

THE WARRANTLESS USE OF GPS TRACKING DEVICES: FOURTH AMENDMENT PROTECTION RESTORED THROUGH APPLICATION OF AN ANALYTICAL FRAMEWORK

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INTRODUCTION

Law enforcement's use of Global Positioning System (GPS) devices continues to expand as the technology gains recognition as an efficient, accurate, and inexpensive method to monitor a suspect's public movement in automobiles.¹ Federal courts have generally upheld the warrantless use of these devices and determined they do not infringe an individual's Fourth Amendment right to a "reasonable expectation of privacy."² The U.S. Court of Appeals for the District of Columbia Circuit, however, has recently held that the warrantless use of GPS devices to monitor vehicle movements on public roads is unlawful when used over a prolonged period.³ The D.C. Circuit based this holding on the belief that long term GPS tracking reveals "the

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¹ Adam Koppel, Note, *Warranting a Warrant: Fourth Amendment Concerns Raised by Law Enforcement's Warrantless Use of GPS and Cellular Phone Tracking*, 64 U. MIAMI L. REV. 1061, 1064 (2010).

² *Katz v. United States*, 389 U.S. 347, 360 (1967) (Harlan, J., concurring).

³ *United States v. Maynard*, 615 F.3d 544, 558 (D.C. Cir. 2010).

whole of one's movements"⁴ and that this collection of movements reveals "more ... than the sum of its parts."⁵

Regrettably, the D.C. Circuit's analysis and decision inserts new variables into the already complicated equation used to assess the lawfulness of warrantless surveillance by law enforcement agencies. This decision has split the federal circuits and produced two immediate issues for D.C. Circuit law enforcement. First, since "collections of movements" can also be gathered through previously lawful visual surveillance, the court's ruling creates confusion for law enforcement regarding what quantity and type of surveillance results in suspect data that is more than "the sum of its parts."⁶ Second, the tipping point for unlawful surveillance is unknown since "conduct that is initially constitutionally sound could later be deemed impermissible if it becomes part of the aggregate."⁷

This Note contends that by adhering to an analytical framework provided by Supreme Court precedent, the D.C. Circuit could have arrived at the same conclusion without the need to establish a derivative approach of assessing the Fourth Amendment's right to privacy. Part I outlines the Supreme Court decisions establishing the modern approach to privacy protection and what constraints the judiciary has placed on law enforcement's warrantless use of technology used to track automobile movement. Part II then provides an overview of law enforcement's use of GPS technology and identifies a framework for warrantless use of this technology. Finally, Part III concludes with a review of the D.C. Circuit's holding in *United States v. Maynard* and an application of the analytical framework to the facts of that case.

I. UNDERPINNINGS OF ANALYSIS: THE SUPREME COURT'S DECISIONS ESTABLISHING REASONABLE EXPECTATIONS OF PRIVACY

A. Fourth Amendment Protection and *Katz*

The Fourth Amendment states that "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause ... describing the place to be searched, and the persons or things to be seized."⁸ This Constitutional

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

⁷ *United States v. Sparks*, 750 F. Supp. 2d 384, 392 (D. Mass. 2010).

⁸ U.S. CONST. amend IV.

protection provides a judicial safeguard intended to check the executive branch's law enforcement powers and ensure individuals are not secure "only in the discretion of the police."⁹ But, the protections of the Fourth Amendment are not absolute since, "the Fourth Amendment protects people, not places. What a person knowingly exposes to the public ... is not a subject of Fourth Amendment protection ... [b]ut what he seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected."¹⁰

In *Katz v. United States*, the Supreme Court re-assessed the boundaries of privacy in a case involving the government's use of an electronic listening device to eavesdrop on the defendant's conversations within an enclosed public telephone booth.¹¹ Shifting the question of Fourth Amendment protections against unreasonable search and seizure from "areas" to people, the majority held that "[t]he Government's activities ... violated the privacy upon which [the defendant] justifiably relied while using the telephone booth and thus constituted a 'search and seizure' within the meaning of the Fourth Amendment."¹² As a result of this decision, the personal right to a "justifiable ... expectation of privacy"¹³ was affirmed and electronic intrusions by the government into this sphere of privacy expectations were equated with a physical intrusion.¹⁴ Essentially, the Court determined that the means of intrusion were irrelevant if the end result was the violation of an individual's reasonable privacy expectations.

Justice Harlan's concurring opinion expanded upon the majority's articulation of a "constitutionally protected reasonable expectation of privacy"¹⁵ Justice Harlan's analysis of prior decisions and the majority holding in *Katz* led to his conclusion that there was a "twofold requirement" used to determine whether an individual has legitimate expectations of privacy under the Fourth Amendment: 1) did the person "exhibit[] an actual (subjective) expectation of privacy"; and 2) was the expectation "one that society is prepared to recognize as 'reasonable'?"¹⁶

Expanding upon this rule, Justice Harlan noted that a person's home is a location where both the individual and society would rec-

⁹ *Katz v. United States*, 389 U.S. 347, 359 (1967) (quoting *Beck v. State of Ohio*, 379 U.S. 89, 97 (1964)).

¹⁰ *Id.* at 351.

¹¹ *Id.* at 348.

¹² *Id.* at 353.

¹³ *Smith v. Maryland*, 442 U.S. 735, 740 (1979) (citations omitted) (internal quotation marks omitted).

¹⁴ *Katz*, 389 U.S. at 353.

¹⁵ *Id.* at 360.

¹⁶ *Id.* at 361.

ognize a reasonable expectation of privacy, “but objects, activities, or statements that he exposes to the ‘plain view’ of outsiders are not ‘protected’ because no intention to keep them to himself has been exhibited.”¹⁷ Applying this evaluation to the facts in the case, Justice Harlan concluded that although a telephone booth is accessible to the public “it is a temporarily private place whose momentary occupants’ expressions of freedom from intrusion are recognized as reasonable” and thus the government’s intrusion into the defendants’ privacy was a violation of the Fourth Amendment.¹⁸ In later decisions, the “lower courts ... came to rely upon the Harlan elaboration, as ultimately did a majority in the Supreme Court.”¹⁹ Federal courts applied this Fourth Amendment “*Katz*” standard in cases where an individual “invoking its protection can claim ... a ‘legitimate expectation of privacy’ that has been invaded by government action.”²⁰

Since the decision in *Katz*, federal courts have continued to apply this standard when assessing the use of surveillance technology by law enforcement in opposition to a suspect’s reasonable expectation of privacy. Using the *Katz* standard, federal courts have authorized law enforcement’s warrantless use of numerous surveillance techniques including aerial photography,²¹ videotape surveillance,²² searches of curbside trash,²³ airborne visual surveillance,²⁴ canine sniffs,²⁵ chemical field tests,²⁶ file access through peer-to-peer file sharing,²⁷ and location tracking of airplanes.²⁸ Although the Supreme Court has not yet ruled on a case involving the warrantless use of GPS technology,²⁹ it has held that law enforcement can track the location of an automobile travelling on public roads without a warrant.

