

In the  
Court of Appeals of Virginia

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Record No. 0521-09-5

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**DAVID LEE FOLTZ, JR.**  
*Appellant,*

v.

**COMMONWEALTH OF VIRGINIA,**  
*Appellee.*

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**Brief of *Amicus Curiae***  
**American Civil Liberties Union of Virginia, Inc.**  
**in Support of Appellant on Rehearing En Banc.**

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This brief is submitted by *amicus curiae* the American Civil Liberties Union of Virginia (“ACLU-VA”) in support of Appellant David Lee Foltz, Jr.

### **INTEREST OF AMICI CURIAE**

This case presents the question of whether the Fourth Amendment prohibits the Government from installing and using a remotely-operated Global Positioning System (“GPS”) location-tracking device, without a warrant, to track the movements of an individual’s vehicle over an extended period of time.

The ACLU-VA is the local affiliate of the American Civil Liberties Union, a nationwide, non-profit membership organization with more than half a million members that, from its founding in 1920, has been devoted to protecting and defending the constitutional rights of Americans. In that cause, the ACLU-VA has frequently appeared before Virginia’s state and federal courts in cases arising under the Fourth Amendment, either as counsel for parties or as *amicus curiae*.<sup>1</sup>

### **SUMMARY OF ARGUMENT**

GPS technology provides police with a powerful and inexpensive method to track remotely and in great detail the movements of individuals by foot or by automobile, over an extensive period, and across public and private areas. Without a warrant requirement, an individual’s every movement could be subject to remote monitoring, and permanent recording, at the sole discretion of any police officer.

Neither the Supreme Court of the United States nor the Virginia Supreme Court has ever decided whether the warrantless use of GPS tracking technology is constitutional. The U.S. Supreme Court’s “beeper” cases (now 27 years old) do not control the question. Indeed, when

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<sup>1</sup> Written consents from both parties to the filing of this Brief are filed herewith.

the Court permitted the use of lawfully installed radio beepers in *United States v. Knotts*, 460 U.S. 276 (1983), and *United States v. Karo*, 468 U.S. 705 (1984), to augment the senses of police physically following a vehicle on public roads, the Court made clear that its ruling did not control “dragnet-type law enforcement practices,” *Knotts*, 460 U.S. at 284, or technological intrusion into private places. *Karo*, 468 U.S. at 714.

GPS tracking (1) does not merely augment the senses of police officers, but provides a complete technological replacement for human surveillance; (2) enables twenty-four hour a day “dragnet” surveillance at nominal cost; (3) enables police to track vehicles or persons in private places as well as on public roads; and (4) enables the simultaneous surveillance of essentially unlimited numbers of people. In at least these four important ways, it does not resemble the use of beepers previously approved by the Supreme Court.

Subsequent to *Knotts* and *Karo*, the Supreme Court has recognized that a Fourth Amendment search may occur through the use of advanced technology to reveal detailed and personal information about individuals. These characteristics apply to GPS tracking, and a warrant should therefore be required for its unconsented use. Such a ruling also comports with the public’s rejection of “Big Brother” police surveillance, and with the empirical evidence that Americans have a strong expectation of privacy that their every movement by automobile or by foot will not remotely be tracked and recorded by private parties or law enforcement.

*Amicus* therefore urges this court to find that GPS location tracking is a search under the Fourth Amendment that may not be employed without a warrant issued upon a showing of probable cause.

## ARGUMENT

### **I. GPS TRACKING TECHNOLOGY PERMITS THE POLICE TO COLLECT DETAILED PERSONAL DATA REMOTELY WITHOUT THE NEED FOR ANY PERSONAL OBSERVATION**

In this case, the Fairfax County Police surreptitiously and without a warrant affixed a GPS tracking device to a concealed location a vehicle that was owned by Appellant Foltz's employer but was freely used by Foltz to travel to and from work sites, probation meetings, and his home. (J.A. at 158, 163, 268). Police then precisely tracked his location and movements over a four to five day period. (J.A. at 303.) This technology did not require police officers to follow Foltz's vehicle or to make any personal observation of his vehicle's location once the device was installed. *Foltz v. Virginia*, 57 Va. App. 68, 71, 698 S.E.2d 281, 284 (2010).

