

GPS “Bullets” and the Fourth Amendment

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For as long as there have been cars, there have been car chases. A car chase connotes a dangerous, high-speed dash through city streets. Fleeing from justice, the criminal finds himself weaving between cars and driving onto sidewalks to evade his pursuers. In the popular imagination, a car chase entails the possibility of danger and injury to the public. This view is confirmed by a number of studies. The National Highway Traffic Safety Administration found that of the 314 people killed in car chases in 1998, 36% were innocent bystanders.^[1] One study estimated that police pursuits caused “14,000 injuries and 700 pursuit deaths each year.”^[2] These tragic consequences belie the fact that the majority of these pursuits begin as traffic stops.^[3] Whatever reason a particular suspect has for fleeing, it is clear that it is a dangerous choice.

Law enforcement’s traditional approach to flight has only exacerbated the potential for danger. Many officers believe that they need to catch fleeing suspects “if it’s the last thing (they’ll) ever do.”^[4] With an ever-proliferating number of new technologies that law enforcement can employ against suspects,^[5] this cavalier attitude no longer seems necessary. But courts have refused to limit officers’ discretion as to how to end a chase. As recently as 2007, the Supreme Court has held that an officer may use deadly force to stop a suspect fleeing by car.^[6]

In 2006, Starchase LLC., a small Virginia-based startup, began pre-commercial testing of Starchase, “a real-time tagging and tracking tool to reduce dangerous high-speed pursuits.”^[7] There are two technologies at work in the Starchase system: a compressed-air launcher and a GPS Bullet—a small cylindrical tube with a GPS tag.^[8] The launcher is mounted into the front-grill of a police cruiser. When an officer is chasing a fleeing suspect, he can load the GPS Bullet into the launcher and fire it at the suspect’s car. The bullet attaches to the car. In principle, officers may cease pursuit and track the car. A suspect will then voluntarily reduce his speed in order to blend in. Once he does, officers converge on his position without exposing the public to harm. Starchase is a more sophisticated version of the helicopter flyover, with one basic advantage: the suspect does not know he is being tracked.

Although Starchase’s efficacy remains speculative, the technology has come about at a fairly unique point in constitutional history. The judiciary has so far struggled to apply traditional Fourth Amendment doctrines to new technologies like GPS tracking. The Supreme Court’s most recent attempt was in *United States v. Jones*, where it held that the placement of a GPS tracker on a suspect’s vehicle constituted a search under the Fourth Amendment.^[9] Since Starchase is a GPS tracker that attaches to a vehicle, the *Jones* test applies. The purpose of this Article is to analyze Starchase’s constitutionality by considering

how the general principles of *Jones* and its progeny will apply in real life situations. I conclude that while it may be unconstitutional in normal circumstances to deploy Starchase without a warrant, the exigencies of a police pursuit justify its use. It is, therefore, constitutional.

I. Starchase, Searches, and *United States v. Jones*

Many had hoped the Court's decision in *United States v. Jones* would settle the question of whether the government conducts a search under the Fourth Amendment when it tracks a vehicle with a GPS device. At oral argument, the government contended that an individual has no reasonable expectation of privacy when he or she is in public. A GPS device tracking public movements does not undermine any protected privacy interest—thus, it is not a search within the meaning of the Fourth Amendment. One case relating to beeper tracking supports this interpretation. In *Knotts v. United States*, the Supreme Court stated, “A person travelling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements.”^[10] A person conveys his movements to the public when he drives on public streets and highways. For the Court, “[t]he fact that the officers in this case relied . . . on the use of the beeper to signal the presence of [the suspect's] automobile to the police” does not change the analysis.^[11] Since beeper tracking is not a search under the Fourth Amendment, the government argued that GPS tracking should not be considered a search.

Privacy advocates claimed that *Knotts* did not control the analysis. Although *Knotts* permitted the government to track a person's *public* movements, later cases barred law enforcement from using a beeper to track *private* movements. In *United States v. Karo*, the Supreme Court held that the government could not use a beeper to track the movements of a person inside his or her home without obtaining a warrant.^[12] “Indiscriminate monitoring of property that has been withdrawn from public view would present far too serious a threat to privacy interests in the home to escape entirely some sort of Fourth Amendment oversight.”^[13] When the government seeks certain kinds of private information via beeper tracking, it is a search under the Fourth Amendment.

