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LAQUAN DAWES

SUPERIOR COURT STATE OF CALIFORNIA
CITY AND COUNTY OF SAN FRANCISCO

People of the State of California,

Plaintiff,

vs.

Laquan Dawes,

Defendant.

Court No: 19002022

Motion to Quash and Suppress Evidence under Penal Code §§ 1538.5 and 1546

Date: 07/07/2020
Time: 9:00am
Dept: 11 (To Set)

LaQuan Dawes, through counsel, moves the Court to quash the warrant issued in this matter on December 4th, 2018. This "geofence" warrant authorized San Francisco Police Officers to obtain the cell phone location data for every Google user who happened to be in the vicinity of 1447 42nd Avenue on the afternoon of October 24, 2018. It then permitted the police to get additional and more extensive location data for six specific users. The geofence warrant issued in this case is both an unlawful and an unconstitutional general warrant. It is overbroad and lacks the particularity required by the Fourth Amendment. The Court should quash the warrant.

Introduction

The San Francisco Police Department obtained LaQuan Dawes's personal information using what has been termed a "geofence" warrant. While it is not unusual for law enforcement to request and receive cell phone location data via warrant, a geofence warrant is uniquely different from a standard cell phone data warrant. This new type of warrant requires Google to produce data for every single device that is using Google location services within a certain area and at a particular time. Unlike all other warrants for personal cell data, which requests data for a particular user, number, or account—these geofence warrants do not have a particular user in mind.

Here, the warrant did not present Mr. Dawes as a suspect under investigation or mention his name in any way. San Francisco Police had no suspects in alleged burglary, so they wrote a warrant that would compel Google to act as a detective for them. The warrant they authored does not specify the name or identity of any of the people whose personal information was searched as a result of this warrant. Instead, the warrant works backwards: it chose a location and time and then required Google to comb through a huge amount of private data—held in what they call the "Sensorvault"—to find any and all devices that were using Google location services in that area or time. It then required Google to hand over all of that data to the San Francisco Police Department. Officers then had complete discretion and no oversight as they looked through the data and requested additional, private information from devices they deemed relevant.

This is the definition of a modern-day incarnation of a "general warrant," and it is strictly prohibited by the Fourth Amendment. People using their cellphones or devices have a reasonable expectation of privacy in their location data—it is sensitive information and reveals the "privacies of life" for users.[1] It shows when and where people are in their homes, their places of worship, or in hotel rooms. These are constitutionally protected spaces. The ability to access data that can locate an individual quickly, cheaply, and retroactively is an unprecedented expansion of law enforcement power and is certainly a search within the meaning of the Fourth Amendment.

Geofence warrants like the one issued in this case are incapable of satisfying the probable cause and particularity requirements of the Fourth Amendment—and the fact that law enforcement obtained a warrant in this matter does not save the search from being constitutionally invalid. The warrant here fails to establish probable cause and establish particularity to search Mr. Dawes's Sensorvault data. Even assuming that Google phones and services are commonplace, there were no facts contained within the affidavit here to establish that those involved with the home invasion used either a Google device or an application—ever or at the time of the burglary. The government's generalizations about cell phone use, without any specific factual nexus to the allegations in this case, are insufficient to establish probable case for the sweeping search that was done here. Permitting this type of invasive and overbroad request would gut Fourth Amendment protections. For these reasons, the Court must quash the warrant and suppress the evidence obtained from the geofence warrant in this matter.

How a Geofence Warrant Works

It is common for law enforcement to compel Google, via warrant, to disclose records related to a particular user's account—including data about that user's location and movement during a particular time of interest.[2] These warrants identify a specific person of interest in a criminal investigation and

[1] *Carpenter v. United States,* 138 S. Ct. 2206, 2214 (2018).

[2] Exhibit A: "Google Amicus", *filed in United States v. Chatrie,* 19-cr-00130 (E.D. Va. Dec. 20, 2019) (ECF No. 59-1) at 2-3.

compel only information about that specific person.

A geofence warrant is something else entirely. As described by Google, "[r]ather than seeking information relating to a known suspect or person of interest, these requests broadly seek to identify all Google LH [location history] users whose LH data suggests that they were in a given area in a given timeframe—even though law enforcement has no particularized basis to suspect that all of those users played a role in, or possess any information relevant to, the crime being investigated."[3] This type of warrant requires Google to conduct a "broad and intrusive" search across all Google users' location history information.[4]

Essentially, instead of only requesting data about whether "John Doe's" cellphone was at a certain Whole Foods on January 1, 2020, between 6 pm and 8 p.m.., a geofence warrant requests information about **every single person** whose cellphone or device passed through the Whole Foods on January 1, 2020, between 6 and 8 p.m.. Google takes the location and timeframe provided by law enforcement and has to search its entire database of location history to determine which users' devices might have been present in that area at that time.[5] This is a search of a massive scale.

The information being provided is also of a highly sensitive nature. Location history information is "essentially a history or journal that Google users can choose to create, edit, and store to record their movements and travel...by enabling and using LH, a Google user can keep a virtual journal of her whereabouts over a period of time....The Timeline might reflect, for instance, that the user left her home on Elm Street in the morning and walked to the bus stop, took the bus to her office on Main Street, walked to a nearby

[3] Exhibit A: "Google Amicus" *supra* at 3.

[4] Id at 4.

[5] Id at 11-12.

coffee shop and back to the office in the afternoon, and then went to a nearby restaurant in the evening before returning home by car."[6]

This is deeply personal and private information. These geographic areas include private homes, government buildings, and places of worship. And this information is being provided not for one, specific user—but for all of us who happen to be using Google location services in that area at that time.

This data is also substantively different from other location history data that has been previously considered by the US Supreme Court. In *Carpenter*, the Court emphasized the revealing nature of "cell site location information,"[7] (CSLI) but also noted that CSLI is a collection of time-stamped records that are automatically generated by a wireless carrier, Verizon-for example, whenever a phone connects to a physical cell site.[8] Carriers like Verizon maintain these records for their own business purposes—identifying spots of bad service or roaming rates. Thus, when law enforcement askes for this cell service location information, it is asking carriers like Verizon to turn over their automatically generated business records relating to when a device connected to a cell site.

By contrast, Google location history information "is controlled by the user, and Google stores that information in accordance with the user's decisions."[9] It is not automatically generated and it is not a business record being stored and used for the sake of Google. A user is entrusting Google to safeguard his or her "journal" in the Sensorvault—and this is the information being compelled by a geofence warrant. It is more personal, more detailed, and more specific. And the search that is done is broader and more intrusive than a traditional cell service location inquiry.

[6] Id at 6.

[7] *Carpenter v. United States, supra,* 138 S. Ct. at 2219.

[8] Id at 8.; *Carpenter* 138 S.Ct. at 2211-2212.

[9] Id at 9.

Memorandum of Points and Authorities

STATEMENT OF THE CASE

Laquan Dawes was arrested on February 6, 2019, by the San Francisco Police Department on an outstanding Ramey warrant, issued on January 28, 2019. Dawes is now charged with a violation of Penal Code section 459 (first degree burglary) with an allegation under Penal Code section 667.5(c)(21) (hot prowl); and with a violation of Penal Code section 487(a) (grand theft).

STATEMENT OF FACTS

Surveillance footage captures four unknown suspects before and during a reported burglary on October 24, 2018

On October 24, 2018, a residential burglary was reported at 1447 42nd Avenue in San Francisco. Nearby security cameras recorded a male suspect (S1) arrive in a four-door sedan, walk to 1447 42nd Avenue, and then return to the car before driving away a minute later. Almost two hours later, a second suspect (S2) is seen walking toward 1447 42nd Avenue and then leaving. An hour after that, footage shows a new, different four-door sedan arrive. The same two male suspects from before, S1 and S2, get out of the new car. There are two, different men who remain inside the new car. S1 and S2 are seen walking back and forth from 1447 42nd Avenue and the four-door sedan, carrying items. No suspects were identified from the video footage nor were there any discernable license plate numbers pulled for either involved vehicle.

Having made no identifications of the suspects, Sergeant Farrell requests a broad, reverse geolocation search for Google customer data.

On October 30, 2018, Sgt. Farrell of SFPD circulated a crime alert with screenshot images of the burglary suspects to surrounding law enforcement departments. As of December 3, 2018, Sgt. Farrell had received no responses.

On December 4, 2018, Sergeant Farrell authored a search warrant affidavit for reverse geolocation data from Google, Inc. in relation to this incident. This warrant cast a wide net, requesting all location history based on cellular, Global Positioning System ("GPS"), and Wi-Fi data for every mobile device within half a block of 1447 42nd Avenue on October 24, 2018. Sgt Farrell asked for:

> *"Google to conduct a search of all Android enabled mobile devices that recorded location data within the geographical area of 1447 42nd Avenue..."*[10]

The warrant requested all mobile device data from during and around the time of the reported burglary.[11] Specifically, for every single device that passed through the search area at any moment between 2:45 p.m. and 3:15 p.m., 4:30 p.m. and 5:00 p.m., and 5:20 p.m. and 6:30 p.m.

The warrant requests location information related to Google accounts. No specific applications, such as Gmail, Google Maps, Play Store, etc. are requested—instead the warrant discusses "Android enabled mobile devices."

