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CELL PHONES ARE ORWELL’S TELESCREEN: THE NEED FOR FOURTH AMENDMENT PROTECTION IN REAL-TIME CELL PHONE LOCATION INFORMATION

MATTHEW DEVOY JONES*

ABSTRACT

Courts are divided as to whether law enforcement can collect cell phone location information in real-time without a warrant under the Fourth Amendment. This Article argues that *Carpenter v. United States* requires a warrant under the Fourth Amendment prior to law enforcement’s collection of real-time cell phone location information. Courts that have required a warrant prior to the government’s collection of real-time cell phone location information have considered the length of surveillance. This should not be a factor. The growing prevalence and usage of cell phones and cell phone technology, the original intent of the Fourth Amendment, and United States Supreme Court case law are the deciding factors.

Research has shown that a cell phone can be located through its basic functioning as it automatically connects to a growing number of cell sites. The fact that nearly all Americans have a cell phone and carry it on their person, makes a cell phone’s location that of the phone’s user, essentially acting as a monitoring device. Permitting law enforcement to collect this location information in real-time without a warrant under the Fourth Amendment violates the principles of the Amendment, which is to curb arbitrary government power. Twenty-first century United States Supreme Court jurisprudence furthers this argument. The Court recently found, in *Carpenter v. United States*, that individuals have a reasonable expectation of privacy in their physical movements as captured through historical cell site location information (“CSLI”). The same rationale in deciding *Carpenter* also applies to the real-time CSLI and GPS data emanating from one’s phone: neither *United States v. Knotts* nor the third-party doctrine are applicable to real-time cell phone monitoring.

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I. INTRODUCTION

Mary Ann and Kent Jeffries, a married couple from southern Texas, were celebrating their twentieth wedding anniversary.¹ The couple traveled to Chicago for a long weekend, leaving their two teenage children to bear the Texas summer heat. Both Mr. and Mrs. Jeffries took their smartphones on the trip.

Michael Rivera-Guerrero, a life-long resident of the Pilsen neighborhood in Chicago, was recently laid-off from his job as an assembler at a local factory. A month earlier he promised his son that the two would go to a Sox-Cubs game at Guaranteed Rate Field. To keep his promise, Mr. Rivera-Guerrero decided it was in his best interest to turn to a life of crime. Rivera-Guerrero always carried his smartphone on his person.

Prior to leaving their hotel on Michigan Avenue, Mrs. Jeffries put her phone in “do not disturb” mode. She did not want to be bothered by any notifications while visiting the Windy City. Mr. Jeffries, ever the workaholic, turned the volume to one-hundred percent on his phone. He did not want to miss any calls, texts, or emails from work. He also launched his Maps mobile application to direct the couple to the closest place to grab a cup of coffee before heading to Millennium Park.

Earlier that morning, Mr. Rivera-Guerrero took the “L” to downtown Chicago. He waited outside of a Starbucks until it was nearly empty. While he was inside demanding money from the cash register, Mr. and Mrs. Jeffries were standing outside of the Starbucks. As Mr. Rivera-Guerrero hurried his way out of Starbucks with a

¹ This fictional story demonstrates a plausible scenario that could arise from the current state of data privacy law in the United States.

book bag full of cash, the Jeffries noted something was wrong and left to grab coffee elsewhere.

The Chicago Police Department (“CPD”) was immediately made aware of the robbery. To assist in their investigation, the CPD obtained a court order to access location information from cell phone service providers that would identify cell phones that were within the vicinity of the Starbucks at the time of the robbery. Due to the density of downtown Chicago, the CPD was able to get location information from multiple cell phones, including those of Mr. Rivera-Guerrero and the Jeffries. After obtaining the numbers of the individuals that were within the vicinity of the Starbucks at the time of the robbery, the CPD obtained a separate court order asking for the real-time location information for those same numbers—again, including Mr. Rivera-Guerrero and Mr. and Mrs. Jeffries.

Meanwhile, the Jeffries continued exploring the city. After grabbing dinner the following evening, the couple decided to attend Guaranteed Rate Field for a Sox-Cubs game. Unbeknownst to them, Mr. Rivera-Guerrero and his son were also in attendance—facts known by the CPD. The CPD arrested both Mr. and Mrs. Jeffries, as well as Mr. Rivera-Guerrero, for questioning.

The CPD revealed to Mr. Jeffries during the questioning that it had evidence that he was at the scene of the robbery. The CPD also revealed that it had evidence that he frequented locations within Chicago often frequented by tourists, asking whether he was there to prey on tourists. Police obtained this information from Mr. Jeffries’ use of his smartphone’s Maps app that he used for walking directions, which utilized GPS. His whereabouts were also obtained from cell-site locators, to which his smartphone connected whenever it was searching for a connection, receiving or sending a call, text, or email.

In a separate room, the CPD revealed to Mrs. Jeffries that it had evidence that she was at the scene of the robbery. The CPD also revealed that it had evidence that she visited locations within Chicago often frequented by tourists, asking whether she was there to prey on tourists. Police obtained this information from Mrs. Jeffries’ smartphone connecting to cell-site locators, to which her smartphone connected in the same way her husband’s did.²

The CPD allowed the Jeffries to leave the station after understanding that they were in town celebrating their wedding anniversary and it was Mr. Rivera-Guerrero who committed the robbery. Though their anniversary was ruined and the couple missed their flight home, neither Mr. nor Mrs. Jeffries pressed charges.

Weeks later, Mr. Rivera-Guerrero’s attorney filed a motion to suppress the historic and real-time cell phone location information, arguing that the evidence was obtained unlawfully. His attorney argued that the CPD should have obtained a warrant before they began tracking Mr. Rivera-Guerrero’s smartphone. The court agreed that the historic cell phone location information was obtained unlawfully under *Carpenter v. United States*—but what about the real-time cell phone location information? Should a warrant be required when the government utilizes an individual’s cell phone to locate or track that individual in real-time? The pre-*Carpenter* courts have been divided on

² Though Mrs. Jeffries had her phone in “do not disturb mode,” all texts and calls—likely from her two teenage boys—that she had received during this time resulted in the collection of her location.

whether the Fourth Amendment provides individuals with a reasonable expectation of privacy in their cell phone's real-time location information.³

This Article argues that a warrant under the Fourth Amendment must be obtained prior to collection of real-time location information from a user's cell phone. Section II discusses cell phones, cell phone location information, and how the purpose of the Fourth Amendment applies to such information. Section II also discusses United States Supreme Court decisions regarding electronic surveillance of individuals by the government.

Section III discusses the different approaches that twenty-first century courts have taken when deciding whether the Fourth Amendment applies to law enforcement's collection of cell phone location information. Section IV explains why a warrant based on probable cause is required to collect such information, focusing on legal and public policy arguments. Section V provides two solutions to ensure individuals have Fourth Amendment protection in the cell phone location information emanating from their phone in real-time.

II. UNDERSTANDING THE USE OF REAL-TIME CELL PHONE LOCATION INFORMATION TO TRACK INDIVIDUALS

Law enforcement's use of real-time cell phone location information to track individuals' movements under the Fourth Amendment's Search and Seizure Clause was explicitly left as an open issue in a recent United States Supreme Court case, *Carpenter v. United States*.⁴ This Section briefly discusses the pervasiveness of cell phones. This Section also discusses background information on cell phone location information including how it functions and its precision. The Fourth Amendment and its applicability to tracking an individual using real-time cell phone location information will then be discussed. Lastly, this Section discusses United States Supreme Court decisions relating to electronic surveillance.

A. Cell Phones Today

The prevalence of cell phones in America is continuing to grow.⁵ Today, nearly all Americans—95%—own a cell phone of some kind.⁶ A vast majority of Americans—around 80%—own smartphones.⁷ Smartphones are cell phones with a broad range of functions, acting as minicomputers that just so happen to be used as telephones.⁸ “They

³ For courts finding a reasonable expectation of privacy in real-time cell phone location information, see *United States v. Ellis*, 270 F. Supp. 3d 1134 (N.D. Cal. 2017); *Tracey v. Florida*, 152 So. 3d 504 (Fla. 2014). *But see* *United States v. Riley*, 858 F.3d 1012 (6th Cir. 2017); *In re Smartphone Geolocation Data Application*, 977 F. Supp. 2d 129 (E.D.N.Y. 2013).

⁴ *Carpenter v. United States*, 138 S. Ct. 2206, 2220 (2018).

⁵ *Mobile Fact Sheet*, PEW RESEARCH CENTER (Feb. 5, 2018), <http://www.pewinternet.org/fact-sheet/mobile/#>.

⁶ *Id.*

⁷ *Id.*; *see also* DELOITTE, 2017 GLOBAL MOBILE CONSUMER SURVEY: US EDITION 7 (2017), <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-2017-global-mobile-consumer-survey-executive-summary.pdf>.

⁸ *See* *Smartphone*, MERRIAM-WEBSTER DICTIONARY ONLINE, <https://www.merriam-webster.com/dictionary/smartphone> (last visited April 8, 2019); *see also* *Riley*, 134 S. Ct. at 2480; *In re Smartphone Geolocation Data*, 977 F. Supp. 2d at 137.

could just as easily be called cameras, video players, rolodexes, calendars, tape recorders, libraries, diaries, albums, televisions, maps, or newspapers.”⁹ For instance, one-in-five American adults use smartphones as their primary means of online access at home, making cell phones even more necessary for these individuals.¹⁰ To utilize these broad range of functions, smartphone users download mobile applications (“apps”), the average of which is thirty-three per user.¹¹

As these numbers show, it is nearly impossible to live in the United States without a cell phone.¹² Individuals use cell phones while shopping, watching television, relaxing, eating (both at home and at restaurants), and while in public spaces (driving or walking).¹³ This means that cell phone users usually keep the phone on their person, rarely leaving its presence.¹⁴

To purchase and use a cell phone, individuals must agree to legal terms and conditions, ranging from the cell phone provider and manufacturer to an app creator.¹⁵ In fact, 91% of users “accept legal terms and conditions without reading them before installing apps, registering Wi-Fi hotspots, accepting updates, and signing on to online services such as video streaming.”¹⁶ However, even if read, the vast majority of terms and conditions are too complex for many people to understand.¹⁷ In fact, of the four largest service providers in the United States, only one has a privacy policy that states that location information may be disclosed to the government when served with lawful process.¹⁸ Of further concern, users do not consider accepting terms and conditions a

⁹ *Riley*, 134 S. Ct. at 2489.

¹⁰ PEW RESEARCH CENTER, *supra* note 5.

¹¹ *Riley*, 134 S. Ct. at 2490 (citing Brief for Electronic Privacy Information Center et al. as *Amicus Curiae* Supporting Petitioner in No. 13-132, p. 9). An app is a software program that is downloaded and accessed on a smartphone, or other device connected to the internet such as a tablet or smart TV. *Understanding Mobile Apps*, FED. TRADE COMM’N (Feb. 2017), <https://www.consumer.ftc.gov/articles/0018-understanding-mobile-apps>.

¹² DELOITTE, *supra* note 7, at 13.

¹³ *Id.* at 3.

¹⁴ *See Riley*, 134 S. Ct. at 2490 (citing HARRIS INTERACTIVE, *2013 Mobile Consumer Habits Study* (June 2013)); *United States v. Graham*, 796 F.3d 332, 348 (4th Cir. 2015); *United States v. Ellis*, 270 F. Supp. 3d 1134, 1144 (N.D. Cal. 2017); *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d 1011, 1023–25 (N.D. Cal. 2015); *Tracey v. Florida*, 152 So. 3d 504, 524 (Fla. 2014).

¹⁵ DELOITTE, *supra* note 7, at 12.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ Verizon, AT&T, T-Mobile, and Sprint are the four largest cell service providers in the United States, as of the second fiscal quarter of 2018. Mike Dano, *How Verizon, AT&T, T-Mobile, Sprint and More Stacked up in Q2 2018: The Top 7 Carriers*, FIERCE WIRELESS (Aug. 13, 2018), <https://www.fiercewireless.com/wireless/how-verizon-at-t-t-mobile-sprint-and-more-stacked-up-q2-2018-top-7-carriers>. Of the four, only T-Mobile’s terms state that location information may be shared with the government. *Privacy Policy & Personal Information*, T-MOBILE, <https://www.t-mobile.com/responsibility/privacy/privacy-policy> (last visited Nov. 2, 2018) (stating that T-Mobile “may disclose, without your consent, the approximate location of

barrier to cell phone use given the absence of choice.¹⁹ As a result, many cell phone users are left without another option but to accept these terms and conditions, as doing otherwise is unthinkable in modern society. Cell phone use and ownership will likely continue to grow, making the issue of warrantless collection of real-time cell phone location information a mounting problem.