B. Privacy on Public Roads and *Knotts*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ Wayne R. LaFare, SEARCH & SEIZURE: A TREATISE ON THE FOURTH AMENDMENT § 2.1(b), at 434 (4th ed. 2004).

²⁰ *Smith*, 442 U.S. at 740.

²¹ *Dow Chem. Co. v. United States*, 476 U.S. 227 (1986).

²² *United States v. Leon Davis*, 326 F.3d 361 (2d Cir. 2003).

²³ *California v. Greenwood*, 486 U.S. 35 (1988).

²⁴ *Florida v. Riley*, 488 U.S. 445 (1989) (authorizing the use of helicopters); *California v. Ciraolo*, 476 U.S. 207 (1986) (authorizing the use of airplanes).

²⁵ *United States v. Place*, 462 U.S. 696 (1983).

²⁶ *United States v. Jacobsen*, 466 U.S. 109 (1984).

²⁷ *United States v. Borowy*, 595 F.3d 1045 (9th Cir. 2010).

²⁸ *United States v. Butts*, 729 F.2d 1514 (5th Cir. 1984).

²⁹ That will soon change with the Court’s imminent decision in *United States v. Maynard*, 615 F.3d 544 (D.C. Cir. 2010), *cert. granted sub nom.* *United States v. Jones*, 131 S. Ct. 3064 (2011).

THE WARRANTLESS USE OF GPS TRACKING DEVICES

The Supreme Court first applied the “reasonable expectation of privacy” concept to law enforcement’s use of a technological device to track the movements of a car in *United States v. Knotts*.³⁰ In *Knotts*, a “beeper” had been placed in a five-gallon drum of chemicals that the suspect subsequently purchased and transported by vehicle to a cabin in rural Wisconsin.³¹ By following the suspect’s vehicle “using both visual surveillance and a monitor which received the signals sent from the beeper”³² the police were able to eventually locate a narcotics laboratory owned by the defendant in the rural woodland of Wisconsin.³³ The defendant challenged the government’s warrantless use of the tracking device as a Constitutional violation of the Fourth Amendment’s protection of an individual’s reasonable expectations of privacy.³⁴

The Supreme Court, however, noted that the “governmental surveillance ... in this case amounted principally to the following of an automobile on public streets and highways”³⁵ and commented that it has consistently held that there is a “diminished expectation of privacy in an automobile ...”³⁶ Further, the Court stated “[a] car has little capacity for escaping public scrutiny. It travels public thoroughfares where both its occupants and its contents are in plain view.”³⁷ Finally, the Court explicitly declared that “[a] person travelling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another.”³⁸ The suspect’s movements in this instance were, in the Court’s view, a voluntary conveyance of information “to anyone who wanted to look.”³⁹

Since the suspect’s vehicle was always visible along the route to the cabin, the Court held that there could be no expectation of privacy even when law enforcement did not maintain constant visual surveillance of the automobile.⁴⁰ Moreover, the Court noted that the suspect could not expect privacy once he drove his automobile off the public highway and entered the defendant’s premises since the vehicle was

³⁰ *United States v. Knotts*, 460 U.S. 276 (1983).

³¹ *Id.* at 278.

³² *Id.* at 278-79.

³³ *Id.*

³⁴ *Id.* at 279.

³⁵ *Id.* at 281.

³⁶ *Id.*

³⁷ *Id.* (quoting *Cardwell v. Lewis*, 417 U.S. 583, 590 (1974)).

³⁸ *Id.* at 281.

³⁹ *Id.*

⁴⁰ *Id.* at 281-82.

still subject to visual surveillance from public places near the cabin.⁴¹ Although the “beeper” technology enabled the police to monitor the suspect’s automobile movements without requiring constant visual contact, “[n]othing in the Fourth Amendment prohibited the police from augmenting the sensory faculties bestowed upon them at birth with such enhancement as science and technology afforded them in this case.”⁴²

The Court in *Knotts* established no limits on the length or extent of surveillance conducted under this “public thoroughfare” standard and held that technology that supports and enables police efficiency is not presumptively unconstitutional.⁴³ Addressing the specific issue of the sense-enhancing nature of the surveillance technology employed, the Court found that “scientific enhancement of this sort raises no constitutional issues which visual surveillance would not also raise.”⁴⁴ The Court concluded that, “[i]nsofar as respondent’s complaint appears to be simply that scientific devices such as the beeper enabled the police to be more effective in detecting crime, it simply has no constitutional foundation. We have never equated police efficiency with unconstitutionality, and we decline to do so now.”⁴⁵

Despite the *Knotts*’ holding, subsequent Supreme Court decisions would limit law enforcement’s warrantless use of science and technology when it was deemed either overly invasive or “extrasensory.”⁴⁶ Federal courts have considered technology to be overly invasive when used to penetrate a recognized zone of privacy, such as a home.⁴⁷ The courts consider technology to be “extrasensory” when not simply augmenting or assisting the human senses.⁴⁸ In each situation, the warrantless use of such a technology is regarded as a violation of reasonable expectations of privacy protected by the Fourth Amendment.

C. Limits on the Warrantless Use of Technology: *Karo* and *Kyllo*

When faced with the overly invasive use of technology by law enforcement in *United States v. Karo*, the Supreme Court found, “[i]t is the exploitation of technological advances that implicates the Fourth

⁴¹ *Id.* at 282.

⁴² *Id.*

⁴³ *Id.* at 284.

⁴⁴ *Id.* at 285.

⁴⁵ *Id.* at 284.

⁴⁶ Renee McDonald Hutchins, *Tied Up In Knotts? GPS Technology and the Fourth Amendment*, 55 UCLA L.REV. 409, 456 (2007).

⁴⁷ *Id.*

⁴⁸ *Id.*

THE WARRANTLESS USE OF GPS TRACKING DEVICES

Amendment, not their mere existence.”⁴⁹ Finding such an exploitation in *Karo*, the Court held the Fourth Amendment is violated when technology is used in areas not open to visual surveillance where individuals have a “justifiable interest” in privacy.⁵⁰ The technology implicated in *Karo*, a beeper similar to the one used by law enforcement in *Knotts*, was attached to a can of ether that was expected to be used by the suspect to extract cocaine from clothing.⁵¹ As the can of ether moved to different locations, law enforcement agents monitored its movement through “both visual and beeper surveillance.”⁵² Eventually, the ether can was moved by vehicle to a private residence and agents later determined, using just the beeper, that the can had been moved inside the residence.⁵³ Therefore, using information derived solely from the beeper attached to the ether can, federal agents were able to “locate the ether in a specific house” and use that information “to secure a warrant for the search of the house.”⁵⁴

However, unlike the use of the beeper in *Knotts*, law enforcement obtained information in *Karo* “that it could not have otherwise obtained without a warrant.”⁵⁵ Although the suspect automobile in *Knotts* was not under constant visual surveillance, he did not have an objectively reasonable expectation of privacy in the opinion of the Court, since travel on public roads voluntarily conveys information to third parties.⁵⁶ In *Karo*, however, there was no opportunity for visual surveillance. Once the ether can moved into a private residence, there was a justifiable expectation of privacy “free of governmental intrusion not authorized by a warrant ... that society is prepared to recognize”⁵⁷ Consequently, the Supreme Court declared the warrantless use of the beeper in *Karo* to be “[i]ndiscriminate monitoring of property ... withdrawn from public view” that violates privacy interests protected by the Fourth Amendment.⁵⁸

Seventeen years after its decision in *Karo*, the Supreme Court was presented with an “extrasensory” governmental intrusion into personal privacy in *Kyllo v. United States*.⁵⁹ In *Kyllo*, police officers used a thermal imaging device to determine that the defendant was using

⁴⁹ United States v. Karo, 468 U.S. 705, 712 (1984).