The reason for this request was Sgt Farrell's generalized assumption that the, "most common types of cell phones used by the vast majority of the people in the United States are smart phones..." and that, "Based on my training and experience, I know the two most commonly used smart phone operating systems are iOS, which run on Apple iPhones, and Android..."[12]

After permitting police investigators to analyze any initial data return to identify suspects, the warrant enables the following:

> *"For those accounts identified as relevant to the ongoing investigation*

[10] Exhibit B: Warrant for LaQuan Dawes, page 11.

[11] A "reverse geolocation search" is distinguished from a "geolocation search" in that the latter seeks to reveal a specific individual's movements whereas the former begins with a location and then seeks to reveal which specific individuals were present there.

[12] Exhibit B, Warrant, pg 10.

> *through an analysis of provided records, and upon demand, Google shall provide additional location history* ***outside of the predefined area*** *for those relevant accounts to determine path of travel."*

Such data could include up to forty-five minutes before or after the initial three time windows enumerated. Furthermore,

> *"For those accounts identified as relevant . . . Google shall provide the subscriber's information for those relevant accounts to include subscriber's name, email address, IMEI and phone numbers, services subscribed to, recovery SMS phone number and recovery email address."*

For each of these additional steps, the warrant mandated no additional judicial oversight or threshold standards over what qualified as "relevant." Instead, the warrant permitted investigators acting only under their own discretion to access location and diverse personal account information for one or various digital device users.

From Google's data, compelled under the warrant and delivered on December 18, 2018, law enforcement targeted six different devices as being of interest to them. Under the terms of the warrant, Officer Lieu subsequently requested Google location data spanning forty-five additional minutes before and after the initial time windows for a specific device that he determined to be "relevant" to the investigation. Because there were no relevancy standards or reporting requirements contained within the warrant, the motivations of this request remain unknown. Google provided the requested location information to Lieu on January 7, 2019. Lieu then requested unmasking of the associated account, again without oversight. Google provided this on January 9, 2019. Investigators gained access to Laquan Dawes's name, two email addresses registered to him, a complete list of the Google-associated products he used, and the IP address from which he first agreed to Google's terms of use.

The information obtained from Google later formed the basis of a Ramey warrant for Dawes's arrest. The Honorable Linda Colfax authorized Dawes's Ramey warrant on January 28, 2019.

ARGUMENT

1. LaQuan Dawes had a Reasonable Expectation of Privacy in his Location Data and the Government's Acquisition of his Data was a Search

Fourth Amendment protections have long been understood to extend beyond property interests into the realm of privacy.[13] The U.S. Supreme Court's 2018 *Carpenter* ruling makes clear that an individual's expectation of privacy extends to his personal location data held by a third party.[14] So long as an expectation of privacy is objectively reasonable, state intrusion qualifies as a search governed by the Fourth Amendment's limitations.[15] A warrant to access cell-site location information must comply with all governing specificity and probable cause limitations.[16]

The location history data at issue here is even more precise with regard to an individual's specific coordinates than the cell-site location information (CSLI) discussed in *Carpenter.*[17] But both types of data give the government the ability to "travel back in time to retrace a person's whereabouts."[18] And they can do so with very little effort on their part. The traditional methods used for surveillance of individuals are logistically draining on law enforcement—they create de-facto limitations on the government's ability to conduct wide-scale and long term tracking of citizens and residents of the United States.[19]

[13] *Katz v. United States* (1967) 389 U.S. 347, 351.

[14] *Carpenter v. United States* (2018) 138 S.Ct. 2206, 2217.

[15] *Smith v. Maryland* (1979) 442 U.S. 735, 740.

[16] *Carpenter, supra,* 138 S.Ct. at p. 2209.

[17] Levinson-Waldman, *Cellphones, Law Enforcement, and the Right to Privacy: How the Government is Collecting and Using Your Location Data* (2018) The Brennan Center for Justice at NYU School of Law, pp. 6–7 <https://www.brennancenter.org/sites/default/files/publications/2018_12_CellSurveillanceV3.pdf>.

[18] *Carpenter, supra,* 138 S. Ct. at p. 2218.

[19] *United States v. Jones, 565 U.S. 400, 406* (2012). As Justice Alito explained in Jones, "[i]n the pre-computer age, the greatest protections of privacy were neither constitutional nor statutory, but practical. Traditional surveillance for any extended

But recent advances in technology raise meaningful, decisive differences in individuals' privacy expectations as compared to traditional in-person surveillance.[20] This is because "GPS monitoring generates a precise, comprehensive record of a person's public movements that reflects a wealth of detail about her familial, political, professional, religious, and sexual associations" and this information can be accessed by a single officer, sitting at a computer and reviewing data, without judicial oversight.[21] This potential for massively invasive searches on a large scale drove the Supreme Court to admonish lower courts to remain vigilant and "ensure that the 'progress of science' does not erode Fourth Amendment protections."[22]

LaQuan Dawes had a reasonable expectation to privacy in the location history data that was being safeguarded for him by Google. This location data was extraordinarily detailed and revealing, and San Francisco police executed a search when they demanded this information from Google. Accessing this information requires a warrant that establishes particularized and specific probable cause as to Mr. Dawes and his data.

2. The Geofence Warrant Used Here is an Unconstitutional General Warrant that Violates the Fourth Amendment Particularity Requirement and the Corresponding California Constitutional Provisions.

The United States Supreme Court has repeatedly made clear that particularity is required for any and every warrant.[23] General searches and so-

period of time was difficult and costly and therefore rarely undertaken." 565 U.S. at 429 (Alito, J., concurring in judgment).

[20] *Carpenter, supra*, 138 S.Ct. at p. 2216 (summarizing *United States v. Jones* (2012) 565 U.S. 400).

[21] *Jones, supra*, 565 U.S. at p. 415 (Sotomayor, J., concurring).

[22] *Carpenter, supra,* 138 S.Ct at 2223.

[23] See, e.g., *Kentucky v. King* (2011) 563 U.S. 452, 459 ("[A] warrant may not be issued unless probable cause is properly established and the scope of the authorized search is set out with particularity."); *Massachusetts v. Sheppard*, (1984) 468 U.S. 981, 988,

called "general warrants" are strictly prohibited.[24] Article 1, section 13 of the California Constitution parallels the relevant language of the Fourth Amendment. As a result, "the issue of particularity resolves itself identically under both federal and California standards."[25]

The purpose of the particularity requirement is to "ensure that a search or seizure 'will not take on the character of the wide-ranging exploratory searches [or seizures] the Framers intended to prohibit.'"[26] More specifically, a warrant's particularity must "impose[] a meaningful restriction upon the objects to be seized."[27] This prevents an individual law enforcement officer from exercising their personal discretion or satisfying their personal curiosity when executing a search – a neutral and fair Judge or Magistrate will have already set the reasonable and meaningful boundaries for the search based on particular information provided to them in an affidavit.

A. Geofence Warrants are Unconstitutional General Warrants

By its very nature, a geofence warrant is overbroad and lacks particularity. This is intentional. Geofence warrants seek out information for Google users merely due to their proximity to a crime scene—that is the only nexus. They sweep up the location data of an unlimited and unknowable number of people, all innocent, in the hopes that the data might show one potential lead to law enforcement. This is the "dragnet" law enforcement practice that the Supreme

n. 5 ("[A] warrant that fails to conform to the particularity requirement of the Fourth Amendment is unconstitutional:").

[24] *Stanford v. State of Texas* (1965) 379 U.S. 480-84; *Marron v. United States* (1927) 275 U.S. 192, 195 ("As to what is to be taken, nothing is left to the discretion of the officer executing the warrant.").

[25] *People v. Tockgo* (1983) 145 Cal.App.3d 635, 640, fn. 2.

[26] *People v. Robinson* (2010) 47 Cal. 4th 1104, 1132 (quoting *Maryland v. Garrison* (1987) 480 U.S. 79, 84) (brackets copied from quotation).

[27] *Burrows v. Superior Court* (1974) 13 Cal.3d 238, 249.

Court has struck down and foretold against.[28] This prohibition of general warrants is historically rooted—in the times leading up to the American Revolution, a general warrant did not provide names of people to be arrested or specify homes to search. A general warrant stated "only an offense...and left to the discretion of the executing officials the decision as to which person should be arrested and which places should be searched."[29] To sweep up the location information of all Google users and then search through their data constitutes the "general, exploratory rummaging" lacking probable cause and a limited scope that our Framers and the Supreme Court requires.[30]

B. This Geofence Warrant Constituted an Unconstitutional Delegation of Discretion to the Executing Officers

It was not only the sweeping and generalized nature of general warrants that concerned the court—but it was the discretion that these warrants gave to individual officers that was feared. It allows for the abuse of power by individual officers, who, without oversight, can target large or small groups of people at their whim. This is not to say every officer will do this—but Fourth Amendment protections were critical in the eyes of our Founders because of the checks and deterrents it places on officers who might abuse their power. General warrants place "'the liberty of every [person] in the hands of every petty officer,'" and this is what must be vigilantly guarded against.[31]

The U.S. Supreme Court has recognized that physical and digital searches are fundamentally different from each other. Much of the case law and policy discussion related to search and seizure law deal with searches of physical

[28] *U.S. v. Knotts* (1983) 460 U.S. 276, 284.

[29] *Steagald v. United States* (1981) 451 U.S. 204, 220.

[30] *Coolidge v. New Hampshire* (1971) 403 U.S. 443, 467.