B. The Development and Use of Cell Phone Location Information

A cell phone's location can be tracked through cell site location information ("CSLI") or global positioning system ("GPS") data.²⁰ Obtaining location information through either of these methods reveals details about an individual that is not likely to be obtained otherwise.²¹

Cellular service providers maintain a network of radio "base stations" to and from which a cell phone sends and receives radio signals.²² These base stations are towers or antennae.²³ A cell site, in turn, is a specific portion of the tower or antennae "which detects the radio signal emanating from a cell phone and connects the cell phone to

a wireless device to a governmental entity or law enforcement authority when we are served with lawful process.").

¹⁹ DELOITTE, *supra* note 7, at 12.

²⁰ *Cell Phone Location Tracking or CSLI: A Guide for Criminal Defense Attorneys*, ELEC. FRONTIER FOUND., https://www.eff.org/files/2017/10/30/cell_phone_location_information_one_pager_0.pdf. A cell-site simulator ("CSS")—also referred to as a StingRay, Hailstorm, or TriggerFish—is another means that the government can use to collect real-time cell phone location information. It is a device that mimics a service provider's tower or antennae. Cindy Ham, *How Lambis and CSLI Litigation Mandate Warrants for Cell-Site Simulators Usage in New York*, 95 WASH. U. L. REV. 509 (2017) (citing Sam Biddle, *Long-Secret Stingray Manuals Detail How Police Can Spy on Phones*, THE INTERCEPT (Sept. 12, 2016), <https://theintercept.com/2016/09/12/long-secret-stingraymanuals-detail-how-police-can-spy-on-phones/>). As a result, it forces cell phones to transmit radio signals to the simulator, believing that the simulator is the most attractive "base station" in the area. *Id.* With the CSS, the government "cuts out the cellular service provider and obtains CSLI directly." *United States v. Ellis*, 270 F. Supp. 3d 1134, 1145 (N.D. Cal. 2017) (citing *United States v. Lambis*, 197 F. Supp. 3d 606, 616 (S.D.N.Y. 2016)). Though CSS is not a focus of this Article, as real-time CSLI and GPS data is, it is still important to note that this is another means to obtain the same information. Additionally, Bluetooth beacons also have the potential to pinpoint the location of a cell phone and its user to a matter of inches. *In re Smartphone Geolocation Data*, 977 F. Supp. 2d 129, 138 (E.D.N.Y. 2013). Again, this is just another means to the same end.

²¹ Marissa Kay, *Reviving the Fourth Amendment: Reasonable Expectation of Privacy in a Cell Phone Age*, 50 J. MARSHALL L. REV. 555, 573, 577 (citations omitted).

²² *United States v. Graham*, 796 F.3d 332, 343 (4th Cir. 2015); *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d 1011, 1013 (N.D. Cal. 2015) (citing *Electronic Communications Privacy Act (ECPA) (Part II): Geolocation Privacy and Surveillance: Hearing Before the Subcomm. on Crime, Terrorism, Homeland Security, and Investigations, of the H. Comm. on the Judiciary*, 113th Cong. 50 (2013) [hereinafter *ECPA Hearing*] (written testimony of Prof. Matt Blaze, Univ. of Pennsylvania)).

²³ *Cellular Phone Towers*, AM. CANCER SOC'Y (May 31, 2016), <https://www.cancer.org/cancer/cancer-causes/radiation-exposure/cellular-phone-towers.html> (last visited Apr. 8, 2019); see also *Graham*, 796 F.3d at 343; *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d at 1013 (citing *ECPA Hearing*, *supra* note 22 (written testimony of Prof. Matt Blaze, Univ. of Pennsylvania)).

the local cellular network or Internet.”²⁴ “Although cell sites are usually mounted on [base stations,] they can also be found on light posts, flagpoles, church steeples, or the sides of buildings.”²⁵ As a cell phone and its user move from place to place, the cell phone’s signal is *automatically* sent to the tower that provides the best reception, typically the nearest cell site.²⁶ This creates CSLI.²⁷ The resulting CSLI identifies the precise location of the tower or antennae, and cell site at particular points in time, approximating, within feet, the whereabouts of the cell phone’s user.²⁸

The government may locate and track a person by collecting two types of CSLI, historical CSLI or real-time CSLI.²⁹ Historical CSLI refers to where an individual’s cell phone has been located at some point in the past.³⁰ As will be mentioned below, this was the subject of *Carpenter* and is not the subject of this Article, though the legal arguments related to historical CSLI are still important. On the other hand, real-time CSLI refers to where an individual’s cell phone is presently located.³¹

The precision of real-time CSLI varies based upon the number of cell sites in the area.³² If the cell phone is within range of three cell sites, known as triangulation, the location discerned from this data is nearly as precise as GPS.³³ In highly populated areas, such as cosmopolitan areas like downtown Chicago, a cell phone can connect to microcells and femtocells, in addition to base stations, which can reveal location

²⁴ *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d at 1014 (citing *ECPA Hearing*, *supra* note 22 (written testimony of Prof. Matt Blaze, Univ. of Pennsylvania)); *see also Types of Cell Sites*, STEEL IN THE AIR, <https://www.steelintheair.com/cell-site-types/> (last visited Apr. 8, 2019).

²⁵ *Carpenter v. United States*, 138 S. Ct. 2206, 2211 (2018); *see also* AM. CANCER SOC’Y, *supra* note 23.

²⁶ *See Carpenter*, 138 S. Ct. at 2211; *Graham*, 796 F.3d at 343.

²⁷ *See Carpenter*, 138 S. Ct. at 2211; *Graham*, 796 F.3d at 343; *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d at 1014 (citing *ECPA Hearing*, *supra* note 22 (written testimony of Prof. Matt Blaze, Univ. of Pennsylvania)).

²⁸ *Graham*, 796 F.3d at 343; *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d at 1014 (citing *ECPA Hearing*, *supra* note 22 (written testimony of Prof. Matt Blaze, Univ. of Pennsylvania)).

²⁹ *See* Steven M. Harkins, *CSLI Disclosure: Why Probable Cause Is Necessary to Protect What’s Left of the Fourth Amendment*, 68 WASH. & LEE L. REV. 1875, 1882 (2011) (citing Stephanie Lockwood, *Who Knows Where You’ve Been? Privacy Concerns Regarding the Use of Cellular Phones as Personal Locators*, 18 HARV. J.L. & TECH. 307, 308 (2004)).

³⁰ R. Craig Curtis et al., *Using Technology the Founders Never Dreamed of: Phones as Tracking Devices and the Fourth Amendment*, 4 U. DENV. CRIM. L. REV. 61, 63 (2014).

³¹ *Id.*

³² Eric Pait, *Find My Suspect: Tracking People in the Age of Cell Phones*, 2 GEO. L. TECH. REV. 155, 157 (2017); *see also Carpenter v. United States*, 138 S. Ct. 2206, 2211–12 (2018).

³³ *See Pait*, *supra* note 32, at 158; *see also United States v. Stimler*, 864 F.3d 253, 260 (3rd Cir. 2017); *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d at 1023 (citing *ECPA Hearing*, *supra* note 22 (written testimony of Prof. Matt Blaze, Univ. of Pennsylvania)).

information within the nearest foot.³⁴ This means the greater the concentration of cell sites, the smaller the coverage area.³⁵ A record number of cell sites were in operation at the end of 2017, providing increased precision of real-time CSLI.³⁶

Like CSLI, the government can track an individual using their cell phone's internal GPS locator to obtain a "precise, real-time location of the device without using CSLI and without its user knowing."³⁷ For necessary background, the GPS system used in cell phones comes from twenty-four GPS satellites in the United States.³⁸ Radio signals are received by a cell phone from this system of satellites, and then interpreted by programs to provide highly accurate location data.³⁹ GPS in cell phones was first used to improve emergency response by giving emergency operators the exact location of the person in need rather than relying on the reporter's estimated location.⁴⁰ Now, however, GPS in cell phones is used for more than aiding those in need.⁴¹

Individuals use smartphone GPS to locate dining and entertainment venues, as well as to obtain driving or walking directions.⁴² Many of the apps that users have on their phone require GPS in order for that app to function.⁴³ For example, when a user activates the GPS on his or her phone, it reports back real-time traffic conditions after crowdsourcing the speed of all cell phones on any particular road.⁴⁴ Law enforcement

³⁴ Susan Freiwald, *Cell Phone Location Data and the Fourth Amendment: A Question of Law, Not Fact*, 70 MD. L. REV. 677, 710–711 (2011); *see also* *Carpenter*, 138 S. Ct. at 2211–12; *United States v. Davis*, 785 F.3d 498, 540, 542 (11th Cir. 2015).

³⁵ Freiwald, *supra* note 34; *see also* *Carpenter*, 138 S. Ct. at 2211–12.

³⁶ *The State of Wireless 2018*, CTIA (July 10, 2018) <https://www.ctia.org/news/the-state-of-wireless-2018>.

³⁷ Pait, *supra* note 32.

³⁸ *What Is GPS?*, GARMIN, <http://www8.garmin.com/aboutGPS/> (last visited Apr. 8, 2019).

³⁹ *See In re Smartphone Geolocation Data Application*, 977 F. Supp. 2d 129 (E.D.N.Y. 2013).

⁴⁰ Ian Herbert, *Where We Are with Location Tracking: A Look at the Current Technology and the Implications on Fourth Amendment Jurisprudence*, 16 BERKELEY J. CRIM. L. 422, 477 (2011).

⁴¹ *See, e.g.*, Sonja Thompson, *10 Smartphone Features that I'm Pretty Darn Thankful for*, TECH REPUBLIC (Nov. 28, 2013), <http://www.techrepublic.com/blog/smartphones/10-smartphone-features-that-im-pretty-darn-thankful-for/>.

⁴² *New Research Shows Consumers Want a Side of Technology with Their Meals*, NAT'L REST. ASS'N (Oct. 23, 2013), <http://www.restaurant.org/News-Research/News/New-researchshows-consumers-want-a-side-of-techno>; *see also* DELOITTE, *supra* note 7, at 13.

⁴³ DJ Pangburn, *How—And Why—Apple, Google, And Facebook Follow You Around in Real Life*, FAST COMPANY (Dec. 12, 2017) <https://www.fastcompany.com/40477441/facebook-google-apple-know-where-you-are>.

⁴⁴ *See Waze—Crowdsourcing Maps and Traffic Information*, DIGITAL INNOVATION AND TRANSFORMATION A COURSE AT HARVARD BUSINESS SCHOOL (Dec. 6, 2015) <https://digit.hbs.org/submission/waze-crowdsourcing-maps-and-traffic-information/>; *see also* *United States v. Jones*, 565 U.S. 400, 428–29 (2012) (Alito, J., concurring).

uses this “continuous, detailed, and real-time location, speed, direction, and duration information” to obtain the whereabouts of suspected criminals or individuals.⁴⁵

The accuracy and flexibility of real-time cell phone location information is an advantage to law enforcement when investigating a crime.⁴⁶ For example, current GPS technology typically achieves spatial resolution within about fifteen feet.⁴⁷ This means, for example, that law enforcement could locate an individual using his or her cell phone within approximately fifteen feet of the individual’s exact location, including in his or her home.⁴⁸ Real-time cell phone location information also makes it easier to collect detailed information “without incurring the commensurate costs in dedicated employee resources, salary, benefits, [maintenance,] and overtime pay.”⁴⁹ Law enforcement can locate individuals in this manner from any location, making such surveillance not only cheaper but vastly superior to visual surveillance because “no one human or organization of human observers is currently capable of such comprehensive, continuous, and accurate information regarding location and movement monitoring.”⁵⁰ While there is a potential disparity in precision between real-time CSLI and GPS data, these two methods provide the government with the current location of a cell phone’s user anywhere in the country based solely on his or her cell phone number.⁵¹

C. *Attached at the Hip: The Fourth Amendment and Real-Time Cell Phone Location Information*

The Fourth Amendment protects the right of United States citizens “to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures.”⁵² The Fourth Amendment also states the grounds on which the government can perform searches and seizures: the government must obtain a warrant issued on “probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.”⁵³ Because the Fourth Amendment does not mention cell phones or real-time location information, an inquiry into the Framers’ motives for drafting the Fourth Amendment and United States Supreme Court jurisprudence is beneficial to understanding the relation between the Fourth Amendment and real-time cell phone location information.

⁴⁵ See, e.g., *State v. Earls*, 70 A.3d 630 (N.J. 2013); Lenese C. Herbert, *Challenging the (Un)constitutionality of Governmental GPS Surveillance*, 26 CRIM. JUST. 34, 34 (2011).

⁴⁶ Pait, *supra* note 32, at 155.