⁵⁰ *Id.* at 714.

⁵¹ *Id.* at 708.

⁵² *Id.* at 708-09.

⁵³ *Id.* at 709-10.

⁵⁴ *Id.* at 714.

⁵⁵ *Id.* at 715.

⁵⁶ United States v. Knotts, 460 U.S. 276, 281 (1983).

⁵⁷ United States v. Karo, 468 U.S. 705, 714 (1984).

⁵⁸ *Id.* at 716.

⁵⁹ *Kyllo v. United States*, 533 U.S. 27 (2001).

“halide lights to grow marijuana in his house”⁶⁰ The thermal scanner used by the officers did not penetrate the interior of the residence’s walls, but instead detected the heat radiating from the home.⁶¹ The U.S. Court of Appeals for the Ninth Circuit affirmed the decision of the lower court, finding that this was not an intrusion into the defendant’s privacy.⁶² The court based its conviction affirmation on their conclusion that the defendant “had shown no subjective expectation of privacy because he had made no attempt to conceal the heat escaping from his home . . . and even if he had, there was no objectively reasonable expectation of privacy because the imager ‘did not expose any intimate details of Kyllo’s life’.”⁶³ The Supreme Court reversed the Ninth Circuit’s decision.⁶⁴

Justice Scalia, writing for the majority in *Kyllo*, declared that “obtaining by sense-enhancing technology any information regarding the interior of [a] home that could not otherwise have been obtained without physical ‘intrusion into a constitutionally protected area’ . . . constitutes a search.”⁶⁵ Thus, by limiting “technological enhancement” of lawful visual surveillance, this standard preserves the “degree of privacy against government that existed when the Fourth Amendment was adopted.”⁶⁶ Importantly, the *Kyllo* decision stipulates that surveillance where “the Government uses a device that is not in general public use” to discover “unknowable” information constitutes a “search [that] is presumptively unreasonable without a warrant.”⁶⁷ Unfortunately, the Court declined to provide a definition for “general public use” in *Kyllo* and it has yet to elaborate on the limits implied by this language.⁶⁸

II. WHAT EXPECTATION OF PRIVACY DOES SOCIETY HAVE RELATED TO GPS TECHNOLOGY: AN ANALYTICAL FRAMEWORK

⁶⁰ *Id.* at 30.

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.* at 31 (quoting *United States v. Kyllo*, 190 F.3d 1041, 1046 (9th Cir. 1999)).

⁶⁴ *Id.* at 41.

⁶⁵ *Id.* at 34.

⁶⁶ *Id.*

⁶⁷ *Id.* at 40.

⁶⁸ Raymond Shih Ray Ku, *The Founders’ Privacy: The Fourth Amendment and the Power of Technological Surveillance*, 86 MINN. L. REV. 1325, 1329 (2002) (“Taken to its logical conclusion, *Kyllo* suggests that government use of new technologies should always be subject to the warrant requirement unless they are in general public use.”).

A. The “General Public Use” of GPS Technology

Federal courts lack a definition of “general public use,” yet they have been required to assess whether GPS technology fits within this classification. This produces mixed results.⁶⁹ Factors complicating the determination include the number of GPS navigation devices purchased and in use,⁷⁰ consumer familiarity with these devices,⁷¹ and judicial confusion in distinguishing a GPS tracking device used by law enforcement from a more common consumer GPS navigation device.⁷² Generally, a consumer GPS navigation device provides simple current location functionality along with destination direction capabilities.⁷³ However, law enforcement GPS tracking devices are much more powerful and covert, and they bear little resemblance to the simple beeper used by the police in *Knotts* that only provided “relational pings.”⁷⁴

The GPS tracking devices used by law enforcement agents are small, inconspicuous devices that can be attached anywhere on a vehicle.⁷⁵ Self-powered, these GPS devices have a battery life of “many

⁶⁹ See, e.g., *United States v. Sparks*, 750 F. Supp. 2d 384, 393 n.10 (D. Mass. 2010) (noting that the GPS in question, which the court found to be “highly sophisticated” was in general public use because of the wide availability of GPS units).

⁷⁰ See, e.g., Kevin J. O’Brien, *Smartphones cut ground out from under navigation devices*, INT’L HERALD TRIB., Nov. 14, 2010, at 14 (“[T]he number of personal navigation devices shipped globally will peak in 2011 at 42 million, up from 40 million this year.”).

⁷¹ See, e.g., Ludovic Privat, *NAVTEQ: Continued Growth in Consumer Navigation Use*, GPS BUSINESS NEWS (Feb. 12, 2011), http://www.gpsbusinessnews.com/NAVTEQ-Continued-Growth-in-Consumer-Navigation-Use_a2812.html (noting that in 2009, “46% of American consumers surveyed reported having experience with a GPS navigation device or application.”).

⁷² See *Sparks*, 750 F. Supp. 2d at 393 n.10 (explaining that the GPS in question, which allowed the FBI to accurately locate Sparks’ vehicle at any time from any computer was highly sophisticated, but did not require a warrant under *Kyllo* because “GPS devices are widely available to the public at large.”).

⁷³ See, e.g., *GPS Buying Advice, GPS features*, CONSUMERREPORTS.ORG, <http://www.consumerreports.org/cro/cars/tires-auto-parts/gps/gps-buying-advice/gps-features/gps-features.htm> (last visited Oct. 16, 2011).

⁷⁴ See, e.g., *Sparks*, 750 F. Supp. 2d 384 at 393 (“It is true that the GPS device used here was highly sophisticated, allowing the FBI accurately to locate Spark’s vehicle from any computer, at any time of the day or night, and store a record of his travels for the entirety of the eleven day period. This is certainly more advanced than the relational “pings” of the beepers of yesteryear.”).