[31] *Stanford, supra,* at 379 U.S. at 481.

spaces or seizures of tangible, physical evidence. But the "search" of a digital device or inquiry for digital data propels this entire body of law into new terrain. The Supreme Court is cognizant of this trend, recognizing that to digital devices "place vast quantities of personal information literally in the hands of individuals."[32] A cell phone and the servers that store a phone's location and other data, "contains a broad array of private information never found in a home in any form."[33] This information is too invasive and private to be left in the hands of individuals officers, without judicial oversight.

The time to start implementing judicial oversight is now. Various news organizations have highlighted law enforcement's growing use of Google's Sensorvault database.[34] Sensorvault allows the reverse geolocation searches discussed here, and across all of Google's users' stored search history.[35] Although Google discloses the aggregate number of subpoenas, court orders, and warrants it receives from U.S. law enforcement (43,683 in 2018), it does not provide specific information on the number of reverse geolocation search warrants it fulfills.[36] However, in 2018, a Google employee stated that the

[32] *Riley v. California* (2014) 573 U.S. 373, 386.

[33] *Id.* at p. 397.

[34] E.g. Valentino-DeVries, *Tracking Phones, Google Is a Dragnet for the Police* (Apr. 13, 2019) New York Times <https://www.nytimes.com/interactive/2019/04/13/us/google-location-tracking-police.html>; Mak, *Close Enough: Police departments are using "reverse location search warrants" to force Google to hand over data on anyone near a crime scene* (Feb. 19, 2019) Slate <https://slate.com/technology/2019/02/reverse-location-search-warrants-google-police.html>; Brewster, *To Catch A Robber, The FBI Attempted An Unprecedented Grab For Google Location Data* (Aug. 15, 2018) Forbes <https://www.forbes.com/sites/thomasbrewster/2018/08/15/to-catch-a-robber-the-fbi-attempted-an-unprecendeted-grab-for-google-location-data>.

[35] Valentino-DeVries, *Google's Sensorvault Is a Boon for Law Enforcement. This Is How It Works* (Apr. 13, 2019) <https://www.nytimes.com/2019/04/13/technology/google-sensorvault-location-tracking.html>.

[36] Google, *Transparency Report: Request for User Information: US* <https://transparencyreport.google.com/user-data/overview?user_requests_report_period=authority:US> (as of Sept. 25, 2019).

company received up to 180 reverse geolocation search warrants in one week.[37] Brian McClendon, the lead developer of Google Maps and other location-based software for the corporation until 2015, has expressed concern in likening the new reverse searches to "a fishing expedition."[38]

A fishing expedition is exactly what was authorized in this warrant. First, this warrant is fundamentally based on Sgt Farrell's extremely broad and general statement that the, "most common types of cell phones used by the vast majority of the people in the United States are smart phones..." and that "[in general] suspects operate by using cell phones during the commission of a crime..." This is nowhere near to being specific or particularized. There is absolutely no information presented by Sgt Farrell to indicate that the suspects who burglarized the house were Google users. There is not evidence of them checking a cellphone or making a phone call—no evidence to indicate that they even owned or had cellphones in their possession. There is no indication that the suspects were messaging with each other on particular applications or through Google services. No evidence that a suspect had an Android phone instead of an iPhone. And there is no information or data backing up the Sergeant's general claims about smartphones or why suspects of crimes use phones in a unique way. Essentially, his affidavit merely makes two broad claims: people in the United States use smartphones and suspects are people. On that basis, he requests Google location history for every single individual in the vicinity of 1447 42nd Ave on October 24, 2018. This is the definition of a generalized, dragnet warrant.

Additionally, the warrant requested location information related to any and all Google accounts. No specific applications, such as Gmail, Google Maps, Play Store, etc. are requested—instead the warrant discusses "Android enabled

[37] Valentino-DeVries, *supra, Tracking Phones, Google Is a Dragnet for the Police.*

[38] Valentino-DeVries, *supra, Tracking Phones, Google Is a Dragnet for the Police.*

mobile devices." And beyond not specifying what basis the government had for believing some type of Google-associated technology might be involved, the warrant does not specify which Google account user it sought information about. It instead asks for every single device that passed through the search area at any moment between 2:45 p.m. and 3:15 p.m., 4:30 p.m. and 5:00 p.m., and 5:20 p.m. and 6:30 p.m. The court had no idea how many people could be affected by this warrant and how much data it was authorizing. And it never would find out—because everything after the initial signature was entirely left to the discretion of the involved police officers. Data from six devices was turned over to law enforcement. Some standard, completely opaque to anyone but the SF Police Officers involved with analyzing this data, was used to demand additional data from one device. This data was outside of the original location and timeframe specified in the affidavit. Officers then demanded that the personal information—username, email, phone number, etc.—for that device be produced. This process was impermissibly overbroad and lacking in particularity, and the warrant should be quashed under the Fourth Amendment. There were no additional showings of probable cause or judicial involvement. This is exactly the general warrant scenario that the Constitution prohibits.

Just as door-to-door sweeps of a neighborhood are overly broad under the Fourth Amendment's particularity standard,[39] so too is a search that queries the location history of all Google users. This warrant violated the Fourth Amendment's particularity requirements and it should be quashed.

[39] See, e.g., *Berger v. State of N.Y.* (1967) 87 S.Ct 1873 (invalidating electronic eavesdropping absent procedural safeguards due to the Fourth Amendment's protection against "general warrants").

2. Beyond the touchstone requirements of the Fourth Amendment and the California Constitution, this warrant fails the additional particularity requirements imposed by the California Electronic Communications Privacy Act (CalEPCA)

California state law affords elevated privacy protections for individual's data stored in electronic form. The 2016 California Electronic Communications Privacy Act (CalECPA) places a number of limitations on law enforcement's access to electronic data, including systematically stored location information.[40] Under the statute, "'Electronic device information' means any information stored on or generated through the operation of an electronic device, including the current and prior locations of the device."[41] This classification includes user information, emails, photos, videos, and other electronically stored information as well as both user-identified and anonymized location data.[42]

Unless the electronic device's possessor gives specific consent "directly to the government entity seeking information," a warrant is required for access to a device's electronic information, including related metadata and anonymized data.[43] CalECPA, in line with California Supreme Court rulings, does not recognize a third-party doctrine or any associated privacy limitations.[44]

CalEPCA makes distinct and unique demands for warrants that seek an individual's electronic data. This goes beyond the particularity requirement discussed in the prior section. CalEPCA provides four specific provisions that

[40] Penal Code section 1546 et seq.

[41] Penal Code section 1546, subdivision (g).

[42] *Id*; see Freiwald, *California's Electronic Communications Privacy Act (CalECPA): A Case Study in Legislative Regulation of Surveillance* in The Cambridge Handbook of Surveillance Law (Gray & Henderson edits., 2017), pp. 629–630 (clarifying the context and meaning of CalECPA's terminology).

[43] Penal Code section 1546, subdivisions (g) and (k); Penal Code section 1546.1.

[44] Penal Code section 1546; Freiwald, *supra,* at pp. 636–637, 640.

every warrant for electronic information must now include: (1) the time periods covered, (2) the target individuals and accounts—as appropriate and reasonable, (3) the "apps" or services covered by the warrant and (4) the types of information sought. [45] These limitations are put in place to prevent fishing expeditions by law enforcement when it comes to our electronic data. Worried about this possibility, the statute specifically enables a Judge or Magistrate signing a CalECPA warrant to appoint a special master to ensure that the authorized investigation is properly limited.[46]

CalECPA, in contrast to similar federal law, also includes a statutory suppression remedy.[47] "[A]ny person in a trial, hearing or proceeding may move to suppress any electronic information obtained in violation of the Fourth Amendment of the United States Constitution or [CalECPA]."[48] Alternatively, the California attorney general can bring a civil action to force a government entity to comply with CalECPA's requirements.[49]

The warrant at issue is governed by CalECPA. The location data requested from Google by Sergeant Farrell falls squarely within the "electronic data" contemplated by CalEPCA. The third provision of the contested warrant—allowing San Francisco police to unmask "accounts identified as relevant" without any additional judicial oversight—results in the government gaining access to additional electronic device information. This includes an individual's email addresses and product use data—clearly contemplated by CalEPCA.

Here, Dawes did not grant specific consent for government access to this or any other of his electronic device information. Absent this consent, CalECPA

[45] Penal Code section 1546.1, subdivision (d)(1).

[46] Penal Code section 1546.1, subdivision (e)(1).

[47] Freiwald, *supra*, at p. 634

[48] Penal Code section 1546.4, subdivision (a).

[49] Penal Code section 1546.4, subdivision (b).

requires a warrant that satisfies the four additional areas of particularity. The warrant authored by Sergeant Fell does not do this. Specifically, the warrant fails the second and third prongs of particularity laid out by CalEPCA.

A. Warrant fails to specify target individuals and accounts

The request here could hardly be more broad. The warrant does not specifically target individuals or accounts. Instead, it required Google to search every individual and account in its database to see which devices were using location data in the area in question during the requested times. There was no tailoring in terms of which accounts could be accessed. Instead, an indiscriminate and overbroad process of combing through up to millions of users' accounts was undertaken in hopes of identifying any individual that matched the location and time parameters. It was a fishing expedition.