⁴⁷ *GPS Accuracy*, gps.gov (Dec. 5, 2017), <https://www.gps.gov/systems/gps/performance/accuracy/>.

⁴⁸ *Earls*, 70 A.3d at 636, 639.

⁴⁹ *In re Application of the U.S. for an Order Authorizing Disclosure of Location Info. of a Specified Wireless Tel.*, 849 F. Supp. 2d 526, 533 (D. Md. 2011).

⁵⁰ Herbert, *supra* note 45, at 35; see also *In re Application of the U.S.*, 849 F. Supp. 2d at 540.

⁵¹ Pait, *supra* note 32, at 159.

⁵² U.S. CONST. amend. IV.

⁵³ *Id.*

The Framers of the Amendment were influenced by government action—in England and the American colonies—which violated personal liberties, specifically in three cases.⁵⁴ In two English cases, *Entick v. Carrington* and *Wilkes v. Wood*, the government seized property using general warrants—warrants with no names or places to be searched.⁵⁵ The courts struck down the general warrants and judgment was entered in favor of the plaintiffs in both cases.⁵⁶ This was a “monument of English freedom” familiar to all Americans at the time the Constitution was adopted.⁵⁷ In the Massachusetts *Writs of Assistance* case, the government searched any place where the sought after property could be hidden without any suspicion the goods were actually there.⁵⁸ Unlike in *Entick* and *Wilkes*, the search was ruled legal and judgment was entered in favor of the government.⁵⁹ The use of general warrants in these cases and, “as John Adams recalled, the patriot James Otis’s 1761 speech condemning writs of assistance [were] ‘the first act[s] of opposition to the arbitrary claims of Great Britain’ and helped spark the Revolution itself.”⁶⁰ In sum, “a central aim of the Framers was ‘to place obstacles in the way of a too permeating police surveillance.’”⁶¹

The Supreme Court’s jurisprudence gives guidance on many of the terms that the Fourth Amendment contains. For example, a search requiring a warrant based on probable cause occurs in two circumstances. First, a search occurs when law enforcement trespasses on a searched person’s property, also known as a physical intrusion.⁶² Second, a search occurs when a searched person’s expectation of privacy in the thing searched is reasonable and society believes that the expectation of privacy is reasonable.⁶³ The Court has also defined the terms seizure and probable cause.⁶⁴ In addition, the Court has crafted numerous exceptions to the warrant requirement including exigent circumstances, arrests outside the home, searches incident to arrest, inventory searches, automobiles, and street stops and frisks.⁶⁵

⁵⁴ *Carpenter v. United States*, 138 S. Ct. 2206, 2213 (2018).

⁵⁵ *Entick v. Carrington* (1765) 19 How. St. Tr. 1029 (C.P.); *Wilkes v. Wood* (1763) 19 How. St. Tr. 1153 (C.P.).

⁵⁶ *Carrington*, 19 How. St. Tr. at 1029; *Wilkes*, 19 How. St. Tr. at 1153.

⁵⁷ *United States v. Jones*, 565 U.S. 400, 404–05 (2012).

⁵⁸ *Writs of Assistance Trial: 1761*, JRANK ARTICLES (Mar. 9, 2019), <https://law.jrank.org/pages/2353/Writs-Assistance-Trial-1761.html>.

⁵⁹ *Id.*

⁶⁰ *Carpenter v. United States*, 138 S. Ct. 2206, 2213 (2018).

⁶¹ *Id.* at 2214.

⁶² *See Jones*, 565 U.S. at 400; *Katz v. United States*, 389 U.S. 347 (1967).

⁶³ *See Jones*, 565 U.S. at 400; *Katz*, 389 U.S. at 347.

⁶⁴ A seizure has been defined as a “meaningful interference with an individual’s possessory interests in that property.” *Soldal v. Cook Cty.*, 506 U.S. 56, 61 (1992). Persons may also be seized, but this is not at issue here. Probable cause has been defined as “a fair probability.” *Illinois v. Gates*, 462 U.S. 213, 246 (1983).

⁶⁵ Such exceptions include: exigent circumstances, arrests *outside* the home, searches *incident* to arrest, inventory searches, automobiles, and street stops and frisks. WILLIAM J. STUNTZ, THE HERITAGE FOUNDATION, THE HERITAGE GUIDE TO THE CONSTITUTION 328 (Edwin Meese III et al. eds., 2005). The exception that will most likely apply to collection of a

The Supreme Court has also confirmed that the basic purpose of the Fourth Amendment “is to safeguard the privacy and security of individuals against arbitrary invasions by governmental officials.”⁶⁶ “[T]he Amendment seeks to secure ‘the privacies of life’ against ‘arbitrary power.’”⁶⁷ It “was the founding generation’s response to the reviled ‘general warrants’ and ‘writs of assistance’ of the colonial era, which[, as mentioned above,] allowed British officers to rummage through homes in an *unrestrained search for evidence of criminal activity*.”⁶⁸ Through this historical background, it is clear that real-time cell phone location information falls within the purview of the Fourth Amendment.

D. A Reasonable Expectation of Privacy and the Fourth Amendment: Setting the Stage for Real-Time Cell Phone Tracking

The United States Supreme Court’s Fourth Amendment jurisprudence has evolved, while keeping intact the Framers’ intent. This subsection focuses on three prominent twentieth century United States Supreme Court cases that have provided the backdrop to cell phone tracking jurisprudence, and five twenty-first century Supreme Court cases that have set the groundwork for real-time cell phone tracking jurisprudence. As evident from the case law below, individuals have a reasonable expectation of privacy in their real-time cell phone location information.

1. Katz, Knotts, and Karo

The Supreme Court established the reasonable expectation standard in *Katz v. United States*.⁶⁹ In *Katz*, the petitioner challenged the government’s attachment of an eavesdropping device to a public phone booth as a violation of his constitutional rights.⁷⁰ The Court found that a conversation is protected from unreasonable search and seizure under the Fourth Amendment if it is made with a “reasonable expectation of privacy.”⁷¹ Justice Harlan’s concurring opinion launched the “*Katz* test,” consisting of a two-part inquiry.⁷² In order to determine whether a search violated a person’s Fourth Amendment rights, courts must consider whether: (1) the individual manifested a subjective expectation of privacy in the object of the challenged search; and (2)

smartphone user’s GPS information is exigent circumstances. *See United States v. Banks*, 884 F.3d 998 (10th Cir. 2018). “Courts recognize the existence of exigent circumstances to justify a warrantless search in several situation, including: to prevent the destruction of evidence, to [ensure safety,] when police are in ‘hot pursuit’ of a fleeing suspect, or when other emergency circumstances exist, such as the need to assist injured individuals.” *Patterson v. North Carolina*, No. 5:12 cv-182-RJC, 2013 WL 170431, at *3 (W.D.N.C. Jan. 16, 2013). The standard under exigent circumstances is a “reasonable suspicion”—a lower standard than probable cause. *Id.*

⁶⁶ *Carpenter*, 138 S. Ct. at 2213.

⁶⁷ *Id.* at 2214.

⁶⁸ *Riley v. California*, 134 S. Ct. 2473, 2494 (2014) (emphasis added).

⁶⁹ *Katz v. United States*, 389 U.S. 347, 360–61 (1967).

⁷⁰ *Id.* at 348.

⁷¹ *Id.* at 360.

⁷² *Id.* at 360–61.

society is willing to recognize that expectation as reasonable.⁷³ This test has been applied in numerous cell phone location information cases.⁷⁴

The Supreme Court in *United States v. Knotts* set forth the proposition that individuals have no expectation of privacy on public roadways.⁷⁵ In *Knotts*, federal agents placed a beeper into a container that was to be purchased by respondent.⁷⁶ The agents were able to monitor the movement of the container as it moved along the highway and eventually to respondent's home.⁷⁷ The Court held that "[a] person traveling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another."⁷⁸ The Court found no reasonable expectation of privacy because the information obtained had been voluntarily conveyed to the public by traveling on public roads.⁷⁹ This rule has effectively been overruled beginning in *United States v. Jones*, and later in *Carpenter*.⁸⁰

In *United States v. Karo*, the Supreme Court considered whether the installation of a beeper in a container amounted to a search or seizure.⁸¹ Federal agents installed a beeper on a container in order to locate the movement of the container from location to location.⁸² The Court held that the installation, with the consent of the original owner, does not invade a buyer's privacy when the buyer had no knowledge of the presence of the beeper.⁸³ However, the Court found that monitoring a beeper in a private residence violates a person's Fourth Amendment rights because a warrant must be obtained in order to search a house.⁸⁴

2. *Kyllo*, *Jones*, *Jardines*, and *Riley*

The Supreme Court in *Kyllo v. United States* considered whether the use of a thermal-imaging device aimed at a home from the street constituted a search.⁸⁵ Federal agents used a thermal imager to determine whether heat was emanating from inside a

⁷³ *Id.* at 361.

⁷⁴ See *Carpenter v. United States*, 138 S. Ct. 2206 (2018); *United States v. Ellis*, 270 F. Supp. 3d 1134 (2017); *United States v. Graham*, 796 F.3d 332 (4th Cir. 2015); *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d 1011 (N.D. Cal. 2015); *United States v. Thomas*, No. 3:15cr80, 2015 WL 5999313 (E.D. Va. Oct. 13, 2015); *Tracey v. Florida*, 152 So. 3d 504 (Fla. 2014).

⁷⁵ *United States v. Knotts*, 460 U.S. 276, 280–81 (1983).

⁷⁶ *Id.* at 277.

⁷⁷ *Id.* at 278–79.

⁷⁸ *Id.* at 281.

⁷⁹ *Id.* at 281–82.

⁸⁰ *United States v. Jones*, 565 U.S. 400, 412 (2012); *Carpenter v. United States*, 138 S. Ct. 2206, 2217 (2018).

⁸¹ *United States v. Karo*, 468 U.S. 705 (1984).

⁸² *Id.* at 708.

⁸³ *Id.* at 712.

⁸⁴ *Id.* at 718.

⁸⁵ *Kyllo v. United States*, 533 U.S. 27, 29 (2001).

house.⁸⁶ The scan of the home took a few minutes and was performed from the agents' car.⁸⁷ The Court held that such behavior is a search because the government used a device that was not in general public use "to explore details of the home that would [have] previously been unknowable without physical intrusion."⁸⁸

In *Jones*, the Supreme Court addressed the issue of "whether the attachment of a GPS device to an individual's vehicle, and the subsequent use of the device to track the vehicle's movements, constitute[d] a search under the Fourth Amendment."⁸⁹ The government attached a GPS device to the defendant's vehicle without a proper warrant and tracked the vehicle's movements for twenty-eight days.⁹⁰ Once indicted, the defendant moved to suppress the evidence obtained through the GPS device.⁹¹

The district court suppressed the GPS data obtained while the vehicle was at the defendant's residence;⁹² however, the court admitted into evidence the data obtained while the vehicle was on public streets, evoking *Knotts*.⁹³ The circuit court for the District of Columbia reversed on appeal, holding that the admission of the evidence obtained by the warrantless use of a GPS device violated the Fourth Amendment.⁹⁴ Affirming the decision of the circuit court, the Supreme Court held that the attachment of the GPS device constituted a search under the Fourth Amendment because of the government's "physical intrusion on an 'effect' for the purpose of obtaining information[.]"⁹⁵ In reaching this decision, the Court utilized the "physical trespass test."⁹⁶ This holding ignored *Knotts* by affirming the decision of the circuit court, which overruled the district court's holding that relied on *Knotts*, to find that no search occurred on public thoroughfares.⁹⁷

The largest impact for cell phone location information came from the *Jones* concurrences.⁹⁸ In her concurrence, Justice Sotomayor argued that the *Katz* test

⁸⁶ *Id.*

⁸⁷ *Id.* at 30.

⁸⁸ *Id.* at 40.

⁸⁹ Letter from N. Mark Rapoport, S.C. Senior Assistant Att'y Gen., to Brian Buck, Chief of Police, 2012 WL 1260180, at *1 (2012).

⁹⁰ *United States v. Jones*, 565 U.S. 400, 402–03 (2012).

⁹¹ *Id.* at 403.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.* at 404.

⁹⁵ *Id.* at 400–01.

⁹⁶ *Id.*; see *supra* Part II.A. Although the majority applied the "physical trespass test," the concurring opinions focused on the "*Katz* test." *Jones*, 565 U.S. at 413–31.

⁹⁷ *Jones*, 565 U.S. at 404.