⁷⁵ See, e.g., *Deleware v. Holden*, C.A. No. 10-03-0545, 2010 WL 5140744, at *2 (Del. Super. Ct. Dec. 14, 2010) (stating that “GPS devices operated by batteries permit the device to be attached anywhere on a vehicle”); and *id.* at 5-6 n. 3 (stating that “GPS devices that do not have their own internal battery source must be placed such that they can be attached to the vehicle’s battery.”).

weeks” and they are generally equipped with a recorder and often a transmitter as well.⁷⁶ Those equipped with a transmitter allow for real-time tracking of a suspect vehicle and have the ability to create a record of the target’s activity.⁷⁷ Other GPS tracking devices are equipped with a recording device that “automatically keeps a detailed time and place itinerary of everywhere the vehicle travels and when and how long it remains at various locations.”⁷⁸ With these devices, law enforcement agents are no longer required to continuously monitor suspect automobiles; agents can simply remove the device from the vehicle at their convenience and download the results.⁷⁹

Therefore, unlike beeper technology, GPS tracking does not merely augment visual surveillance, but, instead, equips law enforcement with a “technological substitute for traditional visual tracking.”⁸⁰ Moreover, GPS tracking devices provide law enforcement with meticulous logs, which include intimate details of a tracked individual’s past activities⁸¹—regardless of lawfulness. This surveillance provides law enforcement with valuable “information not otherwise available to the government” because it cannot maintain persistent long-term surveillance of a suspect vehicle without “extrasensory” electronic support.⁸² GPS devices, unlike beepers, do not simply transmit “‘Here

⁷⁶ See, e.g., *id.* at 5 (stating that “[t]he battery on a GPS device can last for many weeks without needing to be recharged.”).

⁷⁷ See, e.g., *id.* at *6 (“GPS receivers equipped with a transmitter can easily record and relay relatively accurate positional information 24 hours a day to third-parties.”).

⁷⁸ Dorothy J. Glancy, *Privacy on the Open Road*, 30 OHIO N.U. L. REV. 295, 317 (2004) (explaining that the GPS devices attached to vehicles keep detailed logs of where the vehicles travel).

⁷⁹ See, e.g., *id.* (describing the removal, “[l]ater, law enforcement agents remove the device and download the detailed itinerary of where and when the vehicle has traveled. Unlike beepers, GPS devices do not require continuous monitoring by a law enforcement agent.”).

⁸⁰ *State v. Jackson*, 150 Wash.2d 251, 262 (Wash. 2003) (describing that “unlike binoculars or a flashlight, the GPS device does not merely augment the officers’ senses, but rather provides a technological substitute for traditional visual tracking.”).

⁸¹ See, e.g., *id.* (finding that “intrusion into private affairs made possible with a GPS device is quite extensive as the information obtained can disclose a great deal about an individual’s life”).

⁸² *United States v. Holmes*, 521 F.2d 859, 865-67 (5th Cir. 1975), *aff’d en banc by an equally divided court*, 537 F.2d 227 (1976) (holding that without the beeper’s aid, the agents would not have been able to seize evidence that implicated Holmes. However, the issue in cases involving electronic monitoring is whether the government has invaded an individual’s “right of personal security, personal liberty, and private property[.]”) (citations omitted).

THE WARRANTLESS USE OF GPS TRACKING DEVICES

I am;”⁸³ rather, this technology communicates “[h]ere I am, here is where I have been, and here is how long I was there.”⁸⁴

Regrettably, familiarity with the commercial application of GPS technology can create misperceptions regarding the intrusiveness of the GPS tracking devices used by law enforcement.⁸⁵ Furthering the confusion, American society now utilizes GPS tracking devices for more than simple vehicle navigation, such as for tracking truant students,⁸⁶ probationary criminals,⁸⁷ children,⁸⁸ and school buses.⁸⁹ However, these methods of use of GPS tracking are either consensual or court-ordered, and State concern over the misuse of GPS tracking has led to the development of statutory proscriptions in some jurisdictions against private GPS device tracking.⁹⁰ Interwoven into the complica-

⁸³ See, e.g., *id.* at 865 n.12 (“The beacon does convey information as useful as any obtained from a wiretap. As Judge Tuttle of this panel observed at oral argument, the beeper continually broadcasts the statement, ‘Here I am.’”).

⁸⁴ See, e.g., *Jackson*, 76 P.3d at 221 (explaining that the GPS device attached to the suspect’s car kept a log of where he went and how long he stayed at each location).

⁸⁵ See, e.g., *State v. Sparks*, 750 F. Supp. 2d 384, 393 n.10 (D. Mass. 2010) (grouping the “highly sophisticated” GPS devices used by law enforcement agents with those available to the general public).

⁸⁶ Eric Carpenter, *Kids Who Skip School are Tracked by GPS*, THE ORANGE COUNTY REGISTER (Feb. 17, 2011, 1:54 PM), <http://www.ocregister.com/news/school-288730-students-program.html>. (describing how “[s]eventh- and eighth-graders with four unexcused absences or more” were assigned to carry a GPS device, and how “[e]ach morning on schooldays, they get an automated phone call reminding them they need to get to school on time.”).

⁸⁷ See, e.g., Carlin DeGuerin Miller, *Lindsay Lohan Has New Bracelet...the Ankle Monitoring Kind; Actress Gets Tougher DUI Probation Terms*, CBS NEWS (May 24, 2010), http://www.cbsnews.com/8301-504083_162-20005761-504083.html (“A Los Angeles judge ordered the troubled starlet to wear an ankle monitoring bracelet[.]”).

⁸⁸ See, e.g., David Pogue, *Cellphones that Track the Kids*, N.Y. TIMES, December 21, 2006, at C1 (describing how “[a]t least five companies ... have built G.P.S. tracking into something children carry voluntarily: cellphones.”).

⁸⁹ See, e.g., Matt Fritz, *GPS System to Track La Porte School Buses*, THE HERALD ARGUS (Feb. 18, 2011, 5:06 PM), <http://heraldargus.com/articles/2011/02/18/news/local/doc4d5dcd3e9d31e451810001.txt> (explaining the La Porte Community Schools purchased a GPS system to pinpoint buses at any time and to engage in efficient routing).

⁹⁰ See, e.g., Electronic tracking device, CAL. PENAL CODE § 637.7 (West 2010) (demonstrating an example of such a statutory proscription); Electronic tracking device; location of person without consent; prohibit, H.B. 16, 150th Gen. Assemb., Reg. Sess. (Ga. 2010) available at <http://www.legis.ga.gov/legislation/en-US/display/25877>.

tion is the lack of a clear and concise definition for *Kyllo's* "general public use" standard,⁹¹ further creating confusion for the judiciary.

United States v. Sparks, a recent federal court decision, provides a ready example of the confusion stemming from *Kyllo's* "general public use" standard. Here, the district court evaluated the FBI's warrantless use of a GPS tracking device to record and monitor a suspect vehicle that was eventually used in an armed bank robbery.⁹² The court recognized the device was "highly sophisticated," that it allowed the FBI to accurately locate the suspect's "vehicle from any computer, at any time of the day or night," and that the FBI could use the GPS device "to store a record of [the suspect's] travels for the entirety of the eleven day period."⁹³ Despite recognition of the GPS device's capabilities, the court noted that "[t]his technology ... is not the type of highly sophisticated equipment that would require a warrant under *Kyllo*."⁹⁴ Moreover, the court confused the device with navigational devices in "general public use," stating that "GPS devices are widely available to the public at large."⁹⁵ Without further Supreme Court guidance, federal courts will likely continue to inconsistently apply prior precedent while law enforcement increases the warrantless use of GPS tracking devices

B. Decision Framework

To address this judicial confusion, the Supreme Court's Fourth Amendment foundational holdings in *Katz*, *Knotts*, *Karo*, and *Kyllo* can be fashioned into a four-part framework to analyze the constitutionality of warrantless GPS vehicle monitoring. When evaluating warrantless surveillance, Fourth Amendment protections must favor the individual's privacy over the State's need for information. This will "prevent stealthy encroachment upon or 'gradual depreciation' of the rights secured by them, by imperceptible practice of courts, or by well-intentioned, but mistakenly over-zealous, executive officers."⁹⁶

⁹¹ *Kyllo v. United States*, 533 U.S. 27 (2001) (holding that using sense-enhancing technology that is not in general public use to obtain information that could otherwise not have been obtained without physical intrusion into a "constitutionally protected area" constitutes a search under the Fourth Amendment).

