

# **Guidance for NAI Members:** Determining Whether Location is Imprecise

February 2020



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The 2020 update to the NAI Code of Conduct (Code) requires member companies to obtain a user's Opt-In Consent to use Precise Location Information for Tailored Advertising or Ad Delivery and Reporting (ADR). Determining whether a member is required to obtain Opt-In Consent when using location information for those purposes centers on its level of "precision."

The definition of Precise Location Information under the Code does not define the term "precise." Instead, the definition of Precise Location Information provides two explicit examples of how technologies are used to derive "precise" location and therefore require Opt-In Consent: the use of latitude-longitude coordinates as derived from GPS; and location as derived from Wi-Fi triangulation.

Precise Location Information is data that describes the precise geographic location of a device derived through any technology that is capable of determining with reasonable specificity the actual physical location of an individual or device, such as GPS-level latitude-longitude coordinates or location-based radio frequency signal triangulation. – Section I.I of the Code

The commentary to the Code notes that Precise Location Information excludes data that is altered such that a member cannot determine with "reasonable specificity the actual physical location of a person or device." Such data is referred to as "imprecise" data in this guidance.

The main goal of this guidance is to provide clarity as to conditions under which location information is considered imprecise by the NAI Code. This guidance is based on feedback from the industry and the NAI's own technical analysis, and is expected to apply to a majority of location-based practices in the marketplace today. The guidance defines when location information is imprecise, provides clarification on how members may render location information imprecise, and explains the process to otherwise determine whether location information is imprecise. This guidance also explains how to apply these principles when receiving location information in various formats. Appendix A contains a flowchart summarizing the contents of this guidance.

In summary, the NAI's position is that imprecise location information includes geographic coordinates having the precision of two or fewer decimal places (or the geographical equivalent) consistent with the Code's reference to technologies used to determine Precise Location Information (i.e., GPS-level latitude/longitude coordinates and Wi-Fi triangulation).<sup>1</sup>

**This document has been updated to reflect changes in the 2020 NAI Code, current business practices, and consumer expectations. This document supersedes the prior version of the "Guidance for NAI Members: Determining Whether Location is Imprecise" which was published in 2015. The purpose of this document is to offer methods for members to render location information imprecise. Please note that the initial collection of Precise Location Information and the act of rendering location information imprecise will require Opt-In Consent if the precise or imprecise data is to be used for Tailored Advertising or Ad Delivery and Reporting by the member or any downstream partner. Subsequent downstream use of the imprecise data does not require Opt-In Consent.**

**Please note that this guidance is not intended as legal advice regarding compliance with laws or regulations. The NAI encourages members to consult with counsel regarding compliance with laws and regulations in all geographic regions applicable to their business, and to review and update business models, privacy policies, terms of service, advertisements, or other representations accordingly.**

<sup>1</sup> Location coordinates are generally two numbers used to describe the latitude and longitude of a location on the geographic coordinate system (e.g., 38.8977° N, 77.0366° W). Limiting the decimal places of these numbers will reduce the precision of these coordinates. For example, 38.8° N is less precise than 38.8977° N in describing a device's latitude.

## Determining Whether Consent is Required

If a member receives Precise Location Information (such as unaltered raw latitude and longitude coordinates of a device), and that data will be used either by the member or a partner of the member (in any form) for Tailored Advertising or Ad Delivery and Reporting, the member must obtain Opt-In Consent (or obtain reasonable assurances of Opt-In Consent) for the proposed use of that data.

The NAI recommends that members receiving Precise Location Information implement technologically reasonable data minimization practices, such as rendering data imprecise using methodology provided in this Guidance. The methodology is provided as some ways in which members may render location information imprecise. If a member company follows these methodologies, NAI staff will classify the data as imprecise without further analysis during annual compliance reviews. If a member chooses to use a different methodology to render data imprecise, the NAI staff will use a four-factor analysis to determine whether the data meets the required standard of imprecision.

