

SOFTWARE AND TECHNOLOGY

## Mobile location data is accurate up to 30 meters: report

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*Location data accuracy fluctuates*

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While mobile location data is accurate up to 30 meters on average, a new report from PlaceIQ suggests there are significant variations in accuracy depending upon a number of factors, potentially impacting marketers' programs.

As mobile has grown, savvy marketers have understood the need for location-based tactics that reach users with contextual relevance. However, there is a complex relationship between factors such as signal source, environment and personal use that affect location data accuracy, according to the report, Location Data Accuracy Revealed.

"Most marketers agree that location data is a valuable commodity for informing media, marketing, and broader business decisions," said Duncan McCall, CEO at PlaceIQ. "Until now however, we've never had an honest analysis of what location data accuracy really means.

"There have been countless studies about how fraudulent data can impact location accuracy, but this is the first study to show exactly how signals at the device level can skew a marketer's understanding of location," he said.

The report, which PlaceIQ asserts is an industry-first study on location data accuracy, is based on an analysis of more than 150 physical locations across five U.S. cities done by independent research firm Findyr.

### Accuracy fluctuations

While the average for location data accuracy is 30 meters, there were some significant variations.

The average for Boston is 21 meters; New York 27 meters; Austin, TX, 28 meters; Washington 29 meters, and Chicago 38 meters.

A number of factors can impact location data accuracy, including its source, which can include GPS signals, WiFi and cell tower triangulation. Also impacting accuracy is area density, skyline view and whether a user is indoors or outdoors. Other factors include whether location data access is enabled, the type of mobile app being used and which operating system is being used.

A common example of the inconsistencies in location data is ride-hailing apps, which can be less effective in different situations.

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Key for location accuracy is a mixture of physical infrastructure and WiFi density. This is why Boston, which offers high building density for allowing WiFi access but does not have an abundance of skyscrapers that would inhibit GPS signal reception performs best in the test.

### **Optimizing location data**

The report also found that for one national retailer, the average location accuracy for stores in different cities varied greatly, with New York at 87 meters, Boston at 51 meters and Chicago at 10 meters.

To help marketers better understand location accuracy, PlaceIQ has launched Dynamic Distancing, which dynamically accounts for the variability in location signals when determining visitation so marketers can more confidently understand user behavior.

"In terms of location accuracy, all marketers are bound by the same source of data the mobile devices themselves," Mr. McCall said. "Based on an independent third party study, the reality is that on average, location data obtained via mobile smartphones is accurate up to 30 meters.

"If marketers want to use location intelligently, for things like specific targeting of custom creative or analytics for making important decisions, they need technology purpose-built to understand the limitations and optimize the data's potential," he said.

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