⁹² *United States v. Sparks*, 750 F. Supp. 2d 384, 385 (D. Mass. 2010) (noting that the vehicles involved in a robbery were located through the use of a GPS device).

⁹³ *Id.* at 393.

⁹⁴ *Id.* at 393 n.10.

⁹⁵ *Id.* (likening the GPS to "the telephone in 1880 and the video camera in 1950 Undoubtedly, a quarter-century from now, the GPS device used in this case will seem antiquated.").

⁹⁶ *Gouled v. United States*, 255 U.S. 298, 304 (1921).

THE WARRANTLESS USE OF GPS TRACKING DEVICES

Because privacy is a “right” afforded by the Fourth Amendment, analysis of the warrantless use of GPS technology within this framework requires a thorough review of each holding when assessing law enforcement’s need to seek a warrant.

Utilizing the analytical framework requires sequential application of the decisions of *Katz*, *Knotts*, *Karo*, and *Kyllo* to the facts of a given case. First, a *Katz* analysis must be conducted when a defendant invokes Fourth Amendment privacy protections to identify whether the individual has exhibited a subjective expectation of privacy and whether this subjective privacy expectation is objectively reasonable to society.⁹⁷ Second, per *Knotts*, a defendant can have no objectively reasonable expectation of privacy when their automobile movements are wholly conducted in public or visible to the public.⁹⁸ Third, *Karo* provides an exception to the prior rule provided by *Knotts*, that is, warrantless electronic monitoring cannot reveal information not voluntarily conveyed through public actions in situations where visual surveillance would have been an appropriate substitute for the electronic surveillance.⁹⁹ Fourth, as stated in *Kyllo*, law enforcement cannot use technology that is not in general public use to reveal either involuntarily conveyed or unknowable information where there is a reasonable expectation of privacy regarding that information.¹⁰⁰

⁹⁷ *Katz v. United States*, 389 U.S. 347, 361 (1967) (Harlan, J., concurring) (noting that the rule governing the evaluation of one’s Fourth Amendment protection looks to whether the person has exhibited an actual expectation of privacy and if the expectation is one that society is prepared to recognize as reasonable); *See also* *Smith v. Maryland*, 442 U.S. 735, 740 (1979) (finding that “the application of the Fourth Amendment depends on whether the person invoking its protection can claim a ‘justifiable,’ a ‘reasonable,’ or a ‘legitimate expectation of privacy’ that has been invaded by government action The second question is whether the individual’s subjective expectation of privacy is ‘one that society is prepared to recognize as ‘reasonable’”).

⁹⁸ *United States v. Knotts*, 460 U.S. 276, 281-82 (1983). (finding that “[a] person traveling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another.”).

⁹⁹ *United States v. Karo*, 468 U.S. 705, 715 (1984) (“The monitoring of an electronic device such as a beeper is, of course, less intrusive than a full-scale search, but it does reveal a critical fact about the interior of the premises that the Government is extremely interested in knowing and that it could not have otherwise obtained without a warrant. . . . [H]ere, as we have said, the monitoring indicated that the beeper was inside the house, a fact that could not have been visually verified.”).

¹⁰⁰ *Kyllo v. United States*, 533 U.S. 27, 34 (2001) (finding that “obtaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical ‘intrusion into a constitutionally protected area,’ ... constitutes a search—at least where (as here) the technology in question is not in general public use. This assures preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted.”) (internal citations omitted).

When analyzing the Fourth Amendment's privacy protections, it is vital to note that "the decision to allow law enforcement to use emerging surveillance technologies is effectively a decision to expand government power at the expense of the public's privacy and security."¹⁰¹ Thus, to protect public security and privacy, search warrants are scrutinized "by a neutral and detached magistrate instead of being judged by the officer engaged in the often competitive enterprise of ferreting out crime."¹⁰² To do otherwise "would reduce the [Fourth] Amendment to a nullity."¹⁰³ Consequently, warrants are presumptively required when an intrusion into a Fourth Amendment "constitutionally protected area"¹⁰⁴ occurs and this is reflected in the decision paths of the analytical framework. The following diagram illustrates the logical flow:

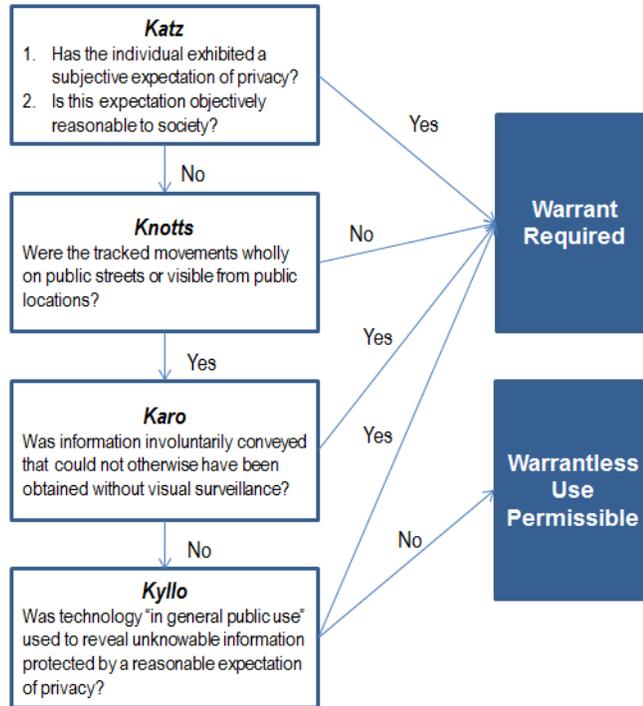
¹⁰¹ Ku, *supra* note 68, at 1331.

¹⁰² Johnson v. United States, 333 U.S. 10, 14 (1948).

¹⁰³ *Id.* (noting that nullifying the warrant requirement would leave homes unprotected and "[t]he right of officers to thrust themselves into a home is a grave concern, not only to the individual but to a society which chooses to dwell in reasonable security and freedom from surveillance.").

¹⁰⁴ See e.g., *Kyllo*, 533 U.S. at 34 (noting that using sense-enhancing technology to obtain information from the home that would not have been available otherwise is "erod[ing] the privacy guaranteed by the Fourth Amendment.").