⁹⁸ Cases relying on *Jones* include: *Carpenter v. United States*, 138 S. Ct. 2206 (2018); *United States v. Graham*, 796 F.3d 332, 338 (4th Cir. 2015) (comparing *Jones* to historical CSLI); *Tracey v. Florida*, 152 So. 3d 504 (Fla. 2014); *State v. Earls*, 70 A.3d 630 (N.J. 2013), among other older cases. Cases distinguishing *Jones* include: *United States v. Davis*, 785 F.3d 498, 514–15 (11th Cir. 2015) (distinguishing *Jones* from historical CSLI); *United States v.*

provides individuals more protection than the test applied by the majority.⁹⁹ She noted that the government can circumvent the *Jones* holding by enlisting factory-installed or owner-installed tracking devices, (i.e., cell phones) instead of physically attaching a tracking device.¹⁰⁰ Justice Sotomayor stated that the delicate information received by the GPS to determine “the existence of a reasonable societal expectation of privacy in the sum of one’s public movements” should be taken into account.¹⁰¹ This weakened the *Knotts* holding, implying that a person may have a reasonable expectation of privacy in GPS data collected on public roads. She also recognized the difficulty in determining a reasonable expectation of privacy in society’s present “digital age.”¹⁰²

Justice Alito’s concurrence expounded upon the points made by Justice Sotomayor. Justice Alito found that continuous monitoring of every single movement of an individual’s car for twenty-eight days violated individuals’ reasonable expectation of privacy and thus constituted a search.¹⁰³ He explained that, prior to GPS devices, a month-long surveillance of an individual would have been demanding and costly, requiring a tremendous amount of resources and people.¹⁰⁴ As a result, society’s expectation that such surveillance would not happen to them is reasonable.¹⁰⁵

In *Florida v. Jardines*, the Supreme Court considered whether using a drug-sniffing dog on a homeowner’s porch to investigate the contents of the home was a search.¹⁰⁶ The government entered the home’s front porch with a drug-sniffing dog, where the dog gave a positive alert for narcotics.¹⁰⁷ Based on the alert, the government obtained a warrant for a search.¹⁰⁸ The Court found that a search occurred when law enforcement entered the front porch using the property-based understanding of the Fourth Amendment, as it did in *Jones*.¹⁰⁹

In Justice Kagan’s concurrence, she argued that the government would violate one’s reasonable expectation of privacy “when they use trained canine assistants to reveal within the confines of a home what they could not otherwise have found there.”¹¹⁰ Her reasoning focused on the privacy interest one has in their home, citing *Kyllo*, and the behavior of the government.¹¹¹ She likened the government’s behavior

Riley, 858 F.3d 1012, 1016 (6th Cir. 2017); *United States v. Skinner*, 690 F.3d 772, 777–79 (6th Cir. 2012), among other older cases.

⁹⁹ *Jones*, 565 U.S. at 414–15 (Sotomayor, J., concurring).

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 416.

¹⁰² *Id.* at 417.

¹⁰³ *Id.* at 428–31 (Alito, J., concurring).

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Florida v. Jardines*, 569 U.S. 1 (2016).

¹⁰⁷ *Id.* at 3–4.

¹⁰⁸ *Id.* at 4.

¹⁰⁹ *Id.* at 10–11.

¹¹⁰ *Id.* at 13 (Kagan, J., concurring).

¹¹¹ *Id.* at 14–15.

to that of a stranger using high-powered binoculars to peer into a house.¹¹² Such behavior, she noted, would allow the stranger to learn details of the homeowner's life that were disclosed to no one, invading the homeowner's reasonable expectation of privacy by "nosing into intimacies . . . sensibly thought protected from disclosure."¹¹³

The Supreme Court in *Riley v. California* held that the government cannot search digital information on a cell phone seized from a person without a warrant.¹¹⁴ In two separate cases, police officers seized a cell phone from arrested persons, discovering incriminating information after accessing information on the phones.¹¹⁵ In finding that people have a reasonable expectation of privacy in their cell phone's digital information, the Court relied on the pervasiveness of cell phones.¹¹⁶ "[M]odern cell phones . . . are now such a pervasive and insistent part of daily life that the proverbial visitor from Mars might conclude they were an important feature of human anatomy."¹¹⁷ "Prior to the digital age, people did not typically carry a cache of sensitive personal information with them as they went about their day. Now it is the person who is not carrying a cell phone, with all that it contains, who is the exception."¹¹⁸ The Court also found that "[p]rivacy comes at a cost" to law enforcement because "[m]odern cell phones are not just another technological convenience. With all they contain and all they may reveal, they hold for many Americans 'the privacies of life[.]'"¹¹⁹

3. Carpenter

In *Carpenter*, the Court addressed the issue of "whether the [g]overnment 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."¹²⁰ The government, without obtaining a warrant, collected cell site records from cell phone carriers that revealed the cell phone's location.¹²¹ The Court found this a violation of the Fourth Amendment, holding that "an individual maintains a legitimate expectation of privacy in the record of his physical movements as captured through CSLI."¹²²

As part of its holding, the Court declined to extend the third-party doctrine to historical CSLI.¹²³ First, the Court found a "world of difference" between the types of

¹¹² *Id.* at 13.

¹¹³ *Id.*

¹¹⁴ *Riley v. California*, 134 S. Ct. 2473, 2495 (2014).

¹¹⁵ *Id.* at 2480–81.

¹¹⁶ *Id.*

¹¹⁷ *Id.* at 2484.

¹¹⁸ *Id.* at 2490.

¹¹⁹ *Id.* at 2494–95.

¹²⁰ *Carpenter v. United States*, 138 S. Ct. 2206, 2211 (2018).

¹²¹ *Id.* at 2212.

¹²² *Id.* at 2217.

¹²³ *Id.* at 2220. The third-party doctrine was first established in *United States v. Miller*, where the Court held that a person has no legitimate expectation of privacy in information voluntarily turned over to a third party. *United States v. Miller*, 425 U.S. 435, 443 (1976). The Court

personal information addressed in the third-party doctrine and the location information “casually collected by wireless carriers today.”¹²⁴ Second, the Court found that CSLI “is not truly ‘shared,’” because CSLI is recorded by simply using the phone “without any affirmative act . . . beyond powering [it] up.”¹²⁵

In finding a reasonable expectation of privacy, the Court relied on the *Jones* concurrences to show an objective expectation of privacy.¹²⁶ The Court, as in *Jones*, rejected *Knotts*, finding that “[a] person does not surrender all Fourth Amendment protection by venturing into the public sphere. To the contrary, ‘what [one] seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.’”¹²⁷ This negates a mechanical reading of *Knotts*, specifically in the case of cell phone location information. Additionally, the Court highlighted the pervasiveness of cell phones while emphasizing the ease at which the government can collect historical CSLI.¹²⁸ The Court noted that this combination is similar to the government attaching “an ankle monitor to the phone’s user.”¹²⁹

Justices Kennedy, Thomas, Alito, and Gorsuch each dissented. Justice Kennedy argued that the majority departed from Fourth Amendment precedent and principles, and that it “place[d] undue restrictions on the lawful and necessary enforcement powers” of the government.¹³⁰ He also believed that the third-party doctrine applied because cell site records “are no different from the many other kinds of business records” and users “do not own, possess, control, or use the [location] records.”¹³¹ He also argued that CSLI is imprecise.¹³² Justices Thomas and Alito echoed these arguments and believed that the legislature should determine whether a warrant showing probable cause is required for the government to collect historical CSLI, not the Court.¹³³ Justice Gorsuch’s dissent made three arguments, seemingly believing that there should be Fourth Amendment protection for CSLI, but didn’t agree with the

determined that Miller’s bank records were not his own but “business records of the bank.” *Id.* In a separate case applying the third-party doctrine, *Smith v. Maryland*, the Court found that Smith had no expectation of privacy in the numbers dialed on a telephone for similar reasons. *Smith v. Maryland*, 442 U.S. 735, 742 (1979). The two factors in the third-party doctrine are voluntary exposure and ownership. *See Miller*, 425 U.S. at 443; *Smith*, 442 U.S. at 742.

¹²⁴ *Carpenter*, 138 S. Ct. at 2219.

¹²⁵ *Id.*

¹²⁶ *Id.* at 2217–19.

¹²⁷ *Id.* at 2217.

¹²⁸ *Id.* at 2218.

¹²⁹ *Id.*

¹³⁰ *Id.* at 2223 (Kennedy, J., dissenting).

¹³¹ *Id.* at 2224, 2229–30.

¹³² *Id.* at 2225.

¹³³ *Id.* at 2246 (Thomas, J., dissenting); *id.* at 2261 (Alito, J., dissenting).

majority in how they came to that conclusion.¹³⁴ Like Justices Alito and Thomas, he also believed the legislature was better suited to address this issue.¹³⁵

All of these cases lay the groundwork for real-time cell phone tracking. Prior to *Carpenter*, some courts distinguished *Jones* and applied *Knotts*, holding that a person traveling on public thoroughfares has no reasonable expectation of privacy in his movements.¹³⁶ Courts also applied the third-party doctrine.¹³⁷ However, *Carpenter* now makes this logic difficult. *Carpenter* and the *Jones* concurrences now control, and include the principles found in *Karo*, *Kyllo*, the *Jardines* concurrence, and *Riley*.

III. CURRENT CASE LAW REGARDING CELL PHONE LOCATION INFORMATION

Some courts have analyzed the government's use of a cell phone's real-time location information under the Fourth Amendment.¹³⁸ Some require a warrant based on probable cause before the government can collect such information, while others have found that a warrant requiring probable cause is not required.¹³⁹ Specifically, some courts have held that a cell phone's user has no reasonable expectation of privacy in his or her cell phone's location information.¹⁴⁰ This Section focuses on courts that have contemplated the legal standard for which the government is permitted to obtain a cell phone user's real-time location information. Most of these cases focus on the collection of real-time cell phone location information. Though others focus on historical location information, the legal standard should not be different. These courts have applied or distinguished *Jones*, as well as other doctrines, resulting in conflicting rationales and conclusions. These differing opinions can now be resolved under *Carpenter*.

¹³⁴ *Id.* at 2272 (Gorsuch, J., dissenting). The three arguments that Justice Gorsuch made were to: (1) "ignore the problem, maintain *Smith* and *Miller*, and live with the consequences [i]f the confluence of these decisions and modern technology means our Fourth Amendment rights are reduced to nearly nothing, so be it[;]" (2) "set *Smith* and *Miller* aside and try again using the *Katz* 'reasonable expectation of privacy' jurisprudence that produced them[;]" and (3) "look for answers elsewhere[, such as bailment and positive law]." *Id.* at 2262.

¹³⁵ *Id.* at 2265–66.

¹³⁶ *Carpenter*, 138 S. Ct. at 2230–31 (Kennedy, J., dissenting); *Davis*, 785 F.3d at 514–15 (distinguishing *Jones* from historical CSLI); *United States v. Riley*, 858 F.3d 1012, 1016 (6th Cir. 2017).

¹³⁷ *See United States v. Riley*, 858 F.3d 1012, 1017–18 (6th Cir. 2017); *United States v. Davis*, 785 F.3d 498, 511–13 (11th Cir. 2015) (applying the third-party doctrine to historical CSLI); *In re Smartphone Geolocation Data Application*, 977 F. Supp. 2d 129, 145–46 (E.D.N.Y. 2013).

¹³⁸ *United States v. Riley*, 858 F.3d 1012 (6th Cir. 2017); *United States v. Ellis*, 270 F. Supp. 3d 1134 (N.D. Cal. 2017); *In re Smartphone Geolocation Data Application*, 977 F. Supp. 2d 129 (E.D.N.Y. 2013); *Tracey v. Florida*, 152 So. 3d 504 (Fla. 2014).

¹³⁹ *Tracey*, 152 So. 3d at 526.

¹⁴⁰ *United States v. Riley*, 858 F.3d 1012 (6th Cir. 2017); *In re Smartphone Geolocation Data Application*, 977 F. Supp. 2d 129 (E.D.N.Y. 2013).

A. *Government Access to Cell Phone Location Information Under the Fourth Amendment*

Requiring the government to obtain a warrant under the Fourth Amendment to collect real-time cell phone location information is necessitated by *Carpenter*.¹⁴¹ Some courts have required such a warrant, however, one remaining issue is whether the length of surveillance should be a factor.¹⁴² In addition to real-time cell phone location information, it is helpful to analyze lower court cases addressing this issue for *historical* cell phone location information.

In one instance, the Fourth Circuit in *United States v. Graham*, held that the government's acquisition of *historical* CSLI without a warrant based on probable cause was an unreasonable search in violation of the Fourth Amendment.¹⁴³ The court correctly found that:

Examination of a person's . . . CSLI [enables] the government to trace the movements of the cell phone and its user across public and private spaces and thereby discover the private activities and personal habits of the user. Cell phone users have an objectively reasonable expectation of privacy in this information.¹⁴⁴

This holding demonstrates the inapplicability of *Knotts*. Instead of relying upon *Knotts*, the court relied on *Karo* and *Kyllo* in recognizing the sanctity of Fourth Amendment protections in the home.¹⁴⁵ The court found that CSLI "allow[s] the government to place an individual and her personal property—specifically, her cell phone—at the person's home and other private locations at specific points in time."¹⁴⁶ The precision of CSLI is an important factor, one that the Fourth Circuit correctly applied in this case.