GPS receivers calculate latitude, longitude, altitude, direction, and speed by receiving and processing location information from the unencrypted transmissions of the four nearest GPS satellites in orbit. *See* Renee McDonald Hutchins, *Tied Up In Knotts? GPS Technology and The Fourth Amendment*, 55 U.C.L.A. L. Rev. 409, 415 (2007) (describing the technology and capability of GPS systems) (hereinafter "Hutchins"). The GPS satellite system can support an unlimited number of receivers. *Id.* at 418.

Government installed GPS tracking technology differs from GPS receivers and from user-controlled GPS devices in important, constitutionally significant ways. For example, the device affixed to Foltz's vehicle was designed to collect location and directional data without his knowledge or consent. The device used cell phone technology to transmit the information secretly to a law enforcement-owned laptop. (J.A. at 266, 298.) The GPS device could also track individuals or vehicles as they traversed private property as well as public streets and did not have a mechanism to stop tracking in private areas. (J.A. at 247.) These GPS trackers give



the police the ability to monitor individuals' physical locations remotely with great accuracy, without leaving the stationhouse.

GPS technology is growing ever more powerful. Currently, police can easily tag one or more vehicles, people, or objects with GPS-enabled tracking devices that are too tiny or cloaked for the target to notice, and then remotely monitor the precise location of the tagged vehicle, person or object from a home computer, law enforcement office, cell phone, or other tracking center. *See* Hutchins, at 418. Though pure GPS devices historically functioned best outdoors, assisted GPS and other innovations that enable reliable indoor tracking are under development. Hutchins at 419-20. *See also* Darren Murph, *Underground/Indoor GPS repeater maintains your position*, Engadget, Feb. 21, 2007, <http://www.engadget.com/2007/02/21/underground-indoor-gps-repeater-maintains-your-position/> (visited Oct. 5, 2010).

The Los Angeles Police Department has begun to outfit its cruisers with air guns that can launch GPS-enabled "darts" at passing cars. Hutchins at 418-19. These darts consist of a miniaturized GPS receiver, radio transmitter, and battery embedded in a sticky compound material. When fired at a vehicle, the compound adheres to the target, and thereafter permits remote, real-time tracking of the target from police headquarters. *Id.* *See* StarChase, <http://www.starchase.org> (last visited Oct. 5, 2010) (official website of a commercial provider of GPS-enabled dart technology).

GPS tracking is being used with increasing frequency. In Fairfax County alone, GPS technology was used in 46 cases in 2007, in 52 cases in 2006, and in 61 cases in 2005. *Foltz*, 57 Va. App. at 73, 698 S.E.2d at 284 n.3. In neighboring Arlington County, police used GPS tracking technology in 70 cases from 2005 to 2007. Ben Hubbard, *Police Turn to Secret Weapon: GPS Devices*, Washington Post, Aug. 13, 2008, at A1.

GPS receivers are also increasingly being built into cell phones, providing law enforcement with the technological capability to use cell phones as “a surreptitious tracking device.” Michael Isikoff, *The Snitch in Your Pocket*, NEWSWEEK, Feb. 19, 2010. At the Government’s request, telecommunication companies have responded to thousands of requests from law enforcement agencies and have provided records of cell phone locations, without notifying the targets and without accompanying judicial warrants. *Id.* In addition to retrieving a cell phone’s historic data and imbedded GPS location, companies can “ping” an individual phone to provide the police with the phone’s location, by sending a signal to a particular phone and using the cell phone towers in the area to triangulate the phone’s location. *See* Christopher Soghoian, *8 Million Reasons for Real Surveillance Oversight*, Slight Paranoia (Dec. 1, 2009) <http://paranoia.dubfire.net/2009/12/8-million-reasons-for-real-surveillance.html> (visited Oct. 8, 2010). One wireless provider, Sprint Nextel, even has a website dedicated to providing law enforcement agencies with an automated process to access customers’ location data directly. *Id.*

When a GPS device is placed on a person or personal effect, the device can provide the police with exact information about his or her visits to any residence, any place of business or entertainment, or any therapist’s office or other medical facility. Law enforcement authorities now have a powerful tool for conducting inexpensive, unobtrusive, twenty-four hour a day surveillance of an individual. The technology is also cheap enough to be used for mass surveillance of the public’s movements.<sup>2</sup> Like all technology, GPS-enabled tracking devices will likely continue to grow even smaller, more accurate and less expensive.

