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AP Exclusive: Google tracks your movements, like it o not

By RYAN NAKASHIMA 42 minutes ago



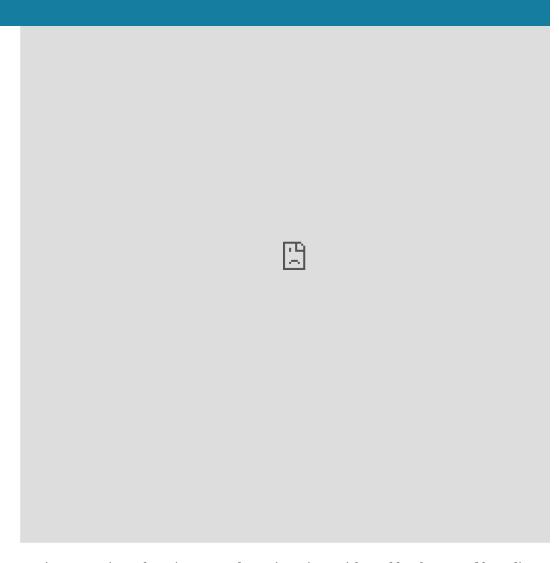
SAN FRANCISCO (AP) — Google wants to know where yo badly that it records your movements even when you expl

tell it not to.

An Associated Press investigation found that many Google services on Android devices and iPhones store your location data even if you've used a privacy setting that says it will preve Google from doing so.

Computer-science researchers at Princeton confirmed these findings at the AP's request.

For the most part, Google is upfront about asking permission to use your location informat An app like Google Maps will remind you to allow access to location if you use it for naviga you agree to let it record your location over time, Google Maps will display that history for a "timeline" that maps out your daily movements.



Storing your minute-by-minute travels carries privacy risks and has been used by police to determine the location of suspects — such as a warrant that police in Raleigh, North Carolina, <u>served on Google</u> last year to find devices near a murder scene. So the company v you "pause" a setting called Location History.

Google says that will prevent the company from remembering where you've been. Google's <u>support page on the subject</u> states: "You can turn off Location History at any time Location History off, the places you go are no longer stored."

That isn't true. Even with Location History paused, some Google apps automatically store stamped location data without asking. (It's possible, although laborious, to delete it.)

For example, Google stores a snapshot of where you are when you merely open its Maps at Automatic daily weather updates on Android phones pinpoint roughly where you are. And searches that have nothing to do with location, like "chocolate chip cookies," or "kids scien kits," pinpoint your precise latitude and longitude — accurate to the square foot — and savyour Google account.

Storing location data in violation of a user's preferences is wrong, said Jonathan Mayer, a Princeton computer scientist and former chief technologist for the Federal Communication Commission's enforcement bureau. A researcher from Mayer's lab confirmed the AP's find multiple Android devices; the AP conducted its own tests on several iPhones that found the behavior.

"If you're going to allow users to turn off something called 'Location History,' then all the p where you maintain location history should be turned off," Mayer said. "That seems like a p straightforward position to have."

Google says it is being perfectly clear.

"There are a number of different ways that Google may use location to improve people's experience, including: Location History, Web and App Activity, and through device-level Location Services," a Google spokesperson said in a statement to the AP. "We provide clear descriptions of these tools, and robust controls so people can turn them on or off, and dele histories at any time."

To stop Google from saving these location markers, the company says, users can turn off at setting, one that does not specifically reference location information. Called "Web and App Activity" and enabled by default, that setting stores a variety of information from Google all and websites to your Google account.

When paused, it will prevent activity on any device from being saved to your account. But I "Web & App Activity" on and turning "Location History" off only prevents Google from add your movements to the "timeline," its visualization of your daily travels. It does not stop Go collection of other location markers.

You can delete these location markers by hand, but it's a painstaking process since you hav select them individually, unless you want to delete all of your stored activity.

You can see the stored location markers on a page in your Google account at myactivity.google.com, although they're typically scattered under several different headers of which are unrelated to location.

To demonstrate how powerful these other markers can be, the AP created <u>a visual map</u> of t movements of Princeton postdoctoral researcher Gunes Acar, who carried an Android pho Location history off, and shared a record of his Google account.

The map includes Acar's train commute on two trips to New York and visits to The High Li park, Chelsea Market, Hell's Kitchen, Central Park and Harlem. To protect his privacy, The didn't plot the most telling and frequent marker — his home address.

Huge tech companies are under increasing scrutiny over their data practices, following a seprivacy scandals at Facebook and new data-privacy rules recently adopted by the European Union. Last year, the business news site Quartz found that Google was <u>tracking Android us</u> collecting the addresses of nearby cellphone towers even if all location services were off. Go changed the practice and insisted it never recorded the data anyway.

Critics say Google's insistence on tracking its users' locations stems from its drive to boost advertising revenue.

The AP learned of the issue from K. Shankari, a graduate researcher at UC Berkeley who st the commuting patterns of volunteers in order to help urban planners. She noticed that he Android phone prompted her to rate a shopping trip to Kohl's, even though she had turned Location History off.

"So how did Google Maps know where I was?" she asked in a blog post.

The AP wasn't able to recreate Shankari's experience exactly. But its attempts to do so reve Google's tracking. The findings disturbed her.

"I am not opposed to background location tracking in principle," she said. "It just really bo me that it is not explicitly stated."

Google offers a more accurate description of how Location History actually works in a plac only see if you turn it off — a popup that appears when you "pause" Location History on your <u>Google account webpage</u>. There the company notes that "some location data may be as part of your activity on other Google services, like Search and Maps."

Google offers additional information in a popup that appears if you re-activate the "Web & Activity" setting — an uncommon action for many users, since this setting is on by default. popup states that, when active, the setting "saves the things you do on Google sites, apps, a services … and associated information, like location."

Warnings when you're about to turn Location History off via Android and iPhone device se are more difficult to interpret. On Android, the popup explains that "places you go with you devices will stop being added to your Location History map." On the iPhone, it simply read "None of your Google apps will be able to store location data in Location History."

The iPhone text is technically true if potentially misleading. With Location History off, Goc Maps and other apps store your whereabouts in a section of your account called "My Activi not "Location History."

Since 2014, Google has let advertisers track the effectiveness of online ads at <u>driving foot tracks</u> a feature that Google has said relies on user location histories.

The company is pushing further into such location-aware tracking to drive ad revenue, whi rose 20 percent last year to \$95.4 billion. At a Google Marketing Live summit in July, Goog executives <u>unveiled a new tool</u> called "local campaigns" that dynamically uses ads to boost person store visits. It says it can measure how well a campaign drove foot traffic with data from Google users' location histories.

Google also says location records stored in My Activity are used to target ads. Ad buyers ca target ads to specific locations — say, a mile radius around a particular landmark — and tyl have to pay more to reach this narrower audience.

While disabling "Web & App Activity" will stop Google from storing location markers, it als prevents Google from storing information generated by searches and other activity. That calimit the effectiveness of the Google Assistant, the company's digital concierge.

Sean O'Brien, a Yale Privacy Lab researcher with whom the AP shared its findings, said it is "disingenuous" for Google to continuously record these locations even when users disable Location History. "To me, it's something people should know," he said.