However, in considering the length of surveillance, the court's focus was on long-term surveillance.¹⁴⁷ The court compared long-term location information disclosed in cell phone records to the long-term GPS monitoring in *Jones*, stating that it "can reveal both a comprehensive view and specific details of the individual's daily life."¹⁴⁸ Though this is true, short-term surveillance can be just as revealing. Determining a cut-off for what is considered long-term surveillance is dangerous because, as found

¹⁴¹ *Carpenter*, 138 S. Ct. at 2223.

¹⁴² See *United States v. Ellis*, 270 F. Supp. 3d 1134 (N.D. Cal. 2017); *Tracey v. Florida*, 152 So. 3d 504 (Fla. 2014). For cases related to historical CSLI, see *United States v. Graham*, 796 F.3d 332 (4th Cir. 2015); *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d 1011 (N.D. Cal. 2015); *United States v. Thomas*, No. 3:15cr80, 2015 WL 5999313 (E.D. Va. Oct. 13, 2015).

¹⁴³ *Graham*, 796 F.3d at 338 (admitting CSLI because "the government relied in good faith on court orders.").

¹⁴⁴ *Id.* at 344–45.

¹⁴⁵ *Id.* at 346.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.* at 347.

¹⁴⁸ *Id.* at 348. The court determined that long-term monitoring is at least fourteen days. *Id.* at 350.

in *Tracey v. Florida*, it can result in “arbitrary and inequitable enforcement.”¹⁴⁹ For this reason, the Florida Supreme Court rejected an approach based on the interval of time location information was collected.¹⁵⁰ The court noted the difficulty for law enforcement to know whether a warrant is needed if lines were drawn regarding the length of location information collection.¹⁵¹ The length of surveillance should not be a factor in determining whether a reasonable expectation of privacy exists. A person’s Fourth Amendment rights can be violated within minutes of tracking via collection of real-time cell phone location information if such collection is done without a warrant based on probable cause. Time is not discriminatory. Otherwise, the precedent set in *Graham* may result in such “arbitrary and inequitable” enforcement.¹⁵²

In *Tracey*, the Florida Supreme Court found that one has a reasonable expectation of privacy in his or her real-time location information.¹⁵³ The court recognized the pervasiveness of cell phones, similar to the Supreme Court in *Riley*.¹⁵⁴ In finding a reasonable expectation of privacy, the court found that “a significant portion” of Americans use cell phones for various purposes, such as email, text-messaging, scheduling, and banking.¹⁵⁵ The court also found that people normally carry cell phones on their person making “a cell phone’s movements its owner’s movements.”¹⁵⁶ The court acknowledged that this pervasiveness violates the principles in *Karo, Kyllo, and Jardines*.¹⁵⁷ The court stated that “cell phone tracking can easily invade the right to privacy in one’s home or other private areas, a matter that the government cannot always anticipate and one which, when it occurs, is clearly a Fourth Amendment violation.”¹⁵⁸ The court correctly noted it as a violation because the Amendment protects the rights of United States citizens to be secure in their houses.¹⁵⁹ Second, the Fourth Amendment requires a warrant that particularly describes the place searched.¹⁶⁰ Without the government knowing precisely where the phone is, tracking a cell phone without a warrant is akin to a general warrant. Additionally, the court found that cell phones are more pervasive than the beeper in *Knotts* because “Knotts did not knowingly obtain, consciously carry, and purposely use the beeper for all manner of

¹⁴⁹ *Tracey v. Florida*, 152 So. 3d 504, 521 (Fla. 2014).

¹⁵⁰ *Id.* at 521.

¹⁵¹ *Id.*

¹⁵² See *United States v. Thomas*, No. 3:15cr80, 2015 WL 5999313, at *5 (E.D. Va. Oct. 13, 2015) (relying on *Graham* in finding that law enforcement “must obtain a warrant before acquiring long-term historical CSLI.”). Though the court determined a warrant was required, the precedent set in *Graham* related to long-term monitoring should be ignored.

¹⁵³ *Tracey*, 152 So. 3d at 526.

¹⁵⁴ *Id.* at 524.

¹⁵⁵ *Id.* at 523 (citation omitted).

¹⁵⁶ *Id.* at 525.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.* at 524.

¹⁵⁹ U.S. CONST. amend. IV.

¹⁶⁰ *Id.*

personal and necessary functions, as occurs with cell phones.”¹⁶¹ The Court cited *Jones* to further distinguish *Knotts*, making it clear that *Knotts* is not applicable to real-time tracking.¹⁶²

The court also recognized that cell phones automatically connect to cell sites.¹⁶³ The court rejected the argument that an individual voluntarily turns over his or her location information, finding that users do not “convey [real-time CSLI] to the service provider for any purpose other than to enable use of his cell phone for its intended purpose.”¹⁶⁴ The court also noted that “[r]equiring a cell phone user to turn off the cell phone just to assure privacy from governmental intrusion . . . places an unreasonable burden on the user to forego necessary use of his cell phone, a device now considered essential by much of the populace.”¹⁶⁵ The Florida Supreme Court correctly found a reasonable expectation of privacy, relying on the pervasiveness of cell phones, the inapplicability of *Knotts*, the *Jones* concurrences, the involuntary conveyance of real-time CSLI, and the need to disregard the length of surveillance.

In *United States v. Ellis*, the government monitored defendant’s cell phone in real-time.¹⁶⁶ The United States District Court for the Northern District of California held that “cell phone users have an expectation of privacy in their cell phone location in real time and that society is prepared to recognize that expectation as reasonable.”¹⁶⁷ The court determined, similar to the *Tracey* court, that individuals “keep their phones on their person or within reach[,]” making cell phones “a close proxy to one’s actual physical location.”¹⁶⁸ The court adopted the reasoning in *In Re: Application for Telephone Information Needed for a Criminal Investigation*¹⁶⁹ (“*Telephone Information*”) to come to this conclusion—a case where the court affirmed the denial of the government’s application to obtain *historical* CSLI.¹⁷⁰ The *Telephone Information* court found the following principles present in the government’s request for historical CSLI:

- (1) an individual’s expectation of privacy is at its pinnacle when government surveillance intrudes on the home;
- (2) long-term electronic surveillance by the government implicates an individual’s expectation of privacy; and
- (3) location data generated by cell phones, which are

¹⁶¹ *Tracey*, 152 So. 3d at 524.

¹⁶² *Id.* at 525.

¹⁶³ *Id.* at 507.

¹⁶⁴ *Id.* at 525.

¹⁶⁵ *Id.* at 523.

¹⁶⁶ *United States v. Ellis*, 270 F. Supp. 3d 1134, 1139 (N.D. Cal. 2017).

¹⁶⁷ *Id.* at 1145.

¹⁶⁸ *Id.*

¹⁶⁹ *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d 1011, 1023–25 (N.D. Cal. 2015).

¹⁷⁰ *Ellis*, 270 F. Supp. 3d at 1145–46.

ubiquitous in this day and age, can reveal a wealth of private information about an individual.¹⁷¹

Other than a focus on long-term surveillance, which should not be a factor, the court's rationale was similar to that in *Tracey*.

When discussing the ubiquity of cell phones, the *Telephone Information* court found persuasive the fact that CSLI is "generated by passive activities" such as connecting to a base station, apps running in the background, and the receipt of calls and text messages.¹⁷² The court also noted, correctly, that "even though a user may demonstrate a subjective expectation of privacy by disabling an app's location identification features," the phone still generates CSLI.¹⁷³ The court also rejected any notion of discarding or turning off cell phones.¹⁷⁴ The fact that "cell phones are not a luxury good" but "an essential part of living in modern society[.]" is exactly the reason why individuals should not have to "choose between maintaining their Fourth Amendment right . . . and using a device that has become so integral to functioning in today's society."¹⁷⁵ The court acknowledged that "it is untenable to force individuals to disconnect from society just so they can avoid having their movements subsequently tracked by the government."¹⁷⁶ Specifically, the court held:

[U]nless a person is willing to live 'off the grid,' it is nearly impossible to avoid disclosing the most personal of information . . . on a constant basis, just to navigate daily life. And the thought that the government should be able to access such information without the basic protection that a warrant offers is nothing less than chilling.¹⁷⁷

The courts in these cases were correct in their findings, using the original purpose of the Fourth Amendment as its guide—to prevent a police state and thwart arbitrary government power.

B. Big Brother's False Hope: Unbound Government Access to Cell Phone Location Information

Some courts have found that a warrant under the Fourth Amendment is not required to collect real-time cell phone location information.¹⁷⁸ The reasoning used in these cases conflict with *Carpenter* by relying on the third-party doctrine and ignoring the role cell phones play in today's society. These cases cannot be relied upon when addressing future cases where the government requests real-time cell phone location information without a warrant showing probable cause.

¹⁷¹ *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d at 1022.

¹⁷² *Id.* at 1024.

¹⁷³ *Id.* at 1025.

¹⁷⁴ *Id.* at 1035–36.

¹⁷⁵ *Id.* at 1035.

¹⁷⁶ *Id.* at 1036.

¹⁷⁷ *Id.* (internal citation and quotations omitted).

¹⁷⁸ See *United States v. Riley*, 858 F.3d 1012 (6th Cir. 2017); *In re Smartphone Geolocation Data Application*, 977 F. Supp. 2d 129 (E.D.N.Y. 2013).

In *United States v. Riley* (“*Riley 6th Cir.*”), the Sixth Circuit held that individuals have no reasonable expectation of privacy in their real-time location information.¹⁷⁹ The court relied on a Sixth Circuit case in which the Sixth Circuit held that an individual has no “reasonable expectation of privacy in the GPS data and location of his cell phone” when he “voluntarily use[s]” it.¹⁸⁰ The Sixth Circuit leaned heavily upon its precedent, incorrectly stating that one must turn off his or her cell phone to avoid ever-present monitoring.¹⁸¹ The court also relied upon *Knotts*, erroneously believing that “because ‘the defendant’s movements could have been observed by any member of the public,’” he has no reasonable expectation of privacy in his real-time CSLI.¹⁸²

In a separate case, *In re Smartphone Geolocation Data Application*, the court held that individuals have no reasonable expectation of privacy in their real-time location information.¹⁸³ The court found that prospective CSLI fell under the third-party doctrine.¹⁸⁴ The court relied on the assumption that a cell phone user is “well aware” that the phone uses location information and can turn off the phone to stop it from doing so.¹⁸⁵ In *In re Smartphone Geolocation Data Application*, as with *Riley 6th Cir.*, the court focused on the assumption that cell phone users voluntarily convey their real-time CSLI, therefore waiving any reasonable expectation of privacy in such information.¹⁸⁶

The reasoning in these cases is flawed. Real-time CSLI does not fall under the third-party doctrine, as evidenced by *Carpenter* rejecting its application to historical CSLI.¹⁸⁷ Furthermore, Justice Sotomayor alluded to the inapplicability of the third-party doctrine to GPS tracking in her *Jones* concurrence by stating that it is “ill-suited to the digital age, in which people reveal a great deal of information about themselves to third parties in the course of carrying out mundane tasks.”¹⁸⁸ Additionally, location information is not always voluntarily conveyed; and “[i]ndividuals cannot be

¹⁷⁹ *Riley*, 858 F.3d at 1013.

¹⁸⁰ *Id.* at 1013, 1017 (citing *United States v. Skinner*, 690 F.3d 772 (6th Cir.)); see also Matthew DeVoy Jones, *The “Orwellian Consequence” of Smartphone Tracking: Why a Warrant Under the Fourth Amendment Is Required Prior to Collection of GPS Data from Smartphones*, 62 CLEV. ST. L. REV. 211 (2014) (arguing that *Skinner*’s position is incorrect).

¹⁸¹ *Riley*, 858 F.3d at 1018.

¹⁸² *Id.* at 1017; see also *United States v. Wallace*, 857 F.3d 685, 690–91 (5th Cir. 2017) (decision substituted by *United States v. Wallace*, 885 F.3d 806). In *Wallace* the Fifth Circuit found that prospective CSLI fell under the third-party doctrine, in addition to relying upon Sixth Circuit precedent. The decision which substituted this finding decided not to address whether obtaining prospective CSLI constitutes a search within the meaning of the Fourth Amendment. *Wallace*, 885 F.3d at 810.

¹⁸³ See *In re Smartphone Geolocation Data Application*, 977 F. Supp. 2d 129, 147 (E.D.N.Y. 2013).