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<sup>2</sup> The widespread use of GPS technology and similar location-tracking capabilities in cellular networks may give law-enforcement authorities the technical ability to monitor remotely the movements of many millions of Americans who carry cellular telephones, as well as those whom are subject to tracking through police-installed GPS devices. *See In re Application of the United States For An Order (1) Authorizing The Use Of A Pen Register And A Trap And Trace Device*

Absent a warrant requirement, the police could track unlimited numbers of members of the public for days, weeks, or months at a time, without ever leaving their desks. No person could be confident that he or she was free from round-the-clock surveillance of his or her movements and associations by a network of satellites constantly feeding data to a remote computer that could at any instant determine with precision his or her current or past movements, and the time and location that the individual crossed paths with other GPS-tracked persons. The police could engage in such surveillance even if the targeted individuals were completely law abiding, and presented no reasonable ground for any suspicion.<sup>3</sup> “By holding that this kind of surveillance doesn’t impair an individual’s reasonable expectation of privacy, the panel hands the government the power to track the movement of every one of us, every day of our lives.” *United States v. Pineda-Moreno*, No. 08-30385, 2010 U.S. App. LEXIS 16708, at \*12 (9th Cir. Aug. 12, 2010) (Kozinski, J., dissenting from the denial of rehearing en banc).

## **II. THE U.S. SUPREME COURT’S RULINGS IN *KNOTTS* AND *KARO* DO NOT CONTROL THE GPS TRACKING ISSUE BEFORE THIS COURT**

The panel opinion, as well as other courts that have upheld the warrantless use of GPS tracking, relied on a duo of cases that upheld the use of electronic beeper tracking devices to assist police in following targeted vehicles: *United States v. Knotts*, 460 U.S. 276 (1983) and *United States v. Karo*, 468 U.S. 705 (1984). *See, e.g., United States v. Pineda-Moreno*, 591 F.3d

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*And (2) Authorizing Release Of Subscriber Information And/Or Cell Site Information*, 396 F. Supp. 2d 294 (E.D.N.Y. 2005).

<sup>3</sup> Law enforcement authorities have been known to engage in close surveillance of law-abiding citizens and infiltration of their organizations. For example, the Maryland State Police and the U.S. Department of Homeland Security recently conducted long-term monitoring of 53 individuals and infiltration of about two dozen groups who were peacefully opposed to the war in Iraq. Lisa Rein, *Federal Agents Aided Md. Spying*, Washington Post, Feb. 17, 2009, at B01; Lisa Rein, *Police Spied on Activists in Md.*, Washington Post, July 18, 2008, at A01.

1212 (9th Cir. 2010); *United States v. Garcia*, 474 F.3d 994 (7th Cir. 2007); *United States v. Marquez*, 605 F.3d 604 (8th Cir. 2010).<sup>4</sup> But the limited holding in *Knotts* does not apply to the far more intrusive technology employed in GPS tracking.

Twenty-seven years ago, the U.S. Supreme Court ruled that police do not need a warrant to make use of the signals transmitted by a radio beeper that had been lawfully installed in a container of chemicals to aid in the physical surveillance of the container as it was transported on public roads. *United States v. Knotts*, 460 U.S. at 282.<sup>5</sup> A year later the Court again accepted the use of signals from a lawfully installed beeper to track the movements of a canister of chemicals in public places, but struck down the use of those signals to confirm that the canister remained inside a home. *United States v. Karo*, 468 U.S. 705, 714 (1984). The Court explained that “monitoring of a beeper in a private residence, a location not open to visual surveillance, violates the Fourth Amendment rights of those who have a justifiable interest in the privacy of the residence.” *Id.* at 714.

The beepers in *Knotts* and *Karo* were simple devices that provided police officers in vehicles a radio signal whose strength indicated whether the vehicle under surveillance was

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<sup>4</sup> The Court of Appeals for the District of Columbia Circuit noted that in neither *Garcia* nor *Pineda-Moreno*, “did the appellant argue that *Knotts* by its terms does not control whether prolonged surveillance is a search.” *United States v. Maynard*, No. 08-3030, 2010 U.S. App. LEXIS 16417, at \*20 (D.C. Cir. Aug. 6, 2010). In *Garcia*, the appellant explicitly conceded the point, and the Court addressed only the installation of the devices in the vehicle, not the tracking of the vehicle. *Garcia*, 474 F.3d at 996. In *Pineda-Moreno*, the Court noted that appellant acknowledged that *Knotts* was controlling, and addressed only if the *Kyllo* analysis of thermal imaging devices had “heavily modified the Fourth Amendment analysis.” *Pineda-Moreno*, 591 F.3d at 1216 (citing *Kyllo v. United States*, 533 U.S. 27 (2001)).