WARRANTLESS USE OF GPS TECHNOLOGY ANALYTICAL FRAMEWORK



This analytical framework demonstrates that the application of *Katz* can immediately create a warrant requirement when an individual exhibits a subjective expectation of privacy that society views as objectively reasonable. However, although *Knotts* can, and frequently will, override the subjective expectation of privacy when GPS tracking is involved, either *Karo* or *Kyllo* may provide an exception that establishes a warrant requirement, and therefore, each must be considered within the analysis. The Supreme Court’s interpretations of the Fourth Amendment’s protection, as structured within the framework, ensures that law enforcement’s warrantless use of GPS technology is bound by the limits of the Amendment.

III. APPLYING THE ANALYTICAL FRAMEWORK TO *MAYNARD*

In the recently-decided case, *United States v. Maynard*, the U.S. Court of Appeals for the District of Columbia unnecessarily fashioned a new Fourth Amendment approach for the analysis of law enforcement’s use of warrantless GPS monitoring instead of relying on

precedent.¹⁰⁵ The court focused on the Supreme Court's statement in *Katz* that an individual's knowing exposure of information results in no cognizable expectation of privacy, and the court went on to find that the appellant's movements, as monitored by a warrantless GPS device, were not "actually" or "constructively" exposed to the public.¹⁰⁶ The modification of the "exposes to the public" standard from *Katz*¹⁰⁷ required consideration of two additional concepts: evaluation of "what a reasonable person expects another might actually do,"¹⁰⁸ and the meta-information related to a "collection of movements."¹⁰⁹ Although the court correctly concluded that law enforcement violated the Fourth Amendment in *Maynard*, the same conclusion could have been reached by the application of prior precedent and without the construction of a new approach.

A. Right Answer, Wrong Approach: *United States v. Maynard* Inserts New Variables into the Equation

In *Maynard*, the police attached a GPS tracking device to the defendants' vehicle without a warrant and monitored the vehicle's movements for the following four weeks before arresting them for a variety of drug-related charges.¹¹⁰ The defendant that drove the car, Jones, argued that under the *Katz* standard the police had "violated his 'reasonable expectations of privacy'"¹¹¹ Counsel for the government countered that although the *Katz* test was relevant, Jones's expectations of privacy were not reasonable based on the Supreme Court's holding in *Knotts*.¹¹² Contrary to the prior precedent of *Knotts* and other federal circuit court cases, however, the D.C. Circuit held that Jones's objectively reasonable expectations of privacy *were* violated since the "totality of Jones's movements over the course of a

¹⁰⁵ *United States v. Maynard*, 615 F.3d 544, 555-56 (D.C. Cir. 2010) (holding that *Knotts* did not control the case and that the police performed a search when they violated Jones's reasonable expectation of privacy).

¹⁰⁶ *Id.* at 558 (noting that the totality of one's movements over a month are "not *actually* exposed to the public because the likelihood anyone will observe all those movements is effectively nil." Further, the court notes that constructively, the whole of one's movements is not exposed because the "whole reveals more—sometimes a great deal more—than does the sum of its parts.").

¹⁰⁷ *Katz v. United States*, 389 U.S. 347, 351 (1967) (finding that "[w]hat a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection.").

¹⁰⁸ *Maynard*, 615 F.3d at 559.

¹⁰⁹ *Id.* at 560-561.

¹¹⁰ *Id.* at 555.

¹¹¹ *Id.*

¹¹² *Id.* at 555-56.

month ... was not exposed to the public”¹¹³ In arriving to this conclusion, the court first distinguished *Maynard* from the Supreme Court’s holding in *Knotts*.¹¹⁴

Focusing on the Supreme Court’s statement in *Knotts* that “[a] person traveling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements *from one place to another*,”¹¹⁵ the court decided that the Supreme Court had “explicitly distinguished between the limited information discovered by the use of the beeper, movements during a discrete journey, and more comprehensive or sustained monitoring of the sort at issue in this case.”¹¹⁶ Further, the *Maynard* court explained, “in *Knotts* the Court actually reserved the issue of prolonged surveillance. That issue is squarely presented in this case.”¹¹⁷ Therefore, from the D.C. Circuit’s perspective, the limited holding in *Knotts* distinguished it from the issues before it in *Maynard*, and so, it proceeded to analyze the warrantless use of GPS monitoring under the *Katz* legitimate expectation of privacy standard.¹¹⁸

The court applied the *Katz* test by concentrating on the information that the monitoring of Jones’s movements had been “exposed to the public” and evaluating whether Jones had an objectively reasonable expectation of privacy regarding that information.¹¹⁹ First, the court reasoned that “unlike one’s movements during a single journey, the whole of one’s movements over the course of a month is not *actually* exposed to the public because the likelihood anyone will observe all those movements is effectively nil.”¹²⁰ The court then found that Jones’s movements were not exposed to the public because it would be very difficult, if not impossible, to track the movement of a person day after day and “week in and week out” until “all the places, people, amusements, and chores that make up that person’s hitherto private routine” had been “identified.”¹²¹ In the court’s view, the proper question should be “what a reasonable person expects another might actually do.”¹²² So, although a “theoretical possibility”¹²³ existed for law

¹¹³ *Id.* at 558.

¹¹⁴ *Id.* at 555-56.

¹¹⁵ *United States v. Knotts*, 460 U.S. 276, 281 (1983) (emphasis added).

¹¹⁶ *Maynard*, 615 F.3d at 556. (citing *United States v. Knotts*, 460 U.S. 276 (1983)).

¹¹⁷ *Id.* at 558.

¹¹⁸ *Id.* at 558-59.

¹¹⁹ *Id.* at 558.

¹²⁰ *Id.* (emphasis in original).

¹²¹ *Id.* at 560.

¹²² *Id.* at 559.

¹²³ *Id.* at 560.

enforcement to monitor Jones's movements, the question "depends ... upon the actual likelihood of ... discovery by a stranger."¹²⁴ Since "the likelihood a stranger would observe all those movements is not just remote, it is essentially nil," the court found the collection of his movements were not voluntarily conveyed.¹²⁵

Second, the *Maynard* court determined that "the whole of one's movements is not exposed *constructively* even though each individual movement is exposed, because that whole reveals more—sometimes a great deal more—than does the sum of its parts."¹²⁶ Noting that the "whole of Jones's movements ... was constructively exposed because each of his individual movements during that time was itself in public view" the court reviewed whether Jones should have an objectively reasonable expectation of privacy in his collection of movements.¹²⁷ Referencing Supreme Court decisions related to collections of data, the *Maynard* court found a precedential basis for determining that there are privacy expectations in a person's "habits and patterns that mark the distinction between a day in the life and a way of life"¹²⁸ Stating that a reasonable person expects the collection of their movements "to remain 'disconnected and anonymous',"¹²⁹ the court concluded that "the extended recordation of a person's movements is ... not what we expect anyone to do, and it reveals more than we expect anyone to know."¹³⁰

Having found that Jones's movements were not both "actually" and "constructively" exposed to the public, the court then analyzed whether "his expectations of privacy in those movements was reasonable"¹³¹ Focusing on the majority opinion in *Katz*, the D.C. Circuit stated, "in *Katz* the Court clearly stated what [one] seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected."¹³² The *Maynard* court found that applying the *Katz* test can "lead to only one conclusion: Society recognizes Jones's expectation of privacy in his movements over the course of a month as reasonable, and the use of the GPS device to monitor those movements defeated that reasonable expectation."¹³³ Although the court

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *Id.* at 558 (emphasis in original).