¹⁸⁴ *Id.* at 146.

¹⁸⁵ *Id.* at 146–47.

¹⁸⁶ *Id.* at 147.

¹⁸⁷ *Carpenter v. United States*, 138 S. Ct. 2206, 2220 (2018).

¹⁸⁸ *United States v. Jones*, 565 U.S. 400, 417 (2012).

compelled to choose between maintaining their Fourth Amendment right to privacy in their location and using a device that has become so integral to functioning in today's society."¹⁸⁹ For these reasons, neither *Riley 6th Cir.* nor *In re Smartphone Geolocation Data Application* can be looked to for guidance. The arguments made in these cases will be struck down, respectfully, in Section IV.

IV. REQUIRING A WARRANT UNDER THE FOURTH AMENDMENT FOR REAL-TIME CELL PHONE LOCATION INFORMATION

This Section argues that a warrant based on probable cause is required prior to the government's collection of real-time cell phone location information to locate an individual. First, this Section counters arguments made in *Riley 6th Cir.*, *In re Smartphone Geolocation Data Application*, and the *Carpenter* dissents. This Section then explains that Fourth Amendment legal standards apply to real-time cell phone location information.

A. Rejecting Arguments that a Warrant Under the Fourth Amendment Is Not Required to Collect Real-Time Cell Phone Location Information

Many arguments have been made as to why cell phone users should not have any expectation of privacy, subjectively or objectively, in the real-time location information collected from their phone. Many of these arguments were made prior to *Carpenter*. Due to the fallacy of these arguments, a warrant pursuant to the Fourth Amendment is required.

The most common argument against one's reasonable expectation of privacy in his or her real-time cell phone location information is that such information is voluntarily conveyed to a third-party, and as such, the user has no ownership interest in the location information.¹⁹⁰ This argument ignores that such information is not always conveyed voluntarily. Real-time cell phone location information is voluntarily conveyed when the user overtly makes a call, sends a text or email, or posts his or her location on an app.¹⁹¹ Yet, this information is not voluntarily conveyed when a user receives calls, texts, or emails, or apps are running in the background.¹⁹² Even though location information may be "voluntarily" conveyed, it is often not the intention of the user. The user makes an intentional act that causes the cell phone to connect to a tower, and therefore reveal real-time location information. However, the information was revealed to use the phone for its intended purpose, not to share his or her location. A cell phone user cannot be said to "voluntarily" convey to his or her service provider information that was generated by the service provider without the user's involvement.

Even more important in striking down this argument, *Carpenter* did not extend the third-party doctrine to historical CSLI.¹⁹³ The Court seconded Justice Sotomayor in

¹⁸⁹ *In re Application for Telephone Information Needed for a Criminal Investigation*, 119 F. Supp. 3d 1011, 1035 (N.D. Cal. 2015).

¹⁹⁰ See *Carpenter*, 138 S. Ct. at 2223–24 (2018) (Kennedy, J., dissenting); *id.* at 2235 (Thomas, J., dissenting); *id.* at 2247 (Alito, J., dissenting); *United States v. Riley*, 858 F.3d 1012, 1017–18 (6th Cir. 2017); *United States v. Davis*, 785 F.3d 498, 511–13 (11th Cir. 2015); *In re Smartphone Geolocation Data Application*, 977 F. Supp. 2d 129, 145–46 (E.D.N.Y. 2013).

¹⁹¹ *Carpenter*, 138 S. Ct. at 2210.

¹⁹² *Id.*

¹⁹³ *Id.*

Jones, where she stated that the third-party doctrine was “ill-suited to the digital age, in which people reveal a great deal of information about themselves to third parties in the course of carrying out mundane tasks.”¹⁹⁴ This reasoning also applies to real-time cell phone location information because users convey location information while simply carrying the phone on their person. People use cell phones for “mundane tasks” such as communicating with family, accessing the Internet, checking account balances, and for a growing number of other reasons. Because real-time cell phone location information can be conveyed without the user doing anything more than turning the phone on, it is incorrect to apply the third-party doctrine to such information. Turning off one’s cell phone does not resolve the problem of one wanting to keep his or her location information private either. As previously noted, nearly all Americans own a cell phone, cell phones are constantly kept on one’s person or close-by, and living without a cell phone would make life difficult as cell phones are such an important part of today’s world. To require a cell phone user to turn off his or her phone in order to shield himself or herself from unconstitutional government intrusion is not the act of a free country. No one buys a cell phone to share detailed information about his or her whereabouts with the government. Because this information is easily collected by wireless carriers and reveals a “detailed chronicle of a person’s physical presence,” the fact that a third party holds this information is irrelevant.¹⁹⁵

Moreover, the detailed location information is not of the same type considered by the third-party doctrine. The information considered in the third-party doctrine—telephone and bank records, among others—does not reveal such a “detailed chronicle” of an individual’s physical presence as does real-time cell phone location information. It is true that telephone and bank records may reveal private associations; however, such records do not show that the person actually attended any private meetings, appointments, or political rallies. As such, records under the third-party doctrine have certain limitations, where the “detailed and comprehensive record of the [cell phone user’s] movements” collected through real-time cell phone location information presents no limitation to what such information can reveal.¹⁹⁶ The records that fall under the third-party doctrine focus on points in time where an individual affirmatively uses technology, whereas real-time cell phone location information is constantly generated, at times, without any affirmative act by its user. *Carpenter* noted this “unique nature of cell phone location records” stating that such records “implicates privacy concerns far beyond those considered in [the third-party doctrine].”¹⁹⁷ In fact, when the third-party doctrine was first introduced “in 1979, few could have imagined a society in which a phone goes wherever its owner goes, conveying . . . a detailed and comprehensive record of the person’s movements.”¹⁹⁸

Another argument against applying the Fourth Amendment is that the warrantless collection of location information serves a compelling government interest. This argument was made by Justices Kennedy and Alito in *Carpenter* in relation to

¹⁹⁴ *Jones*, 565 U.S. at 417 (Sotomayor, J., concurring).

¹⁹⁵ *Carpenter*, 138 S. Ct. at 2220.

¹⁹⁶ *Id.* at 2217.

¹⁹⁷ *Id.* at 2220.

¹⁹⁸ *Id.* at 2217.

historical CSLI.¹⁹⁹ Both believed that requiring a warrant based on probable cause unreasonably burdens the government to the advantage of criminals.²⁰⁰ They argued that CSLI is used to establish probable cause and that requiring a warrant would cause “[m]any investigations to sputter out at the start.”²⁰¹

There is no doubt that law enforcement tactics must advance with technological changes and that apprehending criminals is an important government interest. However, this advancement and interest must not come at the expense of personal liberties. If law enforcement tactics advance, so too must the protections guaranteed under the Fourth Amendment. Otherwise, the government could circumvent the Constitution, eliciting “Orwellian consequences” contrary to American liberty and freedom. As Justice Sotomayor noted in her concurrence in *Jones*, “because GPS monitoring is cheap in comparison to conventional surveillance techniques and, by design, proceeds surreptitiously, it evades the ordinary checks that constrain abusive law enforcement practices: ‘limited police resources and community hostility.’”²⁰² “Much like GPS monitoring, cell phone tracking is remarkably easy, cheap, and efficient compared to traditional investigative tools. With just the click of a button, the [g]overnment can access each carrier’s deep repository of historical location information at practically no expense.”²⁰³ This outweighs any government interest in apprehending criminals because it presents opportunity for abuse. As noted by *Carpenter*, the warrantless collection of cell phone location information risks “[g]overnment encroachment of the sort the Framers, ‘after consulting the lessons of history,’ drafted the Fourth Amendment to prevent.”²⁰⁴ This is important because, as previously mentioned, the purpose of the Amendment is to curb arbitrary government power. Allowing the government warrantless collection of this information would place “the liberty of every man in the hands of every petty officer.”²⁰⁵

Further, requiring a warrant will not limit the effectiveness of law enforcement in solving crimes. Warrants can be obtained without the use of real-time cell phone location information. In fact, law enforcement has obtained warrants without such information for centuries. Though it may be an additional step in the government’s

¹⁹⁹ See *Carpenter*, 138 S. Ct. at 2234 (Kennedy, J., dissenting); *id.* at 2256 (Alito, J., dissenting).

²⁰⁰ See *Carpenter*, 138 S. Ct. at 2234 (Kennedy, J., dissenting); *id.* at 2256 (Alito, J., dissenting).

²⁰¹ See *Carpenter*, 138 S. Ct. at 2234 (Kennedy, J., dissenting); *id.* at 2256 (Alito, J., dissenting).

²⁰² *United States v. Jones*, 565 U.S. 400, 415–16 (2012).

²⁰³ *Carpenter*, 138 S. Ct. at 2218.

²⁰⁴ *Id.* at 2223.

²⁰⁵ Brief of Scholars of the History and Original Meaning of the Fourth Amendment as *Amici Curiae* in Support of Petitioner at 11, 20, *Carpenter*, 138 S. Ct. at 2206 (citing James Otis). Referring back to the introductory scenario, let’s assume a police officer was very fond of Mrs. Jeffries and, as a result, hated Mr. Jeffries. The officer could either follow Mrs. Jeffries using her phone’s real-time location information to know her whereabouts in hopes of “coincidentally” running into her. The officer could also follow Mr. Jeffries using his phone’s real-time location information to confront him or devise a plan to make him look guilty of a crime.

process, technology has aided the government in obtaining warrants faster and more efficiently.²⁰⁶

Additionally, the Fourth Amendment already accounts for any burden that the warrant requirement may pose to law enforcement by allowing warrantless searches and seizures under certain circumstances.²⁰⁷ Requiring a warrant based on probable cause, therefore, does not impede law enforcement's task of arresting criminals. Neither is it unreasonable to require the government to obtain a warrant based on probable cause because warrants are required for other types of searches and seizures.²⁰⁸ Real-time cell phone location information should be no different. Due to the information that can be gleaned from real-time cell phone location information, the ease in which the government can collect it, and the protections in place to prevent any burden the warrant requirement may present to law enforcement, it is clear that a warrant is needed to curb the government's power as required by the Framers' intent. "Privacy comes at a cost"²⁰⁹—the warrant requirement is an important function of American government, not an inconvenience to be weighed against claims of law enforcement efficiency.²⁰⁹

Another argument presented by Justice Kennedy is that after *Carpenter*, the government will not know what information it can and cannot collect without a warrant.²¹⁰ I respectfully disagree. *Carpenter* clearly states that a warrant is required to obtain historical CSLI.²¹¹ The same would be true for real-time cell phone location information. If law enforcement were to follow *Carpenter*, it would understand that because the third-party doctrine was not extended to historical CSLI, it would not extend to any similar information, such as real-time cell phone location information, that would allow the government to obtain private and detailed information with minimal effort.²¹²

Another common argument is that CSLI does not reveal any private information about an individual.²¹³ Justice Kennedy argued that CSLI is imprecise, unlike GPS, and at its most precise reveals a user's location within an area covering a dozen city

²⁰⁶ See *Riley v. California*, 134 S. Ct. 2473, 2493 (2014) (citing *Missouri v. McNeely*, 569 U.S. 141, 152–56 (2013) (Roberts, C.J., concurring in part and dissenting in part)). In *McNeely*, Chief Justice Roberts stated that "police officers can e-mail warrant requests to judges' iPads [and] judges have signed such warrants and e-mailed them back to officers in less than 15 minutes." *McNeely*, 569 U.S. at 152–56.

²⁰⁷ See *supra* text accompanying note 65.

²⁰⁸ See *United States v. Jones*, 565 U.S. 400, 417 (2012) (holding that the government's physical intrusion required a warrant); see also *Illinois v. McArthur*, 531 U.S. 326 (2001) (police obtained a warrant to search defendant's home).

²⁰⁹ *Riley*, 134 S. Ct. at 2494–95.

²¹⁰ *Carpenter*, 138 S. Ct. at 2234 (Kennedy, J., dissenting).

²¹¹ *Id.* at 2221.

²¹² In addition to real-time cell phone location information, the third-party doctrine will not apply to "smart" devices, such as Alexa. Arguments for excluding "smart" devices from the third-party doctrine is that they are located in one's home and can reveal detailed information similar to that of a cell phone.