After police investigators received the anonymized location data for the periods requested, they could, without any additional oversight, "identif[y] as relevant" and receive "...upon demand" any and all location data for devices up to forty-five minutes before and after the original time windows. This data would not be limited to the original geographic search area and could disclose locations from anywhere the device or devices travelled. Furthermore, "For those accounts identified as relevant . . . and upon demand of the investigative agents," the warrant mandated that Google provide the deanonymized personal information for users linked with the "relevant" devices—without any judicial oversight.

B. Warrant Fails to Identify the Apps or Services Covered

Sergeant Farrell asserts in his affidavit that he knows that, "when an Android device user first turns on a new Android device they are prompted to add a Google account" and that, "Based on my training and experience, I know it is impossible for an Android device user to install applications from the Google Play Store without a Google account." By his own admission, then, he is not requesting data from a particular application or service—but is asking for all data associated with an Android phone. Because it is his impression that

Android phones cannot and do not operate – i.e. no applications can be accessed without a Google account—he is necessarily asking for all of the data and information from every single application or service on the target mobile devices. This type of broad, sweeping search is precisely what CalEPCA was designed to prevent.

This warrant is what CalEPCA was meant to prevent. It is overbroad, lacks particularity, and fails to substantiate specific allegations of probable cause. The warrant must be quashed.

3. Broadly searching through Google account holders' personal data for a mobile device's passage through a specified geographic area amounts to an unconstitutional criminal checkpoint.

The United States Supreme Court has declared that general crime control checkpoints unconstitutional seizures.[50] The Court, "decline[d] to suspend the usual requirement of individualized suspicion where the police seek to employ a checkpoint primarily for the ordinary enterprise of investigating crimes."[51] While the Court permits checkpoints with a specific purpose, such as to intercept undocumented immigrants,[52] check for drunk drivers,[53] and verify drivers' licenses and vehicle registration,[54] it bans general purpose checkpoints.[55] In *Edmond*, this ban included a narcotics checkpoint program.[56] If such general checkpoints were allowed, "there would be little check on the ability of the authorities to construct roadblocks for almost any conceivable law

[50] *City of Indianapolis v. Edmond* (2000) 531 U.S. 32, 40–44.

[51] *Id.* at p. 44.

[52] *United States v. Martinez-Fuerte* (1976) 428 U.S. 543.

[53] *Michigan Dept. of State Police v. Sitz* (1990) 496 U.S. 444.

[54] *Delaware v. Prouse* (1979) 440 U.S. 648.

[55] *Edmond, supra,* 531 U.S. at pp. 41–42.

[56] *Ibid.*

enforcement purpose."[57]

Edmond's reasoning is grounded in the principle that, "A search or seizure is ordinarily unreasonable in the absence of individualized suspicion of wrongdoing."[58] The lack of individualized suspicion present in the reverse geolocation search warrant violates the Court's disallowance of "a checkpoint primarily for the ordinary enterprise of investigating crimes."[59]

Here, law enforcement's demand for this data is equivalent to police officers stopping each and every individual leaving the area of 1447 42nd Avenue and then demanding not only that these individuals hand over their cellphone to law enforcement—but also that they put in a passcode to unlock the phone and then allow police to extract data from that phone about where they had been that day. This type of stop, lacking any "individualized suspicion of wrongdoing," is precisely what *Edmond* prohibits.[60] "The general rule that a seizure must be accompanied by some measure of individualized suspicion" stands violated.[61]

San Francisco Police only knew that a residence had been broken into. In casting this wide net, the warrant allowed Google's Sensorvault program to produce data to the police for undefined future criminal investigation. Such data was not collected and stored for use in investigating this particular burglary; instead, law enforcement made use of data that they collected and

[57] *Id.* at p. 42.

[58] *Id.* at p. 37 (citing *Chandler v. Miller* (1997) 520 U.S. 305, 308).

[59] *Id.* at p. 44.

[60] *Edmond, supra,* 531 U.S. at p. 37. The reverse geolocation search warrants differ from tools that make use of user data available publicly online, such as social media geofencing, through which law enforcement collect public social media "posts" to identify or gather information on suspects. See Brennan Center for Justice at NYU School of Law, *Map: Social Media Monitoring by Police Departments, Cities, and Counties* (July 10, 2019) < https://www.brennancenter.org/analysis/map-social-media-monitoring-police-departments-cities-and-counties>.

[61] *Id.* at p. 41.

indefinitely preserved it for a general purpose. They did not collect information only for certain individuals. Instead, the warrant demanded that every registered Google's information be checked in order to determine who passed through the given location at the specified times.

As reverse geolocation search warrants do not fall within the "limited exceptions" to the general prohibition on general criminality checkpoints,[62] the resulting information, seized in violation of Dawes's Fourth Amendment rights, must be suppressed. To rule otherwise would violate the Constitution by permitting law enforcement to "simply stop cars as a matter of course to see if there just happens to be a felon leaving the jurisdiction."[63] That is the physical equivalent to the wide digital parameters laid out in this particular warrant and that is unconstitutional under all of the federal and state protections guaranteed by our legislatures and judiciary.

Conclusion

While modern technology facilitates the broad collection of data, such capabilities cannot be allowed to subject all individuals to law enforcement's digital scrutiny. Fourth Amendment protections demand that particularized suspicion be present when a warrant is used to uncover details of a crime. Here, no such individualized probable cause was present. Rather, all Google users were subjected to a combing through of their data in order to allow law enforcement to find a suspect for a case hitherto cold. To allow such investigations into users' systematically collected electronic data threatens to transform our society into one of constant police surveillance of digital devices.

Access to our digital data must be closely guarded and given to law enforcement in the most controlled and specified of situations. Here no

[62] *Ibid.*

[63] *Id.* at p. 44.

information beyond the occurrence of a crime at a certain location with four unnamed suspects was alleged. Nevertheless, a warrant to search the data of all Google users was permitted. Such a violation of Dawes and other users' reasonable expectation of privacy must be corrected.

Date: 6·1·20

Respectfully submitted

SIERRA VILLARAN
Deputy Public Defender
Attorney for LAQUAN DAWES

EXHIBIT A:

Google Amicus

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
RICHMOND DIVISION

UNITED STATES OF AMERICA

v.

OKELLO T. CHATRIE,

Defendant.

Case No. 3:19-cr-00130-MHL

BRIEF OF AMICUS CURIAE GOOGLE LLC IN SUPPORT OF NEITHER PARTY CONCERNING DEFENDANT'S MOTION TO SUPPRESS EVIDENCE FROM A "GEOFENCE" GENERAL WARRANT (ECF NO. 29)

DISCLOSURE STATEMENT

Pursuant to Local Criminal Rule 12.4, Google hereby discloses that it is an indirect subsidiary of Alphabet Inc., a publicly traded company. No publicly traded company holds more than 10% of Alphabet Inc.'s stock.

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INTEREST OF AMICUS CURIAE[1]

Google LLC ("Google") is a diversified technology company whose mission is to organize the world's information and make it universally accessible and useful. Google offers a variety of products and services, including the Android and Chrome operating systems, as well as Google Search, Maps, Drive, and Gmail. Among those products and services is Google Location History ("LH"), which allows individual users who have chosen to use the LH service to create, edit, and save records of their whereabouts over time—akin to journal entries of journeys taken and places visited. The warrant at issue in this motion compelled Google to produce data associated with Chatrie and other Google users—specifically, data from Google's LH service.

When using LH and other services, Google users routinely entrust private, personal data, including location-related information, to Google for processing and storage. Google recognizes and respects the privacy of this information and is transparent with users about when and how their information is stored. For example, Google's Privacy Policy informs users about their data, how to keep it safe, and how to take control. And Google regularly publishes transparency reports that reflect the volume of requests for disclosure of user data that Google receives from government entities.

Google respectfully submits this amicus brief in support of neither party to provide contextual information to the Court about the data at issue in Defendant Chatrie's motion to suppress evidence obtained from a so-called "geofence" warrant. *See* Mot. to Suppress Evidence

[1] The undersigned certifies that no party or party's counsel authored this brief in whole or in part; no party or party's counsel contributed money that was used to fund the preparation or submission of this brief; and no persons other than amicus curiae or its counsel contributed money that was intended to fund the preparation or submission of this brief.

Obtained From a "Geofence" General Warrant (ECF No. 29) ("Mot."); Govt. Response in Opp. to Def.'s Motion for Suppression of Evidence Obtained Pursuant to Google Geofence Warrant (ECF No. 41) ("Opp."). That warrant compelled Google to produce users' LH information, so an understanding of that information—including what it is, how users can create and save it, and what Google must do to comply with a warrant to produce it—is needed to resolve the parties' legal arguments on the motion to suppress. While the parties' briefs reveal some uncertainty about certain aspects of LH that are relevant to the questions presented by the motion, Google is well situated to explain the nature of the data and the steps Google takes in response to geofence warrants like the one at issue here. Moreover, because law-enforcement requests for this type of data have become increasingly common in recent years, Google also has a significant interest in the constitutional and statutory requirements and limitations that govern law enforcement efforts to obtain LH information. While Google takes no position on the validity of the warrant at issue in this case or whether the evidence it yielded should be suppressed, it respectfully urges the Court to take into account the full factual context surrounding the warrant and hold that both the Stored Communications Act, 18 U.S.C. § 2703, and the Fourth Amendment require the government to obtain a warrant supported by probable cause to obtain LH information stored by Google users.[2]

INTRODUCTION AND SUMMARY OF ARGUMENT

Pursuant to the Stored Communications Act, 18 U.S.C. §§ 2701 *et seq.*, law enforcement can and frequently does obtain legal process compelling Google to disclose the contents or

[2] By submitting this brief as amicus curiae, Google does not become a party to the case and does not waive any objections it might have to any efforts by the parties to obtain discovery or testimony from Google. *See, e.g.*, Fed. R. Crim. P. 17(c)(2); *In re Grand Jury, John Doe No. G.J.2005-2*, 478 F.3d 581, 585 (4th Cir. 2007) ("Courts have recognized various ways in which a subpoena may be unreasonable or oppressive under Rule 17(c).").

records of particular users' stored electronic communications, including data that reveals those persons' locations and movements at particular times of interest. Such requests typically seek to compel disclosure of information pertaining to specifically identified persons of interest in a criminal investigation.