¹²⁷ *Id.* at 560-61.

¹²⁸ *Id.* at 561-62.

¹²⁹ *Id.* at 563 (quoting *Nader v. General Motors Corp.*, 25 N.Y.2d 560, 572 (N.Y. 1970) (Breitel, J., concurring)).

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.*

recognized that other federal circuits had held that GPS monitoring was not a search, the D.C. Circuit noted that the other Circuits were simply “not alert to the distinction drawn in *Knotts* between short-term and prolonged surveillance”¹³⁴

Since the *Maynard* court created a new right of privacy in a collection of movements, but also stressed, “[s]urveillance that reveals only what is already exposed to the public—such as a person’s movements during a single journey—is not a search,”¹³⁵ the challenge for the police applying this new standard is now determining the level of surveillance that establishes a “pattern of movements” for *any* prolonged surveillance activities. Moreover, the *Maynard* court left unanswered whether prolonged monitoring of a vehicle through the warrantless use of a GPS tracking device *always* violates an individual’s reasonable expectations of privacy.¹³⁶ Application of the Supreme Court’s decisions using the analytical framework provided by *Katz*, *Knotts*, *Karo*, and *Kyllo* could have resulted in a satisfactory result without splitting the federal circuits’ approach.

B. Applying *Katz*

When analyzing Fourth Amendment privacy protections, the *Katz* test is first applied to identify whether the individual has exhibited a subjective expectation of privacy and whether this subjective privacy expectation is objectively reasonable to society.¹³⁷ Applying *Katz* to the facts of *Maynard*, it becomes clear that the defendant, Jones, did not invoke any Fourth Amendment privacy protections through the outward exhibition of a subjective expectation of privacy.¹³⁸ Jones performed no actions to mask his individual or collective movements, even those as simple as using more than one vehicle when conducting his criminal activities or screening his car from exposure by placing it in a non-public parking space. Exposing “objects . . . to the ‘plain view’ of outsiders” removes those objects from the protection of the Fourth Amendment “because no intention to keep them to himself has been exhibited.”¹³⁹

¹³⁴ *Id.* at 564.

¹³⁵ *Id.* at 565.

¹³⁶ *Id.* at 566.

¹³⁷ *Katz v. United States*, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).

¹³⁸ *Id.*

¹³⁹ *Id.*; *Contra* Eric Dean Bender, *The Fourth Amendment in the Age of Aerial Surveillance: Curtains for the Curtilage?*, 60 N.Y.U. L. REV. 725, 753 (1985) (“The essential focus of the *Katz* analysis is on the reasonableness of expectations of privacy; it is thus disingenuous for a court to evade consideration of that issue, under the second part of the *Katz* analysis, by failing to recognize that a dweller exhibited an

The Supreme Court has recognized, however, that evaluation of subjective expectations within the Katz standard can “provide an inadequate index of Fourth Amendment protection” when they have “been ‘conditioned’ by influences alien to well-recognized Fourth Amendment freedoms” and “in such cases, a normative inquiry would be proper.”¹⁴⁰ Such a “conditioning” can be properly perceived in an individual’s expectation that they are not under constant warrantless surveillance from their government¹⁴¹. Moreover, “searches conducted outside the judicial process, without prior approval by judge or magistrate, are per se unreasonable under the Fourth Amendment.”¹⁴² Even when an individual expresses no subjective expectation of privacy, they are “entitled to know [they] will remain free from unreasonable searches and seizures” and that they are not “secure from Fourth Amendment violations only in the discretion of the police.”¹⁴³

Therefore, under the analytical framework, although the defendant in *Maynard* failed to exhibit a subjective intention that is objectively reasonable to society,¹⁴⁴ this was not determinative of his right to privacy under the Fourth Amendment. It does, though, preclude an immediate determination that law enforcement was required to obtain a warrant before using GPS tracking to monitor Jones’s movements.¹⁴⁵

C. Applying *Knotts*

Employing *Knotts* to the facts in *Maynard*, however, reveals that Jones could not have had any objectively reasonable expectations of privacy regarding his movements conducted wholly on public streets or visible from public locations.¹⁴⁶ Since all of the automobile movements tracked in *Maynard* were conducted on public thoroughfares,¹⁴⁷ applying *Knotts* within the analytical framework does not result in a requirement for the police involved to have sought a warrant before their warrantless use of the GPS tracking device. This does not end the analysis, but instead advances to considerations of Fourth Amendment warrant protections provided by the Supreme Court in *Karo* and *Kyllo*. Conversely, when considering *Knotts*, the *Maynard*

expectation of privacy because he did not take extraordinary precautions against the specific way in which the state conducted the surveillance.”)

¹⁴⁰ *Smith v. Maryland*, 442 U.S. 735, 740-41 n.5 (1979).

¹⁴¹ *Id.*

¹⁴² *Katz*, 389 U.S. at 357.

¹⁴³ *Id.* at 359.

¹⁴⁴ *Id.* at 361 (Harlan, J., concurring).

¹⁴⁵ *See Maynard*, 615 F.3d at 545.

¹⁴⁶ *Knotts*, 460 U.S. at 281-82.

¹⁴⁷ *Maynard*, 615 F.3d at 559.

court simply sidestepped the issue since, in the court's view, the Supreme Court in *Knotts* had "reserved the issue of prolonged surveillance [and] ... [t]hat issue is squarely presented in this case."¹⁴⁸

The *Knotts* Court had preserved this issue when faced with the concern that upholding the government's use of warrantless tracking would invite "twenty-four hour surveillance of any citizen of this country ... without judicial knowledge or supervision."¹⁴⁹ Reserving the determination for later, the Supreme Court held that "different constitutional principles may be applicable" if "such dragnet type law enforcement practices ... should ... occur."¹⁵⁰ Consequently, in subsequent federal cases it became crucial to determine whether "dragnet" type law enforcement practices were being practiced in the matter at bar. Although not wholly in accord, the federal courts have interpreted the Supreme Court's use of the term "dragnet" to represent some type of "mass" or "wholesale" surveillance.¹⁵¹ These lower courts appear to agree that an indiscriminate network of GPS tracking devices affixed to thousands of vehicles to monitor their movements is clearly a constitutional violation.¹⁵² Yet, prior to the decision in *Maynard*, all federal circuit courts had upheld prolonged warrantless GPS tracking of automobiles on "public thoroughfares"¹⁵³ even though the *Knotts* Court had failed to distinguish how electronic tracking of a single individual "is not Fourth Amendment activity but that the indiscriminate use against many is."¹⁵⁴

Nevertheless, application of *Knotts* within the analytical framework is designed to only identify instances where the warrantless use of GPS technology was used by law enforcement in areas our society understands are worthy of "protection from government invasion."¹⁵⁵ This includes travel on private roads that are not visible from public locations and automobile movement into private garages or similar spaces. In *Maynard*, travel was wholly within the public space and for that reason, the analysis moved to the Fourth Amendment exceptions provided by *Karo* and *Kyllo*.