²¹³ *United States v. Davis*, 785 F.3d 498, 516 (11th Cir. 2015); *Carpenter*, 138 S. Ct. at 2225, 2232 (Kennedy, J., dissenting).

blocks.²¹⁴ This is simply untrue. In some instances, CSLI is nearly as precise as GPS, and in highly populated areas, a cell phone can reveal location information within the nearest foot.²¹⁵ In fact, precision will continue to grow as more cell sites are put into operation. For instance, in 2017 a record number of cell sites were in operation.²¹⁶ Additionally, GPS can create a precise location of a cell phone within fifteen feet.²¹⁷ This fact, then, erases any doubt that real-time cell phone location information does not reveal any private information about an individual. Because individuals “compulsively carry” their phone on their person, and location information is precise and continues to grow even more precise, people can be located within feet of their physical location.²¹⁸ Based on determining one’s location, the government can determine an individual’s habits, beliefs, and affiliations. For example, the CPD was able to determine that Mr. and Mrs. Jefferies visited tourist attractions during their stay in Chicago. It is not unlikely that the CPD also determined what food the Jeffries’ preferred, whether they attended any religious ceremonies or participated in ongoing protests during their visit because their phones followed them “beyond public thoroughfares and into . . . potentially revealing locales.”²¹⁹

An additional argument, advanced by *Riley 6th Cir.* and Justice Kennedy, is that *Jones* is not applicable to the collection of cell phone location information.²²⁰ The focus of this argument revolves around the differences between the methods used to collect information, specifically direct government involvement versus judicial intervention, and GPS versus CSLI. It is true that there was a physical trespass in *Jones* and there is not when the government collects CSLI. It is also true that GPS is different than CSLI. However, such distinctions do not render *Jones* inapplicable in cases where the government collects real-time cell phone location information. Much like GPS monitoring, real-time cell phone location information can reveal a comprehensive and detailed record of an individual’s daily life.²²¹ Real-time cell phone location information may reveal more private material than GPS, because cell phones are carried on one’s person unlike the GPS in *Jones*. Further, allowing the government to access such information, without a Constitutional check by the judiciary, is problematic. It allows the government to gather location information without knowing “in advance whether they want to follow a particular individual, or when.”²²² “Only the few without cell phones could escape this tireless and absolute surveillance.”²²³

²¹⁴ *Carpenter*, 138 S. Ct. at 2225, 2232 (Kennedy, J., dissenting).

²¹⁵ *Id.* at 2233.

²¹⁶ Andy Szal, *US Mobile Data Use, Cell Cites Set New Records in 2017, Industry Group Says*, ECN (July 11, 2018), <https://www.ecnmag.com/news/2018/07/us-mobile-data-use-cell-sites-set-new-records-2017-industry-group-says>.

²¹⁷ *Carpenter*, 138 S. Ct. at 2225.

²¹⁸ *See id.* at 2218 (majority opinion).

²¹⁹ *Id.*

²²⁰ *See id.* at 2231 (Kennedy, J., dissenting); *United States v. Riley*, 858 F.3d 1012, 1016 (6th Cir. 2017).

²²¹ *Carpenter*, 138 S. Ct. at 2220.

²²² *Id.* at 2218.

²²³ *Id.*

B. Following the Signals: Fourth Amendment Case Law

Katz, *Knotts*, *Karo*, *Kyllo*, *Jones*, *Jardines*, *Riley*, and *Carpenter* have laid the foundation for addressing the issue of the warrantless collection of real-time cell phone location information. These cases recognize that a search occurs when: a person expects privacy in the thing searched or seized, and society believes that expectation is reasonable; or the government trespasses on a searched or seized person's property.²²⁴ In the case of nearly all cell phone users, the government does not place a device on or in the suspect's phone to follow their movements. Rather, the phone emits signals to cell service providers' "base stations" while also containing a factory-embedded GPS device.²²⁵ Because there is no trespass by the government, the *Jones* concurrences and *Carpenter* control, as both applied the *Katz* reasonable expectation of privacy test.

1. Untying *Knotts* from Real-Time Cell Phone Location Information Monitoring

Applying *Knotts* to cases where real-time cell phone location information is collected by the government should cease. *Knotts* should not apply to such cases because the facts in *Knotts* are clearly distinguishable and *Jones* and *Carpenter* have effectively rendered *Knotts* inapplicable to such cases.

If *Knotts* were applied to real-time cell phone location information, the government would be permitted to track an individual through the use of a cell phone emitting real-time location information. This would mean that whenever cell phone users are carrying their cell phones on their person in public, which nearly all do, the government could legally follow their every move without any check on its ability to do so. It would grant the government permission to track a person and discover every place he or she goes, without particularly describing the location of the person they intend to track, and in some instances who to track, or providing probable cause of any wrongdoing. Distinguishing *Knotts* is therefore essential.

Knotts is distinguishable because cell phones blur the distinction between public and private places, emitting signals from both places, whereas the GPS in *Knotts* was placed onto the car specifically for the purpose of tracking the defendant, which could only be done in public.²²⁶ The government in *Knotts*, therefore, could only track the defendant on public roads, whereas currently, the government has no way of knowing, in advance, whether it is monitoring a person's phone in public or private. This violates *Karo*, which prevents the government from monitoring a tracking device in a private residence.²²⁷ This also violates the principles in *Kyllo* and *Jardines*, which highlight the privacy interests one has in his or her home.²²⁸ Even if a person was in public,

²²⁴ See, e.g., *United States v. Jones*, 565 U.S. 400, 406–07 (2012); *Katz v. United States*, 389 U.S. 347, 361 (1967).

²²⁵ Herbert, *supra* note 40, at 477 (citing Darren Handler, *An Island of Chaos Surrounded by a Sea of Confusion: The E911 Wireless Device Location Initiative*, 10 VA. J.L. & TECH 1 (2005)); see also Herbert, *supra* note 45, at 34 (stating that most smart phones are "preloaded with GPS-enabled technology").

²²⁶ *United States v. Knotts*, 440 U.S. 276, 278 (1983).

²²⁷ *United States v. Karo*, 468 U.S. 705, 718 (1984).

²²⁸ See *Kyllo v. United States*, 533 U.S. 27, 45 (2001); *Florida v. Jardines*, 569 U.S. 1, 14 (2016) (Kagan, J., concurring).

however, as Justice Sotomayor and the majority in *Jones* concluded, a person might have a reasonable expectation of privacy in their public movements.²²⁹ Justices Sotomayor and Alito concluded that continuous monitoring of individuals' public movements violates their reasonable expectation of privacy.²³⁰ After the *Jones* decision, the rule expressed in *Knotts* was substantially weakened.

Carpenter weakened *Knotts* further. The Court recognized that *Knotts* does not apply to historical CSLI because individuals "compulsively carry cell phones with them all the time" which allows the government to track a cell phone user's location with "near perfect surveillance, as if it ha[d] attached an ankle monitor to the phone's user."²³¹ This inescapability of cell phone technology further separates *Knotts* from real-time cell phone location information. If the government could track individuals from the comfort of an office chair without requiring a warrant, only the hermit would have an advantage. "A person does not surrender all Fourth Amendment protection by venturing into the public sphere. To the contrary, 'what [one] seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.'"²³²

As with historical CSLI, real-time cell phone location information reveals "a detailed chronicle of a person's physical presence compiled . . . every moment" of every day.²³³ It is clear that *Knotts* has run its course and is no longer applicable to such cases, as expressed in *Jones* and *Carpenter*, because tracking individuals without a warrant based on probable cause on public thoroughfares results in a reasonable breach of privacy in individuals' public movements. "Allowing government access to cell-site records contravenes [society's] expectation" that law enforcement could not, and would not, "secretly monitor and catalogue every single movement" of an individual.²³⁴ *Knotts*, therefore, cannot be applied for the aforementioned reasons.

2. A Reasonable Expectation of Privacy in Real-Time Cell Phone Location Information

Katz provides the two-step inquiry of whether there are subjective and objective expectations of privacy.²³⁵ The first inquiry, the subjective question, is fact based and can be determined by looking at whether the individual who claimed a violation of his Fourth Amendment rights actually believed he had privacy rights in the location information emanating from his cell phone. It has been argued that the subjective prong is no longer addressed by courts.²³⁶ Case law appears to support this argument, however, it is still important to discuss.

Many individuals are unaware that making or receiving a call or text message, or using apps on their cell phone will create a record of their whereabouts, which clearly

²²⁹ See *United States v. Jones*, 565 U.S. 400, 417–18 (2012) (Sotomayor, J., concurring).

²³⁰ See *id.* at 417–18; *id.* at 428–31 (Alito, J., concurring).

²³¹ *Carpenter v. United States*, 138 S. Ct. 2206, 2218 (2018).

²³² *Id.* at 2217.

²³³ *Id.* at 2220.

²³⁴ *Id.* at 2217.

²³⁵ *Katz v. United States*, 389 U.S. 347, 361 (1967).

²³⁶ *Carpenter*, 138 S. Ct. at 2238 (Thomas, J., dissenting).

weighs in favor of finding a subjective expectation of privacy.²³⁷ However, more cell phone users are becoming aware that such activity does create a location record. Although this fact is known, individuals with such knowledge may still have a reasonable expectation of privacy in their real-time cell phone location information, even when such a belief is erroneous.²³⁸ Not recognizing an expectation of privacy when one knows that their privacy can be infringed upon will eventually result in no privacy expectations as technology becomes more invasive. For instance, innocent bystanders to a crime, such as the Jeffries, may understand that they can be tracked for days by the government, but because they committed no crime, the expectation is that their movements will not be tracked. Therefore, knowledge that cell phones create a location record should not mean that individuals lack a subjective expectation of privacy in their smartphone's GPS data.

Further, the fact that cell phone users accept terms and conditions does not negate a subjective expectation of privacy. Many service provider and app terms and conditions are lengthy and difficult for a reasonable person to understand. For this reason, the vast majority of cell phone users accept terms and conditions without even reading them. Additionally, the privacy policies of the four largest service providers in the United States do not state that location information will be collected by the government in cases other than emergencies. Only one policy states that location information may be disclosed to the government when served with lawful process. So even if terms and conditions are read, there is no disclosure to users, absent the one provider, stating that location information will be willingly shared with the government. Taken together, it is within the realm of reason that individuals have a subjective expectation of privacy in their real-time cell phone location information.

The second inquiry, the objective question, is more difficult to address. Whether there is an objective expectation of privacy, or whether society believes that an individual's expectation of privacy is reasonable, will change over time. The vast majority of individuals with cell phones carry their phones on their person, in essence, creating a tracking device that they carry with them at all times.²³⁹ This allows the government to achieve near perfect surveillance of the location of a cell phone without concern about who is carrying the phone, where the phone is located, or whether government agents are actively monitoring the phone.²⁴⁰ It grants the government the opportunity to trace an individual's every movement without any obstacles.²⁴¹ This means that real-time cell phone location information provides information twenty-four hours a day, encouraging "broad and indiscriminate" law enforcement practices.²⁴² It is hard to argue, that as Americans, we would expect, or should accept, such law

²³⁷ *Id.* at 2217.

²³⁸ *See* *United States v. Skinner*, 690 F.3d 772, 784 (6th Cir. 2012) (Donald, J., dissenting) (explaining that an erroneous belief that an individual has an expectation of privacy in their smartphone's GPS data does not end the inquiry). It is up to society to determine whether the person's "erroneous" belief was reasonable. *Id.*

²³⁹ *See* PEW RESEARCH CENTER, *supra* note 5; Deloitte, *supra* note 7.

²⁴⁰ *Carpenter*, 138 S. Ct. at 2218.

²⁴¹ *Id.* at 2217–18.

²⁴² Brief of Scholars of the History and Original Meaning of the Fourth Amendment as *Amici Curiae* in Support of Petitioner at 23, *Carpenter v. United States*, 138 S. Ct. 2206 (2018); *see also Carpenter*, 138 S. Ct. at 2216.

enforcement practices, “condemning each of us to live in fear that we could be surveilled at any time or all the time.”²⁴³

In addition to there being a clear objective expectation of privacy, there are supplementary concerns that weigh in favor of an objective expectation of privacy. One such concern is that a person may be in his or her home when the location information is collected. Collecting this information while the phone’s user is in his or her home violates *Karo*. It also implicates *Kyllo* and the *Jardines* concurrence, in that location information reveals details that could not otherwise be obtained absent a warrant. The only way to ensure that an individual is not in a private residence is to take note of this through visual surveillance. Without visual surveillance, law enforcement would not know whether someone is in a private residence. Requiring a warrant based on probable cause easily circumvents the problem of collecting real-time cell phone location information while in a private residence.