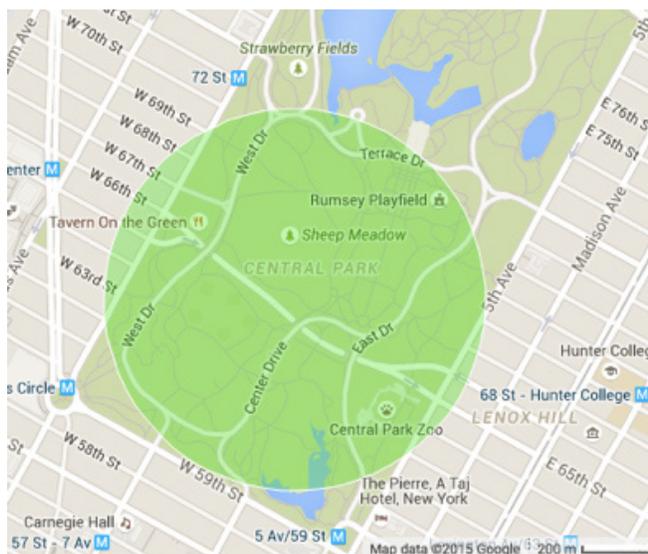
## Imprecise Location Information

This guidance details three methods by which Precise Location Information can be upleveled in a manner that will be considered by the NAI as imprecise: (1) dropping latitude/longitude decimals; (2) increasing the size of the geographic shape or place; and (3) using general descriptors. Precise Location Information that is rendered imprecise before a member receives it does not require Opt-In Consent. This would also mean that if a member company renders Precise Location Information imprecise, recipients of the imprecise data would not be required to obtain Opt-In Consent.

### LOCATION AS LATITUDE AND LONGITUDE COORDINATES

When using latitude and longitude coordinates to determine location, the precision of the location information increases as more decimal places are used.

Latitude and longitude coordinates with two or fewer decimal places are considered by the NAI staff to be imprecise. For example, if location is a geographic area where a user or device user may actually be located, as shown in the image to the right, latitude and longitude coordinates with two or fewer decimals are equivalent to resolving the actual location of a user or device to within to the area of a circle with a radius of at least 500m with an accuracy of 68% or more.<sup>2</sup>



Comparison of a 500m radius circle and the width of Central Park

<sup>2</sup> See Android Developer Documentation regarding the Precision of various location technologies (<http://developer.android.com/reference/android/location/Location.html#getAccuracy>), ([http://developer.android.com/reference/android/location/Criteria.html#ACCURACY\\_LOW](http://developer.android.com/reference/android/location/Criteria.html#ACCURACY_LOW)), the precision of iOS's "significant-change" service (<https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/LocationAwarenessPG/CoreLocation/CoreLocation.html>), and Wikipedia's article on Decimal Degrees ([http://en.wikipedia.org/wiki/Decimal\\_degrees](http://en.wikipedia.org/wiki/Decimal_degrees)).

For latitude and longitude coordinates with more than two decimal places, a member may remove decimal places from those coordinates to render the location information imprecise. For example, if a member receives latitude and longitude coordinates with seven decimal places, this location is likely to be regarded by the NAI staff as precise. By dropping decimal places three through seven and then saving the coordinates with only the remaining first two decimals, the location is rendered imprecise.

## LOCATION AS GEOGRAPHIC SHAPES

The above standard for circular shapes using geographical coordinates also applies to members' use of non-circular geometric shapes or tiles (collectively referred to as geographic shapes) to represent a user's location. Data that locates a device or user to a geographic area that has an area of a circle with a radius of at least 500m is imprecise, regardless of the shape of that area.

If a member receives information locating a user or device to an area with a size of 1,000 meters<sup>2</sup>, that member can render the data imprecise by only storing information that the user or device was in an area with a size of 800,000 meters<sup>2</sup>.

The definition of Precise Location Information also does not include location information that has been altered prior to its provision for use in Tailored Advertising or Ad Delivery or Reporting, so that a member is unable to determine with reasonable specificity the actual physical location of a user or device.

– Code Commentary, page 21

## LOCATION AS NAMES OR ADDRESSES

Members may receive a name or address for a location associated with a user or device (hereafter referred to as a "place") instead of receiving that location information in the form of geographic coordinates or shapes. For example, a member may receive information through a Wi-Fi connection that a device is located in a Starbucks with a specific street address in a given city. Similarly, a member may receive information that a device is located in a particular city or neighborhood based on the IP address associated with the device. If a member receives data that a user or device is at a particular address, that member can render that location imprecise by storing only the name of the city.