<sup>5</sup> In *Knotts*, the Court did not decide whether the warrantless installation of the beeper violated the Fourth Amendment, as that issue was not presented. *Knotts*, 460 U.S. at 279 n. \*. That issue is presented in this case and requires reversal, but is not the focus of this brief.

getting closer or farther from the officers' vehicle.<sup>6</sup> This assisted the police officers in physically following a vehicle.

Taken together, *Knotts* and *Karo* require the suppression of evidence obtained when police use radio tracking technology, without a warrant, to learn information about places not open to visual surveillance. The Court's rulings, however, did not approve every type of warrantless electronic surveillance of movements even on the public roads.

In *Knotts*, the Court said that “[a] person traveling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another,” 460 U.S. at 281, and that the Fourth Amendment does not prohibit the police from “augmenting the sensory faculties bestowed upon them at birth with such enhancement as science and technology afforded them in this case.” *Id.* at 282.

Despite this broad language, the Court made clear that it was not giving the police a blank check to conduct warrantless, electronic tracking even as to movements on public roads. The defendant in *Knotts* argued that the warrantless use of a beeper could allow “twenty-four hour surveillance of any citizen of this country . . . without judicial knowledge or supervision.” 460 U.S. at 283. The Court responded that “if such dragnet-type law enforcement practices as respondent envisions should eventually occur, there will be time enough then to determine whether different constitutional principles may be applicable.” 460 U.S. at 284.

In *Knotts*, the Court only allowed “sense-augmenting” beeper technology that assisted police in better conducting their physical and visual surveillance of a single suspect's public

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<sup>6</sup> See, e.g., *United States v. Berry*, 300 F. Supp. 2d 366, 368 (D. Md. 2004) (“a beeper is unsophisticated, and merely emits an electronic signal that the police can monitor with a receiver. The police can determine whether they are gaining on a suspect because the strength of the signal increases as the distance between the beeper and the receiver closes”).

movements. *Knotts*, at 282. The Court had no occasion to consider whether “remote” tracking – which replaces, rather than augments, an officer’s sensory faculties – can be performed without a warrant. Accordingly, *Knotts* does not directly apply to GPS technology, which does not “augment” police officers’ own senses but provides a complete and superior substitute for physical observation. GPS technology allows “a small law enforcement team [to] deploy a dozen, a hundred, a thousand such devices and keep track of their various movements by computer,” and to do so “without human intervention--quietly, invisibly, with uncanny precision.” *United States v. Pineda-Moreno*, No. 08-30385, 2010 U.S. App. LEXIS 16708, at \*13 (9th Cir. Aug. 12, 2010) (Kozinski, J., dissenting from the denial of rehearing en banc). Simply put, GPS enables remote tracking that a police officer could never accomplish with his or her own senses.

This distinction is significant to this case. While the GPS tracking unit was on the car collecting data on the location of Foltz’s vehicle, the Fairfax Police did not actually follow Foltz’s vehicle as it made its way from place to place until the very end of their surveillance. (J.A. 266, 280.) Instead, they made use of advanced satellite and computer technology to remotely monitor Foltz’s movements across public and private areas. This was not human observation assisted by technology, but non-human technological tracking unassisted by humans in any manner after the initial installation of the GPS device.

Besides the fact that it replaces, rather than augments, the senses of police, the use of GPS in this case also differs from *Knotts* and *Karo* in that it was used to track a suspect over an extended period of time, rather than for a single journey. The Court of Appeals for the District of Columbia Circuit distinguished the tracking in *Knotts* of a suspect’s “movement from one place to another” from present-day GPS tracking of a suspect’s movements 24 hours a day as he

moves “among scores of places, thereby discovering the totality and pattern of his movements from place to place to place.” *United States v. Maynard*, No. 08-3030, 2010 U.S. App. LEXIS 16417, at \*21 (D.C. Cir. Aug. 6, 2010).<sup>7</sup> “The intrusion such monitoring makes into the subject’s private affairs stands in stark contrast to the relatively brief intrusion at issue in *Knotts*; indeed it exceeds the intrusion occasion by every police practice that the Supreme Court has deemed a search under *Katz*.” *Id.* at \*32.