Another concern is that real-time cell phone location information, like GPS data and historical CSLI, “is detailed, encyclopedic, and effortlessly compiled.”²⁴⁴ As *Carpenter* noted, this “time-stamped data 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’” because “[a] cell phone faithfully follows its owner beyond public thoroughfares and into private residences, doctor’s offices, political headquarters, and other potentially revealing locales.”²⁴⁵ Decades ago, “few could have imagined a society in which a phone goes wherever its owner goes, conveying to the wireless carrier . . . a detailed and comprehensive record of the person’s movements.”²⁴⁶ This compilation of “public” information from continual collection of real-time cell phone location information gives the government information that a normal person could not otherwise obtain. In essence, it is similar to having a person that you do not know follow you for hours, days, or weeks on end, or permitting the government to place a tracking device on your person. It is extremely unlikely that anyone would condone and welcome such behavior. For example, when a stranger sees a person running, the stranger may infer that the individual is conscious of his or her health, but little more. When the government has this same information, collected through real-time tracking, the government can make inferences that the stranger cannot. This is a clear invasion of privacy.²⁴⁷ Continuous monitoring was addressed in *Jones*, where Justice Alito stated that it violates an objective expectation

²⁴³ Brief of Scholars of the History and Original Meaning of the Fourth Amendment as *Amici Curiae* in Support of Petitioner, *supra* note 242, at 23.

²⁴⁴ *Carpenter*, 138 S. Ct. at 2216.

²⁴⁵ *Id.* at 2216–17.

²⁴⁶ *Id.* at 2220.

²⁴⁷ Justice Kagan’s concurrence in *Jardines* also emphasized this point. In the example mentioned above, if the stranger followed the person running, the stranger would exceed the license granted by the runner if the stranger followed the runner’s every move, including entering the runner’s house, violating the runner’s reasonable expectation of privacy. *Florida v. Jardines*, 569 U.S. 1, 3, 13 (2016) (Alito, J., concurring).

of privacy and thus constitutes a search.²⁴⁸ *Carpenter* furthered the rationale in *Jones*, applying it to cell phones.²⁴⁹

Though *Carpenter*'s issue was one of the government's "ability to chronicle a person's *past* movements through the record of his cell phone signals[.]"²⁵⁰ and specifically did not express any views on real-time tracking,²⁵¹ the decision and its supporting arguments make *Carpenter* the definitive case as it relates to tracking individuals using real time cell phone location information. First, it took into account the most recent Supreme Court rulings and rationale, applying the principles from those cases to historical cell phone location information.²⁵² For instance, the Court relied on *Riley* to highlight the pervasiveness of cell phones and their vast storage capacity of sensitive information,²⁵³ *Kyllo* to emphasize that the government, absent a warrant, could not capitalize on new technology to explore what was happening within the home,²⁵⁴ and the *Jones* concurrences to support its holding that individuals have a reasonable expectation of privacy in the whole of their physical movements because such information holds the privacies of life.²⁵⁵ *Carpenter*'s reliance on *Jones* is important because it can also be used to support real-time cell phone location information.²⁵⁶ In fact, real-time cell phone location information includes GPS.²⁵⁷

An additional concern is abuse of power by the government. This was discussed in Justice Sotomayor's concurring opinion in *Jones*:²⁵⁸

[T]he Government's unrestrained power to assemble data that reveal private aspects of identity is susceptible to abuse. The net result is that GPS monitoring [gives law enforcement] a relatively low cost and substantial quantum of intimate information about any person whom the government, in its unfettered discretion, chooses to track, and may "alter the relationship between citizen and government in a way that is inimical to democratic society."²⁵⁹

She further stated that this unwelcomed power would defeat the purpose of the Fourth Amendment.

²⁴⁸ *United States v. Jones*, 565 U.S. 400, 428–31 (Alito, J., concurring).

²⁴⁹ *Carpenter*, 138 S. Ct. at 2216–2219.

²⁵⁰ *Id.* at 2216 (emphasis added).

²⁵¹ *Id.* at 2220.

²⁵² *See infra* text accompanying notes 253–55.

²⁵³ *Carpenter*, 138 S. Ct. at 2214.

²⁵⁴ *Id.* at 2218–19.

²⁵⁵ *Id.* at 2216–20.

²⁵⁶ *See United States v. Ellis*, 270 F. Supp. 3d 1134, 1146 (2017) (applying *Jones* to real-time CSLD); *Tracey v. Florida*, 152 So. 3d 504, 525 (Fla. 2014) (applying *Jones* to real-time CSLD).

²⁵⁷ Herbert, *supra* note 40, at 477.

²⁵⁸ *United States v. Jones*, 565 U.S. 400, 416 (Sotomayor, J., concurring).

²⁵⁹ *Id.* at 416 (citing *United States v. Cuevas-Perez*, 640 F.3d 272, 285 (7th Cir. 2011) (Flaum, J., concurring)).

Justice Sotomayor's description of the government sounds eerily similar to the one in George Orwell's novel, *1984*.²⁶⁰ In *1984*, Orwell wrote,

[T]he telescreen received and transmitted simultaneously There was of course no way of knowing whether you were being watched at any given moment. How often, or on what system, the [police] plugged in on any individual wire was guesswork. It was even conceivable that they watched everybody all the time. But at any rate they could plug in your wire whenever they wanted to. You had to live—did live, from habit that became instinct—in the assumption that every sound you made was overheard, and, except in darkness, every movement scrutinized.²⁶¹

Although Orwell's recital may seem extreme or farfetched science fiction, it no longer is. Orwell's telescreen is the modern-day cell phone. It receives and transmits radio signals simultaneously by connecting to base stations. There is no way to know whether the government is "watching" you by collecting real-time cell phone location information, or at what location they are gathering such information. It is even conceivable that they "watch" everybody all the time. In fact, smart televisions, refrigerators, personal assistants, and other smart devices are increasingly becoming the norm. Add that with the fact that law enforcement can monitor cell phone users' every move at any given moment, and it is recognizable that what was written as science fiction is not such anymore.²⁶²

Also relevant to the concern of government abuse are the reasons the Framers drafted the Amendment, despite the fact that cell phones and real-time location information were not in existence during its creation. Not requiring a warrant based on probable cause permits the government to obtain real-time cell phone location information without particularly describing the location of the person they intend to track, while at the same time monitoring any place that the cell phone user goes—possibly not knowing who the person is, only the associated phone number.²⁶³ Not requiring a warrant or probable cause may also allow the government to track a person without describing any connection to the crime investigated.²⁶⁴ Such behavior would resemble the government's use of general warrants during colonial America and the fear of the Framers—a too permeating police force.

The precise reason the Amendment was adopted was to curb the use of general warrants, not permit them to occur hundreds of years later.²⁶⁵ James Madison believed that "there are more instances of the abridgement of freedom of the people by gradual and silent encroachments by those in power than by violent and sudden usurpations."²⁶⁶ Further, as established by the Florida Supreme Court:

²⁶⁰ GEORGE ORWELL, *1984* 2 (1949).

²⁶¹ *Id.*

²⁶² *See supra* Part II.C.

²⁶³ *United States v. Powell*, 943 F. Supp. 2d 759, 778–79 (E.D. Mich. 2013).

²⁶⁴ *Id.* at 779.

²⁶⁵ GERARD V. BRADLEY, THE HERITAGE FOUNDATION, THE HERITAGE GUIDE TO THE CONSTITUTION at 327 (Edwin Meese III et al. eds., 2005), <https://www.heritage.org/constitution/#!/amendments/4/essays/145/warrant-clause>.

²⁶⁶ *Tracey v. Florida*, 152 So. 3d 504, 522 (Fla. 2014).

[T]he ease with which the government, armed with current and ever-expanding technology, can now monitor and track our cell phones, and thus ourselves, with minimal expenditure of funds and manpower, is just the type of ‘gradual and silent encroachment’ into the very details of our lives that we as a society must be vigilant to prevent.²⁶⁷

It is therefore clear that the original intent of the Fourth Amendment protects society against the warrantless collection of real-time cell phone location information.

It is apparent that when the government uses real-time cell phone location information to locate an individual, that person has a subjective and, more importantly, an objective expectation of privacy in this location information. Therefore, there exists an objective expectation of privacy, which raises concerns about what information the government collects and why it is collected, implicating the Fourth Amendment and requiring a warrant based on probable cause.

V. SOLUTION TO THE ISSUE OF WARRANTLESS COLLECTION OF REAL-TIME CELL PHONE LOCATION INFORMATION

There are two proposed solutions to ensure that individuals’ Fourth Amendment rights are not violated by the warrantless collection of real-time cell phone location information. The first option is for the United States Supreme Court to take up the issue that it avoided in *Carpenter*. The second option is for Congress to pass legislation regarding such information. Failing to resolve this matter could result in violations of the Fourth Amendment. Furthermore, federal case law is conflicted on this issue, which may result in bad law becoming precedent in a growing area of jurisprudence. It is through either of these solutions that the proper protections will be afforded to the vast majority of United States citizens.

A. Legislature

The most agreeable solution is for Congress to pass legislation dealing with the government’s collection of real-time cell phones location information. Justice Alito stated in *Jones* that, “[i]n circumstances involving dramatic technological change, the best solution to privacy concerns may be legislative.”²⁶⁸ For one, Congress is better situated than the courts to gauge public attitudes.²⁶⁹ Additionally, Congress can draw detailed lines and balance privacy and public safety better than the courts.²⁷⁰

“Because the collection and storage of cell-site records affects nearly every American, it is unlikely that the question whether the current law requires strengthening will escape Congress’s notice.”²⁷¹ Members of Congress must fulfill their duties and listen to their constituents, rather than their donors, and address this issue. If Congress fails to act, the Supreme Court will have to continue to restrict the third-party doctrine and to expand Fourth Amendment jurisprudence to include real-

²⁶⁷ *Id.*

²⁶⁸ *United States v. Jones*, 565 U.S. 400, 429 (2012) (Alito, J., dissenting).

²⁶⁹ *Id.*

²⁷⁰ *Id.* at 429–30.

²⁷¹ *Carpenter v. United States*, 138 S. Ct. 2206, 2261 (2018) (Alito, J., dissenting).

time cell phone location information. As Justice Alito stated in *Carpenter*, “[l]egislation is much preferable.”²⁷²

B. Judiciary

The Court must follow the *Jones* concurrences and *Carpenter* until Congress acts on real-time cell phone location information. Any case regarding real-time cell phone location information should simply refuse to extend the third-party doctrine to real-time cell phone location information, since the rationale in *Carpenter* would apply. The decision should not take into account the length of time an individual is monitored, as short-term cell phone monitoring presents the same Fourth Amendment concerns as long-term monitoring. Nor should a distinction be made between GPS and real-time CSLI emanating from the cell phone, as discussed in Section IV.

One possible issue with this approach is if there is a plurality opinion, as in *Jones*, which could cause some confusion. This may be likely as the Court continues its change under the current administration.

Another possible issue is that the Court may have already opened the door to more litigation in finding a reasonable expectation of privacy in historical CSLI. It may have also limited one’s reasonable expectation of privacy in other location information, such as real-time cell phone location information, as its holding in *Carpenter* was narrow, and lower courts have incorrectly applied case law to the government’s collection of real-time cell phone location information. This could actually limit one’s reasonable expectation of privacy in real-time cell phone location information if lower courts distinguish *Carpenter* or rely on previous lower court rulings. For these reasons, the Court must take on a case involving the warrantless monitoring of real-time cell phone location information until Congress acts.

VI. CONCLUSION

Technological advancements are continuing to modify and influence criminal law. Cell phones provide individuals greater access to the world, while also providing the government greater access into individuals’ private lives. It is important that the law surrounding real-time cell phone location information advance with technology to protect people in society, like the Jeffries couple and Mr. Rivera-Guerrero. In their situation, a warrant based on probable cause should have been obtained prior to the collection of their real-time cell phone location information. To do otherwise reduces Fourth Amendment protections and raises privacy concerns.

This Article argued that a warrant pursuant to the Fourth Amendment is required before the government can monitor an individual by collecting the real-time cell phone location information from the individual’s phone. Section II presented a legal background of information, focusing on the Fourth Amendment and Supreme Court case law dealing with the government’s electronic surveillance of individuals. Section III presented recent case law on law enforcement’s collection of cell phone location information. Section IV explained why a warrant based on probable cause is required to collect such information, focusing on legal and public policy arguments. Section V illustrated two concrete solutions to resolve this problem.

To uphold individuals’ Fourth Amendment rights, it is necessary that a warrant under the Fourth Amendment be required prior to the government’s collection of real-time cell phone location information emanating from any cell phone. To do otherwise

²⁷² *Id.*

is accepting Orwell's "Big Brother" government as our own—allowing law enforcement to "watch" our every move using our "telescreens." *Jones* laid the foundation by refusing to apply *Knotts*, weakening *Knotts*' holding, as well as the arguments of the courts that relied on it. *Carpenter* took it further and found a reasonable expectation of privacy in historical CSLI. The Fourth Amendment and case law require a warrant based on probable cause, ensuring constitutional protection for the United States' citizenry. For these reasons, a warrant based on probable cause under the Fourth Amendment must be obtained before law enforcement can track an individual by obtaining the real-time cell phone location information emanating from his or her cell phone.