This case, in contrast, concerns a novel but rapidly growing technique in which law enforcement seeks to require to search across LH data, using legal requests sometimes called "geofence" requests. Rather than seeking information relating to a known suspect or person of interest, these requests broadly seek to identify all Google LH users whose LH data suggests that they were in a given area in a given timeframe—even though law enforcement has no particularized basis to suspect that all of those users played a role in, or possess any information relevant to, the crime being investigated. State and federal law-enforcement authorities have made increasing use of this technique in recent months and years. Year over year, Google has observed over a 1,500% increase in the number of geofence requests it received in 2018 compared to 2017; and to date, the rate has increased over 500% from 2018 to 2019.

As set forth below, the LH information at issue in geofence requests such as the one in this case differs in significant respects from the cell site location information ("CSLI") at issue in *Carpenter v. United States*, 138 S. Ct. 2206 (2018), and other types of data that courts have considered in Fourth Amendment cases. For example, rather than a record created and stored by Google as an automatic result of using a Google service, Google LH information is created, edited, and stored by and for the benefit of Google users who opt into the service and choose to communicate their location information to Google for storage and processing. Moreover, LH information can often reveal a user's location and movements with a much higher degree of precision than CSLI and other types of data. And rather than targeting the electronic communications of only a specific user or users of interest, the steps Google must take to respond to a geofence request entail the government's broad and intrusive search across Google users' LH information to determine which users' devices may have been present in the area of interest within the requested timeframe.

Given the characteristics of geofence requests, the law requires the government to obtain a warrant to require Google to search LH information. First, although the parties have not addressed the statutory context, the Stored Communications Act ("SCA")—quite apart from the Constitution—requires the government to obtain a search warrant because a geofence request seeks the "contents" of Google users' electronic communications within the meaning of the SCA. *See* 18 U.S.C. § 2703(a), (b). Therefore, regardless of whether a geofence request amounts to a "search" for Fourth Amendment purposes, the government must obtain a warrant from a neutral magistrate that satisfies the requirements of probable cause and particularity. *See id.* (incorporating requirements of Fed. R. Crim. P. 41).

In any event, it is also clear that a geofence request constitutes a "search" within the meaning of the Fourth Amendment and that, absent an applicable exception, the Constitution independently requires the government to obtain a warrant to obtain LH information. Users have a reasonable expectation of privacy in their LH information, which the government can use to retrospectively reconstruct a person's movements in granular detail. Under *Carpenter*, the "third-party doctrine" does not defeat that reasonable expectation of privacy merely because users choose to store and process the information on Google' servers.

Whether under the SCA or under the Fourth Amendment—and absent an applicable exception—the government is therefore obligated to obtain a warrant to search LH information. That requirement is entirely appropriate in light of the sensitivity of LH information, the intimate details it can reveal about a user's life, and the breadth of the government's intrusion on users' private LH information that occurs whenever a geofence search is executed. Google's users expect their LH information to be kept private, and the Court should ensure that it receives the greatest available protection. Google takes no position on Defendant Chatrie's arguments that the warrant at issue here failed to satisfy the requirements of probable cause and particularity or, if so, whether suppression is the appropriate remedy. But the Court should hold—taking account of the full factual context—that a warrant is indeed required.

ARGUMENT

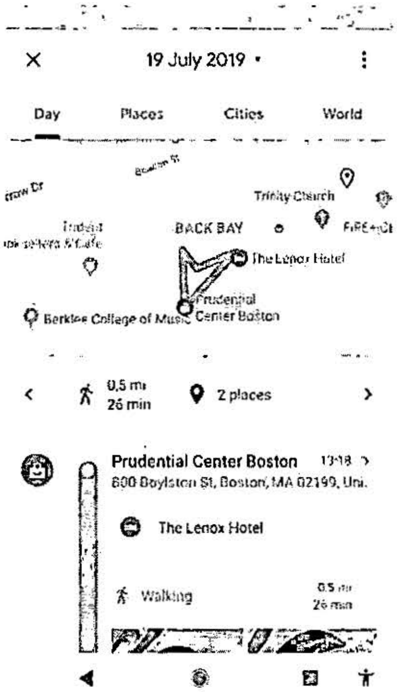
I. GOOGLE "LOCATION HISTORY" INFORMATION DIFFERS SIGNIFICANTLY FROM CELL SITE LOCATION INFORMATION AND OTHER TYPES OF LOCATION DATA COURTS HAVE CONSIDERED IN OTHER FOURTH AMENDMENT CASES

While many of Google's products and services can be used without a Google account, millions of people choose to create Google accounts and log into them from their mobile devices or while using Google applications to take full advantage of account-specific products such as Gmail and to obtain a more personalized experience on applications such as Maps and Search. Holders of Google accounts can control various account-level and service-level settings and preferences. "Location History" (or "LH") is an optional account-level Google service. It does not function automatically for Google users. But when users opt into LH on their Google accounts, it allows those users to keep track of locations they have visited while in possession of their mobile devices.

In the briefing, the parties analogize the LH information at issue in this case to CSLI, "tower dumps," GPS data, and other types of location information that courts have considered in other cases. Mot. 2, 14; Opp. 7-8, 11-12, 18. In fact, while Google LH information bears some similarities to those types of data in some respects, it differs in important ways that are highly relevant to the question whether a warrant is required. In determining the legal framework governing law enforcement requests for Google LH information, the court should therefore proceed with an understanding of the nature and precision of that information, how it is recorded and stored, how users control it, and how it is collected in response to legal process.

A. Google "Location History" Is Not A Business Record, But A Journal Of A User's Location And Travels That Is Created, Edited, And Stored By And For The Benefit Of Google Users Who Have Opted Into The Service

Google "Location History" information is essentially a history or journal that Google users can choose to create, edit, and store to record their movements and travels. Google's users activate and use LH for many reasons. By enabling and using LH, a Google user can keep a virtual journal of her whereabouts over a period of time. For most Google users, this journal is captured in the "Timeline" feature of the Google Maps app. *See* Fig. 1. The Timeline feature allows the user to visualize where she has traveled with her phone and when over a given period—in essence, a journal. The Timeline might reflect, for instance, that the user left her home on Elm Street in the morning and walked to the bus stop, took the bus to her office on Main Street, walked to a nearby coffee shop and back to the office in the afternoon, and then went to a nearby restaurant in the evening before returning home by car.



Prudential Center Boston 13:18
600 Boylston St, Boston, MA 02199, Uni.

The Lenox Hotel

Walking 0.5 mi 26 min

Figure 1. Sample Google Timeline.

By using Google LH, the user can access other benefits on her Google device or applications as well. For example, she can obtain personalized maps or recommendations based on places she has visited, get help finding her phone, and receive real-time traffic updates about her commute.[3]

For Google LH to function and save information about a user's location, the user must take several steps—some tied to her mobile device, some tied to her Google account. First, the user must ensure that the device-location setting on her mobile device is turned on. When the device-location setting is activated, the mobile device automatically detects its own location, which the device ascertains based on GPS and Bluetooth signals, Wi-Fi connections, and cellular networks.[4] Second, the user must configure her mobile device to share location information with applications capable of using that information. Not all mobile applications can use location information, and those that can, such as Google Maps, will do so only if the user configures her device to allow the app to use the mobile device's location information.

Critically, merely taking the steps described above that are tied to the mobile device does not on its own generate a saved LH record of a Google user's locations. Google does not save information about where a particular mobile device has been to a user's account—even when the device-location feature is turned on and applications on the device are using location data—unless the user has also taken additional specific steps tied to her Google account. Specifically, the user must opt into LH in her account settings and enable "Location Reporting"—a subsetting

[3] *See* Google, *Manage Your Location History*, https://support.google.com/accounts/answer/3118687 (visited Dec. 20, 2019).

[4] Android users can tailor their devices' location-reporting settings, controlling which sources of information (*e.g.*, GPS, cellular, or Wi-Fi) are detectable from the device, and which applications can access location data. *See, e.g.*, Google, *Manage Your Android Device's Location Settings*, https://support.google.com/accounts/answer/3467281 (visited Dec. 20, 2019); Google, *Choose Which Apps Use Your Android Phone's Location*, https://support.google.com/android/answer/6179507 (visited Dec. 20, 2019).

within LH—for the particular device.[5] And to actually record and save LH data, the user must then sign into her Google account on her device and travel with that device. In sum, LH functions and saves a record of the user's travels only when the user opts into LH as a setting on her Google account, enables the "Location Reporting" feature for at least one mobile device, enables the device-location setting on that mobile device, permits that device to share location data with Google, powers on and signs into her Google account on that device, and then travels with it.