The *Maynard* court reasoned that “the whole of a person’s movements ... is not actually exposed to the public because the likelihood a stranger would observe all those movements is not just remote, it is essentially nil.” *Id.* at \* 26. The court was particularly concerned that prolonged unmanned surveillance reveals far more information than what is revealed by a single short-term tailing by a police officer.

Repeated visits to a church, a gym, a bar, or a bookie tell a story not told by any single visit, as does one's not visiting any of these places over the course of a month. The sequence of a person's movements can reveal still more; a single trip to a gynecologist's office tells little about a woman, but that trip followed a few weeks later by a visit to a baby supply store tells a different story. A person who knows all of another's travels can deduce whether he is a weekly church goer, a heavy drinker, a regular at the gym, an unfaithful husband, an outpatient receiving medical treatment, an associate of particular

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<sup>7</sup> The panel in this case erroneously distinguished *Maynard* by emphasizing the duration of the warrantless GPS surveillance. *Foltz*, 57 Va.App. at 88, 698 S.E.2d at 291 n.12. While the time period in *Maynard* was longer than the four to five day surveillance of *Foltz*, the shorter duration in this case was pure happenstance, because the police made an arrest before further surveillance was necessary. There is no indication that the police intended the GPS to be for some limited period of time; rather, they plainly intended to continue the surveillance indefinitely for as long as useful information could be obtained. Even if police had meant for the surveillance to last no more than four or five days, there is no legal basis for distinguishing that amount of time from the month-long surveillance in *Maynard*. In both cases, the relevant fact is law enforcement’s continuous tracking of the defendant – as opposed to the single journey, of direct relevance to the suspected criminal activity – tracked in *Knotts* and *Karo*. The panel also suggested that because *Foltz*’s use of his work van was restricted, the use of GPS was less intrusive than in *Maynard*. But this is an impractical distinction, as there is no clear stopping point. If, for example, in addition to the uses approved by *Foltz*’s employer, he were permitted to visit the doctor’s office, or go to the grocery store, or pick up a spouse or children, it is unclear whether Fourth Amendment protections would be triggered under the panel’s analysis

individuals or political groups -- and not just one such fact about a person, but all such facts.

*Id.* at \* 40.

The next section explains why remote GPS tracking should require use of a warrant under the U.S. Supreme Court's rulings since *Knotts* and *Karo*.

### **III. THE FOURTH AMENDMENT PROHIBITS LAW ENFORCEMENT FROM CONDUCTING REMOTE GPS TRACKING WITHOUT A WARRANT**

The Fourth Amendment provides 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.” Modern Fourth Amendment analysis starts with *Katz v. United States*, 389 U.S. 347 (1967). Whether a Fourth Amendment “search” has occurred is governed by: (1) whether the government has intruded into a matter as to which an individual has exhibited an actual (subjective) expectation of privacy, in seeking to preserve something as private, and (2) whether the individual’s subjective expectation of privacy against government intrusion is one that “society is prepared to recognize as ‘reasonable.’” *Knotts*, 460 U.S. at 281, quoting *Smith v. Maryland*, 442 U.S. 735 (1979).

The Fourth Amendment protects “people, not places.” *Katz*, 389 U.S. at 351. Thus, whether investigative activities track an individual on a public road or in a private space does not determine the Fourth Amendment question. What an individual “seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.” *Id.* at 351.

As described below, Americans have a “reasonable expectation of privacy” to be free of warrantless, remote GPS monitoring. That expectation is demonstrated by constitutional doctrine developed since *Knotts*, by basic principles recognized in *Katz*, and by common sense and empirical evidence.



A. The Fourth Amendment Protects Against the Warrantless Use of Advanced Technology like GPS to Gather Detailed Information About Individuals' Movements

The Fourth Amendment imposes some limits on the “power of technology to shrink the realm of guaranteed privacy.” *Kyllo v. United States*, 533 U.S. 27, 34 (2001). *See Garcia*, 474 F.3d at 997, *cert denied*, 552 U.S. 883 (2007) (“[T]he meaning of a Fourth Amendment search must change to keep pace with the march of science”).

The U.S. Supreme Court has repeatedly recognized that a warrant is required when police use advanced technology to obtain detailed information about Americans’ activities. Remote GPS tracking is such a technology.