¹⁴⁸ *Id.* at 558.

¹⁴⁹ *Knotts*, 460 U.S. at 283 (citation omitted).

¹⁵⁰ *Id.* at 284.

¹⁵¹ *United States v. Marquez*, 605 F.3d 604, 609-10 (8th Cir. 2010); *United States v. Garcia*, 474 F.3d 994, 998 (7th Cir. 2007).

¹⁵² *Marquez*, 605 F.3d at 610; *Garcia*, 474 F.3d at 998.

¹⁵³ *Marquez*, 605 F.3d 604 (8th Cir. 2010); *United States v. Pineda-Moreno*, 591 F.3d 1212 (9th Cir. 2010); *Garcia*, 474 F.3d 994 (7th Cir. 2007).

¹⁵⁴ *LaFave*, *supra* note 19, § 2.7(e), at 762.

¹⁵⁵ *Oliver v. United States*, 46 U.S. 170, 178 (1984).

D. Applying *Karo*

When stating the protections provided by the Fourth Amendment, the Court in *Karo* held that warrantless electronic monitoring cannot reveal information involuntarily conveyed through public actions where visual surveillance would have provided a substitute.¹⁵⁶ The application of the *Karo* holding to the facts in *Maynard* provides an exception the *Maynard* court sought in their analysis. Specifically, since in the *Maynard* court's opinion law enforcement could not have practically conducted a visual surveillance of Jones' movements over the four-week period, the GPS tracking that was performed had no non-technological substitute.¹⁵⁷ Moreover, in *Maynard*, the lack of a visual surveillance substitute was noted by a Special Agent testifying for the prosecution who stated, "[p]hysical surveillance is actually hard ... [t]here's always chances of getting spotted ... so we decided to use GPS technology."¹⁵⁸ So, although Jones's information was "voluntarily conveyed to anyone who wanted to look,"¹⁵⁹ the prolonged monitoring of Jones violated his legitimate interest in privacy under *Karo* since it "could not have been visually verified."¹⁶⁰

Nevertheless, while the *Maynard* court could assert the *Karo* holding establishes a clear exemption from law enforcement's warrantless use of GPS tracking to monitor Jones, not all Fourth Amendment experts agree the language within *Karo* should be interpreted literally.¹⁶¹ Because of this, analysis of *Maynard* within the analytical framework should advance to the privacy protections provided by *Kyllo*.

E. Applying *Kyllo*

Despite the support for Jones in *Karo*, the Supreme Court's decision in *Kyllo* is determinative on the outcome of the analytical framework's analysis of *Maynard*. As held by the Court in *Kyllo*, "obtaining by sense-enhancing technology any information ... that could not otherwise have been obtained without ... 'intrusion into a constitutionally protected area' constitutes a search ... where ... the technol-

¹⁵⁶ United States v. *Karo*, 468 U.S. 705, 715 (1984).

¹⁵⁷ See *Maynard*, 615 F.3d 544 (D.C. Cir. 2010).

¹⁵⁸ *Maynard*, 615 F.3d at 565 (citation omitted).

¹⁵⁹ *Knotts*, 460 U.S. at 281.

¹⁶⁰ *Karo*, 468 U.S. at 715.

¹⁶¹ LaFave, *supra* note 19, § 2.7(e), at 771 ("[I]nconsistency in results is to be preferred over an interpretation of *Karo* whereunder the Court's 'could not have been obtained through visual surveillance' language is taken literally.").

THE WARRANTLESS USE OF GPS TRACKING DEVICES

ogy in question is not in general public use.”¹⁶² Yet, the GPS tracking technology used by law enforcement in *Maynard*: 1) is a device not in general public use;¹⁶³ 2) is being used to obtain information that could otherwise not be obtained;¹⁶⁴ and 3) is intruding on intimate details of an individual’s past and current activities.¹⁶⁵ Since the Court in *Kyllo* expressed an intent to limit the “power of technology to shrink the realm of guaranteed privacy,”¹⁶⁶ the *Maynard* court, given the facts surrounding the case, should presume that use of this technology by law enforcement violates a justifiable expectation of privacy absent a warrant.

Furthering the restrictive presumption of *Kyllo* is the Court’s recognition that “the rule we adopt must take account of more sophisticated systems that are already in use or in development.”¹⁶⁷ GPS tracking devices used by law enforcement represent precisely the type of “extrasensory”¹⁶⁸ surveillance systems the *Kyllo* Court intended to prevent from revealing an individual’s “unknowable” information.¹⁶⁹ Moreover, the Court emphasized in *Kyllo* that the “means” of collecting information matter, and therefore “[t]he fact that equivalent information could sometimes be obtained by other means does not make lawful the use of means that violate the Fourth Amendment.”¹⁷⁰

In *Maynard*, the means of surveillance, a GPS tracking device not in general public use, was used to acquire information that Jones had a justifiable expectation of privacy in safeguarding.¹⁷¹ Further, although equivalent information theoretically could have been obtained, under current Fourth Amendment standards “it should take much more than the mere theoretical possibility of a member of the public engaging in surveillance of equivalent intensity to undo one’s justified expectation of privacy.”¹⁷² Consequently, application of *Kyllo* within the analytical framework to the facts of *Maynard* categorizes the warrantless use of GPS tracking as a violation of the privacy protection conferred by

¹⁶² *Kyllo v. United States*, 533 U.S. 27, 34 (2001) (quoting *Silverman v. United States*, 365 U.S. 505, 512 (1961)).

¹⁶³ *See* *Ku*, *supra* note 68, at 1366 (Lacking a definition, “assume that *Kyllo*’s ‘general public use’ means what it says: The technology must actually be routinely used by the general public and not simply available or used by some portion of the public.”); *supra* Part II. A.

¹⁶⁴ *See supra* Part III.C.

¹⁶⁵ *See supra* Part II.A.

¹⁶⁶ *Kyllo*, 533 U.S. at 34.

¹⁶⁷ *Id.* at 36.

¹⁶⁸ *Hutchins*, *supra* note 46, at 456.

¹⁶⁹ *Id.*

¹⁷⁰ *Kyllo*, 533 U.S. at 35 n.2.

¹⁷¹ *Maynard*, 615 F.3d at 549.

¹⁷² *LaFave*, *supra* note 19, § 2.2(e), at 501-02.

the Fourth Amendment. To hold otherwise “would be to permit police technology to erode the privacy guaranteed by the Fourth Amendment.”¹⁷³

IV. CONCLUSION

Adhering to an analytical framework provided by the Supreme Court precedents of *Katz*, *Knotts*, *Karo*, and *Kyllo* provides a standard approach to assessing law enforcement’s need to seek a warrant before conducting surveillance of automobile movements. Utilization of this framework in *United States v. Maynard* could have prevented the splintering of the standard of review for evaluation of the warrantless use of GPS technology by law enforcement while still preserving the rights provided by the Fourth Amendment.

¹⁷³ *Kyllo*, 533 U.S. at 34.