In scenarios where a place is used in lieu of geographic coordinates or shapes, the above standard for latitude/longitude coordinates applies to the geographic area of the identified place. Therefore, if the geographic area of the identified place is larger than the area of a circle with a radius of 500m, then the fact that a user or device is actually located in that place is not Precise Location Information. To illustrate, Disney World, Central Park, and downtown San Francisco all have areas larger than a circle with a radius of 500m (or 785,398 meters<sup>2</sup>) and therefore, are examples of imprecise location information.

A member should consider the precision of the location they're using to uplevel. For example, a member may receive a latitude/longitude coordinate with seven decimals that identifies a specific Starbucks on the corner of 5th street and 6th avenue in Manhattan. The member only saves the term "Starbucks" or "coffee", based on that consumer's location. Because "Starbucks" and "coffee" describe generic places (i.e., there are many Starbucks and Coffee shops in the US), they do not precisely locate an individual and thus the location is rendered imprecise if those general descriptors are saved instead of the latitude/longitude coordinate with seven decimals. If the general descriptor, however, is unique (for example, "Mom & Pop's Coffee") it may be more likely to be precise and members should use a larger geographic area. The first scenario described (labeling a consumer's location as "Starbucks") does constitute a use of Precise Location Information. Members have to first obtain Opt-In Consent for the collection of latitude/longitude coordinates even though they are subsequently rendered imprecise. The subsequent use of the segment or descriptor thereafter by another member or party, however, does not constitute a use of Precise Location Information.

## Other Methods of Rendering Location Information Imprecise Require a Four-Factor Analysis

The NAI staff acknowledges that members may have methods other than those described above for collecting or processing location information in such a way that it will fall outside of the definition of Precise Location Information. In those cases, the ability of NAI members to determine the actual location of a user or device may be influenced by additional factors such as population density and geographic area. In addition, the precision of location information is generally enhanced when using additional decimal places, smaller geographic shapes, or more specific places.

To determine whether location information that has not been rendered imprecise using one of the methods described above is Precise Location Information (and therefore subject to the Code's Opt-In Consent requirements), the NAI requires members to consider four factors:

1. the area of the identified location (e.g., the number of decimal places used),
2. the population density of the located area (e.g., a crowded stadium versus an old country road?),
3. the accuracy of the data (e.g., were extra decimal places in the coordinates added arbitrarily, such as trailing zeros?), and
4. the presence and detail of the location's timestamp (e.g., does the location information describe a user's location at a specific millisecond or specific month?)

No single factor listed above is dispositive as to whether location information is precise when evaluating these factors. Instead, where applicable, members should consider all four factors. For example, even if a member uses latitude and longitude coordinates with three decimal places, that member may still determine that the location information is imprecise based on information such as whether its use is minimized in sparsely populated areas, the accuracy of the technology producing these coordinates, and whether the timestamps are attached to the location information.

Similarly, when working with places or geographic shapes, if the geographic area of the located place or shape is smaller than a circle with a radius of 500m (or an equivalent area of 785,398 meters<sup>2</sup>), then members should undertake the four-factor analysis set forth above to determine whether that location information is precise or imprecise. For example, information that a consumer or device is in a particular store may be imprecise depending on the size of the store, the usual number of customers in that store, the accuracy of the location data, and the detail of the location information's timestamp.

In reviewing a member's use of location information, NAI staff will consider whether the member has conducted a reasonable analysis using the above factors and concluded that the information is imprecise. However, a member may be asked to change its practices if NAI staff determines the location information is precise based on the above factors, subject to all procedure and rights of appeal under the NAI Sanction Procedures.<sup>3</sup> If the NAI requires a change of practices, the member must comply. Through this process, NAI staff will work with members to ensure that the risk of re-identifying an individual and the sensitivity of the location information are minimized when classifying it as imprecise.

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<sup>3</sup> See Network Advertising Initiative, [https://www.networkadvertising.org/pdfs/NAI\\_Compliance\\_and\\_Enforcement%20Procedures.pdf](https://www.networkadvertising.org/pdfs/NAI_Compliance_and_Enforcement%20Procedures.pdf)

## APPENDIX A

### How to Determine Whether Location is Imprecise