In *Kyllo*, the Court ruled that police could not, without a warrant, direct a thermal-imaging device from a public street at a home in order to detect heat emissions from suspected marijuana-growing activity. The Court found that the police had engaged in an unreasonable search by obtaining information about the interior of the home through “sense-enhancing” technology. 533 U.S. at 34.

The Court rejected as “quite irrelevant” the dissent’s objection that the information about heat inside the home can sometimes be perceived by observers without the use of technology. 533 U.S. at 35 n.2. “The fact that equivalent information could sometimes be obtained by other means does not make lawful the use of means that violate the Fourth Amendment.” *Id.* This suggests that the Court is not willing to approve the warrantless use of technology to obtain information about individuals simply because all or most of the same information could theoretically be obtained by physical observation from a public space.

The Court also recognized that vigilance is required to ensure that advances in police technology do not “erode the privacy guaranteed by the Fourth Amendment.” *Id.* at 34.

Drawing that line requires courts to “take the long view, from the original meaning of the Fourth Amendment forward,” and in a manner “which will conserve public interests as well as the interests and rights of individual citizens.” *Id.* at 40, citing *Carroll v. United States*, 267 U.S. 132, 149 (1925).

While *Kyllo* involved surveillance of a home – due special protection under the Fourth Amendment – the Court’s observations about the use of advanced technology were not limited to the home environment. For example, in *Katz*, the government eavesdropped on calls the defendant made from a public phone booth by attaching a listening device to the outside of the booth. Any passerby could see Katz talking in the booth, Katz intended the person he was calling to hear him, and he knowingly transmitted his voice over public wires. Despite having revealed his appearance to the public, and transmitted the contents of his communication over phone lines to the recipient of the call, and despite the fact that the agents affixed the listening device to the outside of the phone booth without trespassing on a private space, the Court held that Katz had a reasonable expectation of privacy that his communications would be free from government eavesdropping. *Id.* at 359 (“These considerations do not vanish when the search in question is transferred from the setting of a home, an office, or a hotel room to that of a telephone booth. Wherever a man may be, he is entitled to know that he will remain free from unreasonable searches and seizures.”).

In *Dow Chemical Co. v. United States*, 476 U.S. 227 (1986), the Court addressed aerial surveillance of an industrial facility, upholding the warrantless use of an airplane-mounted commercial camera to photograph the outline of an industrial plant and nearby equipment. However, the Court noted that use of “unique sensory devices” could well constitute a Fourth Amendment search. *Id.* at 238. It singled out satellite technology as just such a device:

“Surveillance of private property using highly sophisticated surveillance equipment not generally available to the public, such as satellite technology, might be constitutionally proscribed without a warrant.” *Id.*

An important factor for the Court in *Dow Chemical* was that the photographic surveillance revealed no more than an outline of the building and equipment. *Id.* at 238. It did not reveal intimate details, which would have caused constitutional concerns:

[T]he photographs here are not so revealing of intimate details as to raise constitutional concerns. Although they undoubtedly give EPA more detailed information than naked-eye views, they remain limited to an outline of the facility’s buildings and equipment. The mere fact that human vision is enhanced somewhat, at least to the degree here, does not give rise to constitutional problems.

476 U.S. at 237-38.

By contrast, GPS tracking does not “somewhat enhance,” but completely replaces naked-eye views. It reveals a plethora of intimate information about a person’s life, including his or her travel to political meetings, places of worship, news media offices, or the homes of friends or lovers.

The Fourth Amendment regulates intrusive police practices even when a defendant’s actions are partially exposed to the public. In *Bond v. United States*, 529 U.S. 334, 338-39 (2000), the Court held that a police officer’s squeezing of soft-sided luggage on a bus is a search, even though a traveler knows that members of the public may touch his baggage when putting their own luggage on the rack. Though the petitioner could have expected casual touching of his bag by members of the public, he could not have expected that someone would feel his bag in an exploratory manner. The police officer’s squeezing was therefore a search. *Id.* at 339.