When a user takes those steps, the resulting data is communicated to Google for processing and storage on Google's cloud-based servers, and to enable Google to make it available to the user in various ways. But it is the user who controls the LH information. The user can review, edit, or delete her Timeline and LH information from Google's servers at will. For example, the user could decide to keep LH information only for dates when she was traveling abroad and manually delete the rest; she could delete all Timeline entries except those associated with visits to memorable restaurants; she could instruct Google to automatically delete all LH information after a set period (say, every three months); or she could keep all LH information for future reference.

The user thus controls her Google LH data—unlike, for instance, the CSLI at issue in *Carpenter* or cellular data obtained via a "tower dump." As the Supreme Court explained in *Carpenter*, CSLI consists of time-stamped records that are automatically generated by and for the wireless carrier whenever a mobile device connects to a cell site (*i.e.*, the physical radio

[5] A Google account may be associated with multiple devices. The "Location Reporting" feature within LH allows users to select specific devices on which to enable LH. *See* Google, *Manage Your Location History*, https://support.google.com/accounts/answer/3118687 (visited Dec. 20, 2019).

antennas that make up the cellular network). 138 S. Ct. at 2211-2212. Wireless carriers collect and maintain CSLI records "for their own business purposes," such as identifying weak spots in the network or determining when to apply roaming charges. *Id.* at 2212. When law enforcement seeks access to CSLI, it is thus asking the wireless carrier to produce its own business records showing when a particular device connected to a cell site within a particular period of time. A request for a "tower dump" likewise seeks the wireless carrier's own business records—in that case, identifying every phone that connected to a particular cell site (or "tower") in a particular period.

Mobile device users cannot opt out of the collection of CSLI or similar records, nor can they retrieve, edit, or delete CSLI data. Google LH information, by contrast, is stored with Google primarily for the user's own use and benefit—just as a user may choose to store her emails on Google's Gmail service and her documents on Google Drive. Google LH information is controlled by the user, and Google stores that information in accordance with the user's decisions (*e.g.*, to opt in or out, or to save, edit, or delete the information), including to enhance the user's experience when using other Google products and services. *Supra* pp. 6-8.

Defendant thus errs in asserting that "[i]ndividuals do not voluntarily share their location information with Google," Mot. 10, and that the acquisition of user location records by Google is "automatic and inescapable," Reply 6. As discussed, Google does not save LH information unless the user opts into the LH service in her account settings (and logs into her Google account while using a properly configured mobile device), and the user can choose at any time to delete some or all of her saved LH information or to disable the LH service completely. And LH information was the only location information produced to the government in response to this geofence warrant.

B. Google LH Can Reflect A User's Location and Movements More Precisely Than CSLI And Other Types Of Data

Google LH information can be considerably more precise than other kinds of location data, including the CSLI considered in *Carpenter*. That is because, as a technological matter, a mobile device's location-reporting feature can use multiple inputs in estimating the device's location. Those inputs include not only information related to the locations of nearby cell sites, but also GPS signals (*i.e.*, radio waves detected by a receiver in the mobile device from orbiting geolocation satellites) or signals from nearby Wi-Fi networks or Bluetooth devices. Combined, these inputs (when the user enables them) can be capable of estimating a device's location to a high degree of precision. For example, when a strong GPS signal is available, a device's location can be estimated within approximately twenty meters.[6]

CSLI, by contrast, shows a less-detailed picture of a mobile device's movements. Although its precision has increased as wireless carriers have introduced more and more cell towers that cover smaller and smaller areas, it typically reflects location on the order of dozens to hundreds of city blocks in urban areas rather than a matter of meters, and up to forty times more imprecise in rural areas. *See Carpenter*, 138 S. Ct. at 2225 (Kennedy, J. dissenting); *see also United States v. Beverly*, 943 F.3d 225, 230 n.2 (5th Cir. 2019) ("CSLI should not be confused with GPS data, which is far more precise location information derived by triangulation between the phone and various satellites.").[7]

[6] *See* Google, *Find And Improve Your Location's Accuracy*, https://support.google.com/maps/answer/2839911 (visited Dec. 20, 2019).

[7] No estimate is perfect, and the estimated locations reflected in Google LH are no exception. Like any probabilistic estimate based on multiple inputs, the estimated locations reflected in Google LH have a margin of error, so a user's actual location will not always align with any one estimated location data point in LH. In that respect, LH differs from CSLI, which is not an estimate at all, but simply a historical fact: that a device connected to a given cell tower

C. Collecting And Producing Google LH Information To Law Enforcement In Response To A Geofence Request Requires A Uniquely Broad Search Of All Google Users' Timelines

The Stored Communications Act ("SCA") governs how service providers such as Google handle the contents and records of their users' stored electronic communications, including Google LH. In general, the SCA prohibits unauthorized access to those stored communications, restricts the service provider's ability to disclose them to the government, and delineates the procedures law enforcement must follow—and the substantive standards it must meet—to compel a service provider to produce them. *See* 18 U.S.C. §§ 2701 *et seq.*

Typically, U.S. law-enforcement authorities use legal process (whether in the form of a search warrant, court order, or subpoena) to compel Google to disclose content or records of electronic communications associated with specifically identified Google users or accounts. For example, the government might obtain a warrant for the contents of emails associated with a particular Gmail account. Google often receives warrants for LH information that take the same form—*i.e.*, demands for a specifically identified Google user's LH information from a specifically identified time range. When producing data in response to such a demand, Google must search for and retrieve only the responsive data that is associated with the particular users or accounts identified in the warrant.

So-called "geofence" requests operate quite differently. Geofence requests represent a new and increasingly common form of legal process that is not tied to any known person, user, or account. Instead, law enforcement uses geofence requests in an attempt to identify all Google users who might have stored LH data in their accounts suggesting that they were near a given

during a given time period. An LH user's Timeline, however, combines and contextualizes numerous individual location data points, so that the resulting picture of the user's location and movements is sufficiently precise and reliable for the purposes for which it was designed.

area in a given timeframe—and to do so at a level of precision not available through CSLI or similar data.

Such requests typically identify a geographic area surrounding a point of interest. That point of interest is typically a suspected crime scene. As Defendant observes (at Mot. 12-13), however, the geographic area can also include private homes, government buildings, places of worship, and other sensitive locations. A geofence request seeks to compel Google to produce LH information for all Google users whose LH records indicate that they may have been present in the defined area within a certain window of time, which might span a few minutes or a few hours. (In practice, although the legal requests do not necessarily reflect this limitation, such requests can cover only Google users who had LH enabled and were using it at the time in question.)

Many of the earliest "geofence" legal requests attempted to mimic "tower dump" requests, seeking LH data that would identify all Google users who were in a geographical area in a given time frame. In light of the significant differences between CSLI and Google LH data described above, however, Google developed a multi-step anonymization and narrowing protocol to ensure privacy protections for its users. That protocol typically entails a three-step process:

First, law enforcement obtains legal process compelling Google to disclose an anonymized list of all Google user accounts for which there is saved LH information indicating that their mobile devices were present in a defined geographic area during a defined timeframe. Google, however, has no way to know ex ante which users may have LH data indicating their potential presence in particular areas at particular times. In order to comply with the first step of the geofence protocol, therefore, Google must search across all LH journal entries to identify users with potentially responsive LH data, and then run a computation against every set of coordinates to determine which LH records match the time and space parameters in the warrant.

After Google has completed that search, it assembles the LH information that is responsive to the request without any account-identifying information. This anonymized "production version" of the data includes an anonymized device number, the latitude/longitude coordinates and timestamp of the reported location information, the map's display radius,[8] and the source of the reported location information (that is, whether the location was generated via Wi-Fi, GPS, or a cell tower). The volume of data produced at this stage depends on the size and nature of the geographic area and length of time covered by the geofence request, which vary considerably from one request to another.[9]

Second, the government reviews the anonymized production version to identify the anonymized device numbers of interest. If additional anonymized location information for a specific device is necessary to eliminate false positives or otherwise determine whether that device is actually relevant to the investigation, law enforcement can compel Google to provide additional contextual location coordinates beyond the time and geographic scope of the original request. Here, for example, the government requested a second round of anonymized LH information showing where certain users moved during an extended period of time 30 minutes

[8] Each set of coordinates saved to a user's LH includes a value, measured in meters, that reflects Google's confidence in the reported coordinates. A value of 100 meters, for example, reflects Google's estimation that the user is likely located within a 100-meter radius of the reported coordinates.

[9] *See, e.g.*, Jennifer Valentino-DeVries, N.Y. Times, *Tracking Phones, Google Is a Dragnet for the Police* (Apr. 13, 2019), https://www.nytimes.com/interactive/2019/04/13/us/google-location-tracking-police.html (discussing examples); Tony Webster, Minnesota Public Radio, *How Did The Police Know You Were Near A Crime Scene? Google Told Them* (Feb. 7, 2019), https://www.mprnews.org/story/2019/02/07/google-location-police-search-warrants (same).

before and 30 minutes after the original timeframe. This additional contextual LH information can assist law enforcement in eliminating devices that were not in the target location for enough time to be of interest, were moving through the target location in a manner inconsistent with other evidence, or otherwise are not relevant to the investigation. The government then reviews users' movements, as reflected in the anonymized data, and selects the anonymized device numbers for which it will require Google to produce identifying user account information.

