is location data really? A few hundred feet? A few dozen feet? Four feet?

No mean feat

The four-feet number is very attractive. It is small enough to dismiss the concerns of mobile-skeptical audiences, but not so small as to raise the suspicions of someone not familiar with location data infrastructure.

In materials, these accuracy claims are supported by cherry-picking figures or taking readings from only ideal scenarios. Some cite one figure from an academic study as confirmation of minute accuracy claims, but fail to include figures in the same study which refute it for example, when trying to locate devices indoors, location services were only accurate to 74 meters.

Another study cited produced high accuracy by allowing devices several minutes to an hour to obtain a fix, something we cannot expect in the real world. The four-foot figure is simply shrewd marketing, but marketing which makes the jobs of marketers harder.

Four-feet accuracy is an impractical and misleading claim, but let us set that aside for a moment. Because the accuracy of the mobile device is only one of three components that need to be taken into account when considering "accuracy."

The accuracy of location technologies depends on their map, the movement data captured by devices, and how the two are brought together. Think of these three parts like the legs of a stool. Screw up any one of them and you will fall over.

Maps should contain the locations and boundaries of locations auto dealerships, retail stores, municipal boundaries, transit routes, roads and residential parcels. It is essential that a base map be detailed and accurate.

Movement data quality depends on your use case.

When getting directions or calling an Uber, a phone roughly triangulates its position using nearby cellular towers. Then, it looks around for any Wi-Fi networks it recognizes. All the while, it is scanning the sky (the haystack) looking for GPS satellites (the needles) somewhere above the horizon. With a fix on a satellite, it starts to determine your location with real accuracy. All the while, you watch the blue dot marking your location shrink.

This can happen quickly. It can also happen slowly. How quickly and accurately your position is realized depends on the model of phone you are carrying, the version of the operating system installed, what city or town you are standing in, and many other extraneous variables out of a marketer's control.

On the dot

Findyr, an independent research company, produced a study that provided perspective in this area. Its study tasked hundreds of people to visit specific locations in five cities to measure the discrepancy between recorded phones location and actual location. Retail locations, restaurants, sports arenas, universities, museums and landmarks were just a few examples.

The market researcher measured the efficacy of smartphone location services in real world conditions. In other words, it did not just check to see if the blue dot on your map was small indicating a good reported accuracy, but it also analyzed whether or not the dot agreed with stated location.

One takeaway from Findyr's study: when it comes to advertising use cases, location data is accurate to an average of 93 feet. Sometimes it is better, sometimes it is worse.

But since the estimated accuracy of a user's location is not defined in the OpenRTB standard yet, the accuracy of the device cannot be known by advertisers when evaluating location in ad requests.

WHAT DOES THIS mean for brands?

Well, location data continues to empower brands with insights that inform both media and business decisions.

As demand for the technology rises, however, marketers should navigate through a cloudy landscape with a scientific eye. Only in this way can they arm themselves with knowledge to separate facts from fiction.

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