The Court’s ruling in *Walter v. United States*, 447 U.S. 649 (1980), similarly recognized that law enforcement agents require a warrant if their search becomes more intrusive than a

simple, visual review of materials in plain sight. In *Walter*, the agents lawfully obtained cartons of motion pictures that had been misdelivered to, and opened by, a private party. Labels on the individual film boxes indicated that they contained obscene pictures, but the private party was unable to see the films when holding the strip up to the light. Without obtaining a warrant, agents seized the items and screened the movies on a projector. The Court held that use of the movie projector violated the Fourth Amendment. Even though the private search doctrine may allow the Government to review materials in plain view when turned over, the Government may not exceed the scope of the private search unless it has the right to make an independent search. “The private search merely frustrated that expectation [of privacy] in part. It did not simply strip the remaining unfrustrated portion of that expectation of all Fourth Amendment protection.” *Id.* at 659.

Taken together, U.S. Supreme Court precedent establishes that intrusive police techniques revealing the details of a person’s private activities constitutes a Fourth Amendment search even if those activities may be exposed to the public, especially when the techniques involve use of sophisticated technology that does not merely enhance an officer’s own senses. The police in *Kyllo* were not permitted to use a thermal-imaging device to detect heat emanations that were not visible to the human eye; the officers in *Bond* were not permitted to engage in investigatory squeezing to detect the contents of a bag not knowable by a casual traveler; the agents in *Dow Chemical* would not have been permitted to use satellites or other unique sensory devices to surveil the factory; the officers in *Katz* were prohibited from eavesdropping on the defendant’s call; and the agents in *Walter* could not without a warrant use a film projector to screen the contents of films they legally obtained from a private party. Similarly, travelers on the public road may reveal their physical location to casual observers, or to officers conducting

physical surveillance, but they retain a reasonable expectation of privacy against tracking by the unique sensory capacities of GPS satellites.<sup>8</sup>

The Fourth Amendment's warrant requirement should also be rigorously applied with respect to remote GPS tracking because it threatens the First Amendment right to associate privately with others. *NAACP v. Alabama*, 357 U.S. 449, 462 (1958). GPS tracking can reveal whether a person visits a Planned Parenthood clinic, patronizes a gay bar, or attends a meeting of an unpopular political organization. Moreover, if GPS devices are used to track multiple vehicles or persons, modern computer technology will enable the Government to correlate those data sets to reveal whose paths cross, and where and when. Far beyond photography of the mere outline of a building as in *Dow Chemical*, and even beyond the bag squeezing that the Court found unconstitutional in *Bond*, GPS tracking creates a detailed portrait of the target's friends, interests, and affiliations.<sup>9</sup>

If the police could at any moment, and without a warrant, compile a list of members in an organization by tracking one or more of them via satellite as he or she visited other members of the organization, the freedom of privacy in one's associations would be impaired just as much as through compelled disclosure of a confidential membership list (which *NAACP* held improper). The Constitution requires judicial supervision for such powerful and intrusive surveillance

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<sup>8</sup> Washington's State Supreme Court and the Court of Appeals of New York reached the same conclusion under their respective state constitutions. *People v. Jackson*, 76 P.3d 217, 223-34 (Wash. 2003) (under art. I, § 7 of Washington State Constitution, "use of a GPS device on a private involves a search and seizure"); *People v. Weaver*, 909 N.E.2d 1195, 1203 (N.Y. 2009) ("the installation and use of a GPS device to monitor an individual's whereabouts requires a warrant supported by probable cause").

<sup>9</sup> Such an abuse of technology is not the mere conjured fear of the paranoid. In Michigan, law enforcement officers concerned about the possibility of a riot, requested information from wireless providers for "information on all the cell phones that were congregating in an area where a labor-union protest was expected." Michael Isikoff, *The Snitch in Your Pocket*, NEWSWEEK, Feb. 19, 2010.

methods. The Supreme Court emphasized in *Walter* that the Fourth Amendment's warrant requirement should be "scrupulously observed" when First Amendment concerns are presented.<sup>10</sup>

In sum, the Fourth Amendment requires a warrant for GPS tracking because that technology is a unique sensory device that enables remote dragnet-type location tracking of individuals (as well as mass surveillance), far beyond what human police officers could possibly conduct. Moreover, GPS tracking can reveal intimate details of an individual's private life, as well as associations, which require that the Fourth Amendment's warrant requirement be scrupulously applied.