Third, the government can compel Google to provide account-identifying information for the anonymized device numbers that it determines are relevant to the investigation. Typically, the legal request requires Google to provide account subscriber information such as the Gmail address associated with the account and the first and last name entered by the user on the account.

The steps necessary to respond to a geofence request are thus quite different from and far more intrusive than responses to requests for CSLI or "tower dumps." To produce a particular user's CSLI, a cellular provider must search its records only for information concerning that particular user's mobile device. A tower dump is similarly limited: It requires a provider to produce only records of the mobile devices that connected to a particular cell tower at a particular time. But because Google LH information on a user's account is distinct from a mobile device's location-reporting feature, Google has no way to identify which of its users were present in the area of interest without searching the LH information stored by every Google user who has chosen to store that information with Google.

II. THE STORED COMMUNICATIONS ACT REQUIRES THE GOVERNMENT TO OBTAIN A WARRANT TO COMPEL PRODUCTION OF "LOCATION HISTORY" INFORMATION

Although the parties' briefing has focused on the Fourth Amendment, the Court's resolution of the important questions presented here should reflect the entire legal landscape.

Google's storage and disclosure of user data, including LH information, is subject to the SCA, which governs law-enforcement efforts to compel service providers such as Google to disclose data relating to a user's stored electronic communications. *See* 18 U.S.C. § 2703. The SCA generally requires the government to obtain a warrant supported by probable cause to require a provider to disclose the "contents" of electronic communications (such as the contents of an email). *Id.* § 2703(a), (b)(1)(A); *United States v. Graham*, 824 F.3d 421, 437 (4th Cir. 2016) (en banc), *overruled on other grounds*, 138 S. Ct. 2206.[10] By contrast, if the government uses legal process requiring a less demanding showing than probable cause—such as a court order or subpoena—it can generally only compel the production by a provider of basic subscriber information (using a subpoena) and other "records" of electronic communications, such as data indicating when an email was sent or to whom, but without the content of the email (using a court order). *See* 18 U.S.C. § 2703(c), (d).

[10] The SCA draws a distinction between government access to the contents of electronic communications in "electronic storage in an electronic communications system for one hundred and eighty days or less"—for which a warrant is invariably required—and access to the contents of electronic communications in "electronic storage in an electronic communications system for more than one hundred and eighty days" or contents of electronic communications "in a remote computing service," for which a warrant is required unless the government complies with certain notice procedures. 18 U.S.C. § 2703(a), (b). That distinction, which reflected the technical landscape prevailing at the time of the SCA's enactment in 1986, has largely fallen into disuse. The statutory provisions purporting to allow warrantless access to "contents" of communications under certain conditions without a warrant have been held unconstitutional, *see United States v. Warshak*, 631 F.3d 266, 288 (6th Cir. 2010), and the Department of Justice has followed that holding as a matter of policy since 2013 by always using warrants to obtain stored content, *see* H.R. Rep. No. 114-528, at 9 (2016). In any event, Google acts as a provider of both an "electronic communication service" and a "remote computing service" in regard to LH information, and the information sought in this case was in storage for less than 180 days at the time of the warrant, rendering these statutory distinctions irrelevant in this case. *See In re Application of the United States of America for a Search Warrant for Contents of Elec. Mail and for an Order Directing a Provider of Elec. Comm'cn Servs. to not Disclose the Existence of the Search Warrant*, 665 F. Supp. 2d 1210, 1213 (D. Or. 2009) ("Today, most ISPs provide both ECS and RCS; thus, the distinction serves to define the service that is being provided at a particular time ... , rather than to define the service provider itself.").

Google LH information is subject to the SCA's warrant requirement because that information qualifies as "contents" of "electronic communications." The SCA defines an "electronic communication" as a "transfer of signs, signals, writing, images, sounds, data, or intelligence of any nature transmitted in whole or in part" by an electronic system. 18 U.S.C. § 2510(12). And it defines the "contents" of such a communication as "any information concerning the substance, purport, or meaning of that communication." *Id.* § 2510(8). A user's LH information qualifies as "contents" within that statutory definition. Google's users employ LH to record where they have been and when. In doing so, they "transfer" signals and data to Google, *id.* § 2510(12)—data that Google processes to fill users' Timelines and compile an accurate record of users' whereabouts, among other things. The user's location itself is the "substance" and "meaning" of the data the user transfers to Google, *id.* § 2510(8). The user's locations and movements are the "substance, purport, [and] meaning" of the data transmitted and they fill the digital journal that the Timeline feature provides. Although the contents of that journal are reflected on a map in one's Google account rather than in a written document, the locations and travels recorded therein are fundamentally the contents of the journal, capable of being reviewed, edited, and deleted by the user. Such information is plainly "contents" under the Act.

To be sure, location-reporting data in other contexts is sometimes considered to be "records" of electronic communications (sometimes called "metadata") because it is transmitted incidentally to a user's interaction with his or her mobile device. Sending such location data to a third party, in other words, is sometimes an ancillary byproduct of using a mobile device for other purposes (*e.g.*, to make a call or to find the best route home). That is certainly true of CSLI. As the Supreme Court explained in *Carpenter*, CSLI is generated "[e]ach time the phone connects to a cell site," which can occur "several times a minute" in order to maintain the phone's function. 138 S. Ct. at 2211; *see also Graham*, 824 F.3d at 433 ("CSLI is non-content information because 'cell-site data—like mailing addresses, phone numbers, and IP addresses—are information that facilitate personal communications, rather than part of the content of those communications themselves.'"). As the Third Circuit has explained, however, location data need not be ancillary to an electronic communication; often, location data "serves no routing function, but instead comprises part of a communication's substance" itself. *In re Google Inc. Cookie Placement Consumer Privacy Litig.*, 806 F.3d 125, 136 (3d Cir. 2015). The question is whether the location information serves as "dialing, routing, addressing, or signaling information," or whether, as here, such information is "part of the substantive information conveyed to the recipient"—in which case "by definition it is 'content.'" *Id.*; *see also id.* at 137; *In re Certified Question of Law*, 858 F.3d 591, 594 (Foreign Int. Surv. Ct. Rev. 2016) (holding that digits an individual enters on a dial pad after dialing a telephone number, such as a PIN or a bank account number, qualify as content information because they transmit substantive information).[11] When users convey their locations to Google to save and store using the LH service, the data is not performing a "routing" or "addressing" role; it is itself the "substantive information" of the user's communications, 806 F.3d at 137, and thus "contents" for the purpose of the SCA.

Because LH information is "contents" under the SCA, the government must generally obtain a warrant to compel Google to disclose it—just as it would have to do to compel Google to produce the contents of a user's written journals stored on Google Drive. *See* 18 U.S.C.

[11] *See also* Orin Kerr, Volokh Conspiracy, Wash. Post, *Websurfing and the Wiretap Act* (June 4, 2015), https://www.washingtonpost.com/news/volokh-conspiracy/wp/2015/06/04/websurfing-and-the-wiretap-act/ ("the line between contents and metadata is not abstract but contextual with respect to each communication").

§ 2703(a), (b)(1)(A); *Warshak*, 631 F.3d at 288. Thus, regardless of the Fourth Amendment analysis, the government was required to obtain a warrant in this case and to satisfy all the substantive and procedural obligations attending the issuance of a warrant.

III. ABSENT AN APPLICABLE EXCEPTION, THE FOURTH AMENDMENT REQUIRES THE GOVERNMENT TO OBTAIN A WARRANT TO COMPEL PRODUCTION OF "LOCATION HISTORY" INFORMATION

The Constitution also required a warrant in this case. The Fourth Amendment protects "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures." U.S. Const., amend. IV. The Amendment's purpose "is to safeguard the privacy and security of individuals against arbitrary invasions by government officials." *Camara v. Municipal Court*, 387 U.S. 523, 528 (1967). The Fourth Amendment protects people against unreasonable "searches," and governmental action that intrudes upon an "expectation of privacy" that "society is prepared to recognize as 'reasonable'" constitutes a search. *Katz v. United States*, 389 U.S. 347, 361 (1967) (Harlan, J., concurring). Because the government's acquisition of Google LH information via a geofence request intrudes upon just such a reasonable expectation of privacy, it constitutes a search for which a warrant is generally required.

Under the traditional *Katz* analysis, Google's users have a reasonable expectation of privacy in their LH information. Google LH information "provides an intimate window into a person's life, revealing not only his particular movements, but through them his 'familial, political, professional, religious, and sexual associations'"—what the Supreme Court described in *Carpenter* as "the privacies of life." 138 S. Ct. at 2217 (quotation marks omitted). The Court in *Carpenter* held that "an individual maintains a legitimate expectation of privacy in the record of his physical movements as captured" through the government's acquisition of cell-site location information. *Id.* The same is true of Google LH information.