B. Common Sense and Empirical Evidence Demonstrate That Americans Do Not Expect Their Privacy to be Infringed by Remote Monitoring of Their Every Movement

Common sense establishes that members of the public have an expectation that their every movement will not be remotely monitored through the use of sophisticated technology. The "Big Brother" of George Orwell's *1984* would not retain its emotive power if people did not believe that they enjoy freedom from extensive, around-the-clock technological tracking. Nor would the Supreme Court in *Knotts* have identified dragnet-type surveillance as worthy of special constitutional consideration. Several state courts have convicted individuals for their non-consensual use of GPS technology to track others.<sup>11</sup> Some state have also passed legislation

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<sup>10</sup> See *Maryland v. Macon*, 472 U.S. 463, 468 (1985) ("The First Amendment imposes special constraints on searches for and seizures of presumptively protected [published] material . . . and requires that the Fourth Amendment be applied with 'scrupulous exactitude' in such circumstances.").

<sup>11</sup> E.g., *People v. Sullivan*, 53 P.3d 1181 (Colo. App. 2002) (a husband using GPS technology was guilty of harassment by stalking), *cert. denied*, 2005 Colo. LEXIS 979 (2005); *State of Delaware v. Biddle*, 2005 Del. C.P. LEXIS 49 (2005) (defendant held criminally liable for privacy violation in attaching GPS tracking device to victim's car). See John Schwartz, *This Car*

prohibiting unauthorized GPS tracking. *See Maynard*, No. 08-3030, 2010 U.S. App. LEXIS 16417 at \*33. All these factors indicate that society finds the practice of warrantless, remote electronic surveillance highly disturbing and invasive of citizens' reasonable expectations of privacy.

Furthermore, there is empirical evidence that the public has a strong expectation of privacy against location tracking. One study by researchers at University of California at Berkeley Law School examined a survey that queried respondents about location tracking using information provided from cell-phone towers. J. King & C. Hoofnagle, *Research Report: A Supermajority of Californians Supports Limits on Law Enforcement Access to Cell Phone Location Information*, available at <http://ssrn.com/abstract=1137988> (Apr. 18, 2008). The survey asked: "would you favor a law that required the police to convince a judge that a crime has been committed before obtaining location information from the cell phone company?" Seventy two percent of respondents supported or strongly supported this requirement. *Id.* at 8.

Similarly, in a study by law professor Christopher Slobogin, respondents rated the relative intrusiveness of different surveillance practices. *Public Privacy: Camera Surveillance Of Public Places And The Right To Anonymity*, 72 U. Miss. L. Rev. 213 (2002). The respondents rated the intrusiveness of a police officer noticeably following an individual down a public street as a 50 on a scale from one to 100. Camera surveillance of a public street where the tapes are destroyed after a four-day period received a slightly higher rating of 53. However, that same surveillance, where the tapes are not destroyed, received a very high rating of 73, higher than pat-downs or detecting items through clothes, *id.*, Table 1, at 268, which are all

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*Can Talk. What is Says May Cause Concern*, New York Times, Dec. 29, 2003, at C1 (defendant convicted in Wisconsin for stalking his girlfriend using a secretly installed GPS device).

investigative activities that are searches regulated by the Fourth Amendment. *See United States v. Askew*, 529 F.3d 1119 (D.C. Cir. 2008) (pat down requires reasonable suspicion). This survey confirms that Americans have an expectation that they will not be subjected to surveillance technology, like GPS, that can be used to remotely and comprehensively track and record movements over time.<sup>12</sup>

In sum, warrantless, remote GPS tracking trespasses on individuals' reasonable expectation not to be tracked electronically, twenty-four hours a day, for extensive periods of time.

### **CONCLUSION**

For the foregoing reasons, the Court should rule that the warrantless use of a GPS tracking device by the Fairfax Police to remotely record and monitor the movements of Appellant Foltz violated the Fourth Amendment.

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<sup>12</sup> While not a scientific sampling, an online poll conducted by the Washington Post showed that 60% of 2,954 responders felt that “[t]he growing use of GPS technology by police departments to track criminal suspects marks [a] troubling trend.” *See* <http://www.washingtonpost.com/wp-dyn/content/article/2008/08/12/AR2008081203275.html?hpid=topnews> (visited Oct. 5, 2010).



Respectfully submitted,

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**CERTIFICATE OF COMPLIANCE WITH RULE 5A:19(f)**

I, Rebecca K. Glenberg, do hereby certify that I have complied with Rule 5A:19(f) by filing seven copies of the foregoing brief with the Court of Appeals, and mailing one copy of the same by United States mail, postage pre-paid, to each of the following counsel of record:

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