The question in *Carpenter* was "whether the Government conducts a search under the Fourth Amendment when it accesses historical cell phone records that provide a comprehensive chronicle of the user's past movements." 138 S. Ct. at 2211. As the Supreme Court explained, access to such records implicates two lines of precedent: one addressing "a person's expectation of privacy in his physical location and movements" and the other "draw[ing] a line between what a person keeps to himself and what he shares with others." *Id.* at 2215-2216. The government's ability to obtain CSLI plainly implicated a person's "reasonable expectation of privacy in the whole of [his] physical movements." *Id.* at 2217. By obtaining historical location data generated by a person's cell phone, the Court explained, the government could obtain "an all-encompassing record of the holder's whereabouts," thus "revealing not only his particular movements" but the most intimate details of his or her life, *id.* at 2217-2218; *see also Riley v. California*, 573 U.S. 373, 403 (2014) ("With all [modern cell phones] contain and all they may reveal, they hold for many Americans 'the privacies of life.'"). And while it was true that cell-phone-generated location information was shared with a third party (the cellular provider), the Court reasoned, that did not diminish users' reasonable expectation of privacy in that information, given that it constituted—in essence—"a detailed chronicle of a person's physical presence compiled every day [and] every moment." *Carpenter*, 138 S. Ct. at 2220; *see also United States v. Jones*, 565 U.S. 400, 415 (2012) (Sotomayor, J., concurring) ("GPS monitoring generates a precise, comprehensive record of a person's public movements...."); *United States v. Aigbekaen*, 943 F.3d 713, 723 (4th Cir. 2019) (referring to location history as "unusually sensitive").

The same factors that led the Court in *Carpenter* to find a reasonable expectation of privacy in historical CSLI apply just as forcefully to Google LH information. Google LH information, like the CSLI at issue in *Carpenter* and the GPS data in *Jones*, permits the government to ascertain where a person has been and when—contravening the person's "legitimate expectation of privacy in the record of his physical movements." 138 S. Ct. at 2217. As was true of the CSLI at issue in *Carpenter*, by compelling Google to disclose LH information, the government can, "[w]ith just the click of a button," access a "deep repository of historical location information at practically no expense." *Id.* at 2218. Such data is remarkably revealing. Like CSLI, Google LH information lets the government "travel back in time to retrace a person's whereabouts." *Id.* In fact, the LH information at issue here is significantly more granular than the data at issue in *Carpenter*. The CSLI at issue there allowed the government to trace a suspect to an area that could have been as wide as four square miles. *Id.*; *see also id.* at 2232 (Kennedy, J., dissenting). By contrast, the information recorded in a Google user's LH information potentially records a person's whereabouts to within a matter of meters. *See supra* p. 10. The privacy interests implicated by Google LH information are thus even greater than in *Carpenter*.[12]

Here, the government argues—just as it did in *Carpenter*—that users have no reasonable expectation of privacy in their Google LH information because such records consist only of data that users have "revealed to a third party." Opp. 9. But the Supreme Court rejected that argument in *Carpenter*, and this Court should do the same here. The so-called third-party

[12] As noted, each individual estimate of a user's location reflected in the LH service has a margin of error, which distinguishes it from CSLI. *See supra* n.7. But that does not undermine the fact that a user has a reasonable expectation of privacy in her location as it is reflected in LH information—especially given that such information draws on data that can be far more precise than is CSLI and is highly reliable in context. At the same time, the margin of error associated with LH data means that the government's effort to use this information for purposes for which the LH service was not designed creates a likelihood that the LH data will produce false positives—that is, that it will indicate that certain Google users were in the geographic area of interest to law enforcement who were not in fact there. That, in turn, means that the potential incursion on privacy is quite significant indeed.

doctrine, as the Court explained in *Carpenter*, traces its roots to *United States v. Miller*, 425 U.S. 435 (1976), and *Smith v. Maryland*, 442 U.S. 735 (1979)—cases in which the government obtained "business records" of a defendant's bank (in *Miller*) and telephone company (in *Smith*) that revealed personal information about the defendants. In each case, the Court held that "a person has no legitimate expectation of privacy in information he voluntarily turns over to third parties," *Smith*, 442 U.S. at 743-744, and concluded that no search had occurred. But the Supreme Court in *Carpenter* conclusively rejected the argument that the doctrine should extend to CSLI. 138 S. Ct. at 2219-2220. For one, the Court explained, "[t]here is a world of difference between the limited types of personal information addressed in *Smith* and *Miller* and the exhaustive chronicle of location information" collected today by third parties of all kinds. *Id.* at 2219; *cf. United States v. Finley*, 477 F.3d 250, 259 (5th Cir. 2007) (individuals have a reasonable expectation of privacy in the contents of their text messages). For another, the Court reasoned, "the second rationale underlying the third-party doctrine"—voluntary exposure—did not justify the application of the doctrine to CSLI, given that, for multiple reasons, users did not genuinely "share" such data with phone companies. *Carpenter*, 138 S. Ct. at 2220.

Neither of the two "rationale[s] underlying the third-party doctrine" justifies extending that doctrine to the LH information here. *Carpenter*, 138 S. Ct. at 2219-2220. First, it is not the case that Google users have a "reduced expectation of privacy" in LH information. *Id.* at 2219. As described above, LH functions in effect as a daily journal of a user's whereabouts and movements with a potentially high degree of precision. It can reveal when a user was at her home (or someone else's), a doctor's office, a place of worship, a political meeting, or other sensitive locations. The information is far more revealing than the bank records or telephone pen register information at issue in *Smith* and *Miller*, and users expect that information to remain private. *See supra* pp. 6-10.

Second, as in *Carpenter*, the fact that users voluntarily choose to save and share LH information with Google does not on its own implicate the third-party doctrine, to the extent that doctrine is still viable. 138 S. Ct. at 2220.[13] The Court in *Carpenter* emphasized that "cell phones and the services they provide are 'such a pervasive and insistent part of daily life' that carrying one is indispensable to participation in modern society." *Id.* (quoting *Riley*, 573 U.S. at 385). For many users, the same is true of the location-based "services that [cell phones] provide," *id.*—including the ability to track one's own movements and enrich one's electronic footprint with that information. Moreover, unlike the business records of the third-party bank and telephone company in *Smith* and *Miller*, LH information is not compiled "for ... business purposes" by the third party, *Smith*, 442 U.S. at 743—the key factor that justified the development of the doctrine in the first place. Rather, it is created and stored at the discretion of the user for the user's own purposes and remains in the user's control. Such relationships are common in the digital age. In *Warshak*, for instance, the fact that individuals transmitted their emails to a third party did not stop the court from finding that those individuals enjoyed a reasonable expectation of privacy in the contents of their emails. *See Warshak*, 631 F.3d at 288 (rejecting the applicability of the third-party doctrine and explaining that "the best analogy" was "cases in which a third party carries, transports, or stores property for another"—cases in which "the customer grants access to the [provider] because it is essential to the customer's interests"). The same is true here.

[13] *See Jones*, 565 U.S. at 417 (Sotomayor, J., concurring) (observing that the third party doctrine espoused by *Smith* and *Miller* is "ill suited to the digital age").

The government alternatively argues that *Carpenter* does not apply because the request here applied to a supposedly small area and a shorter period of time than the CSLI requests in *Carpenter*. Opp. 6-8. But there is nothing limited about a geofence search. As explained, *see supra* pp. 12-13, in order to conduct such a search, Google must search across the records of the account holders who entrust Google with their personal LH information. That is a significant incursion on privacy. Unlike the CSLI requests in *Carpenter*, moreover, which rested on the government's belief that particular suspects were involved in a crime—and which sought information only for those users—when the government seeks LH information via a geofence request, it does not know whose records it is searching for. The result is that the government obtains information associated not only with a specific person of interest whose actions might have given rise to probable cause or at least reasonable suspicion, but for numerous others who happened to have LH information from the area. The government's comparison to a "tower dump" (Opp. 8) fails for essentially the same reasons. A tower dump entails a search of records relating only to those mobile devices that were present in the defined area at the defined time; a geofence request requires a search across all Google users for their LH information. And a tower dump yields data that is significantly less granular than a user's LH.

Ultimately, although the time period covered by the warrant here is shorter than the CSLI requests in *Carpenter*, that distinction does not defeat Google's users' reasonable expectation of privacy. A shorter timeframe could make a dispositive difference when dealing with CSLI or tower dump information because a snapshot of such data, if sufficiently limited in duration, would not result in "a detailed and comprehensive record of the person's movements." *Carpenter*, 138 S. Ct. at 2217. It would reveal only that a particular device was at a particular place at one narrow point in time. But because of its greater granularity and precision, a Google user's LH information allows the government to reconstruct a "detailed and comprehensive record of [the user's] movements," even if only for an hour or two—something that law enforcement would not be able to do using traditional investigative methods. *Id.* at 2217.

A request compelling production of Google LH information accordingly constitutes a search within the meaning of the Fourth Amendment. Unless an exception applies, the government thus "must generally obtain a warrant supported by probable cause before acquiring such records." *Carpenter*, 138 S. Ct. at 2221.

CONCLUSION

Google takes no position on whether the warrant in this case satisfies the requirements of probable cause and particularity or, if it does not, whether suppression is appropriate. But in resolving those questions, the Court should take into account the complete factual and legal context, and it should hold that both the SCA and the Fourth Amendment require the government to obtain a warrant to compel Google to search LH information via a geofence search. That result is compelled by the statute and the Constitution and the cases applying them. It is also the only result that takes appropriate account of the singularly broad and intrusive nature of a geofence search and the granularity of the intimate detail it produces. Given the capacity of geofence searches to intrude on personal privacy, their use should be supervised by a neutral magistrate and restricted to cases in which the government can establish probable cause.

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