The *Knotts* Court also expressly disavowed that its holding would permit “twenty-four hour surveillance of any citizen of this country . . . without judicial knowledge or supervision.”^[14] Rather, the Court stated, “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.”^[15] For advocates, long-term GPS tracking is the exact circumstance that requires different constitutional principles. GPS tracking uncovers far more than a person's public movements. As Justice Sotomayor wrote in *Jones*, “GPS monitoring generates a precise, comprehensive record of a person's public movements that reflects a wealth of detail about her familial, political, professional, religious, and sexual

associations.”^[16] Under this “mosaic theory” of the Fourth Amendment, the otherwise constitutional monitoring of public movements becomes unconstitutional when, in its totality, it reveals private information about the person.^[17]

The majority opinion in *Jones* ultimately found the installation of a GPS tracker on a vehicle is a search under the Fourth Amendment, though it applied a seemingly anachronistic “trespass” test to reach its conclusion. This test had fallen into disuse since *Katz*, but the Court made clear that “the *Katz* reasonable-expectation-of-privacy test has been *added to*, not *substituted for*, the common-law trespassory test.”^[18] Under the latter test, a court must determine whether the government has physically intruded upon a protected area.^[19] A vehicle is an “effect,” which is one of the areas protected by the Fourth Amendment.^[20] In the Court’s view, the government intruded on the vehicle by attaching a GPS device to the undercarriage of the defendant’s Jeep.^[21] This amounted to a search under the Fourth Amendment because “[t]he Government physically occupied private property for the purpose of obtaining information.”^[22]

The facts in *Jones* would be similar to the kinds of fact scenarios that would arise with the use of Starchase. An officer using Starchase would launch the GPS Bullet at a suspect’s car. The GPS Bullet would attach to the back of the vehicle, allowing police to monitor the car’s movements.^[23] The slight distinction from *Jones* is that *Jones* concerned the attachment of a device to the undercarriage of a vehicle.^[24] But where the attachment on the vehicle occurs is ultimately irrelevant; what matters is whether there has been a physical intrusion by law enforcement onto private property. And the back of a car is no less the private property of a suspect than the undercarriage of the car. The attachment of the GPS Bullet to the back of a car intrudes on the driver’s private property in the same way the device in *Jones* did to the defendant’s Jeep. An officer thus conducts a search when he deploys the Bullet.

II. Starchase and the Warrant Requirement

The *Jones* court expressly refused to consider whether police must obtain a warrant before attaching a GPS device to a vehicle.^[25] In general, to conduct a lawful search under the Fourth Amendment, an officer must first obtain a warrant.^[26] There are a myriad of exceptions to the warrant requirement, however, including an exception for searches of automobiles.^[27] In lieu of a warrant, police must have probable cause to believe there is evidence of a crime inside the vehicle.^[28] The Supreme Court has justified the exception based on the automobile’s inherent mobility, which renders it impracticable to secure a warrant.^[29] Furthermore, citizens have a reduced expectation of privacy in their vehicles than in other areas, like their homes.^[30] This second justification is inapplicable to a search based on *Jones*, where expectations of privacy are irrelevant.

The Third Circuit is the first federal circuit court of appeals to decide the issue left open by *Jones*.^[31] In holding that police are required to obtain a warrant before attaching a GPS device to a vehicle, the panel noted, “Attaching and monitoring a GPS tracker is different [from a search of a car]: It creates a continuous police presence for the purpose of discovering evidence that may come into existence and/or be placed within the vehicle at some point in the future.”^[32] The court distinguished a normal automobile search from a GPS search on the basis of the temporality of the search.^[33] Officers who have probable cause to believe evidence is in a car at that moment in time are permitted to search it without a warrant; but police would not be justified in acting on that probable cause weeks or months later.^[34] Officers who attach a GPS device do so to secure evidence that may exist in the future. It is a far more pervasive search than the nominal investigation of a car’s interior. And the officers’ decisions to search with a GPS device are likely more deliberative than the kind of decisions officers make on the sides of streets and highways. A search by GPS device does not strongly implicate the considerations underlying the automobile exception.

Assuming the Third Circuit is correct, a police officer would violate the Fourth Amendment by using Starchase without first obtaining a warrant. Unlike most GPS devices, however, the GPS Bullet is used in a situation that permits no time for thoughtful deliberation. A warrant requirement would defeat the very purpose of Starchase—if officers had the time to get a warrant during a police pursuit, they would not need a GPS device to track the suspect. This is the reason why Starchase falls within the exigent-circumstances exception to the Fourth Amendment. Officers may engage in a search that would otherwise violate the Fourth Amendment when there is a sufficient exigency warranting the search.^[35] For example, officers may engage in a warrantless search to render emergency aid, to pursue fleeing suspects, or to prevent the destruction of evidence.^[36] A police pursuit by car is a paradigmatic case of an exigent circumstance justifying a warrantless search.^[37] But, it should be noted that an otherwise valid use of Starchase might become unconstitutional depending on the length of the tracking. If police were to end pursuit and then track the suspect for hours or days after the chase, the search would no longer fall into the exigent-circumstance exception.^[38]

As its website states, Starchase is used to “reduce dangerous high-speed pursuits.”^[39] The exigency of a police pursuit would excuse the otherwise unlawful search with the GPS Bullet. It is ultimately a reasonable application of the exigent circumstance exception, and the Supreme Court has noted, “warrantless searches are allowed when the circumstances make it reasonable, within the meaning of the Fourth Amendment, to dispense with the warrant requirement.”^[40] In addition, it would be asymmetrical to prohibit GPS searches during a police pursuit while permitting officers to use deadly force against the suspect. The exemption of Starchase from the warrant requirement makes sense as a policy matter because it offers police a safe alternative to end the chase.

Conclusion

United States v. Jones upended fifty years of settled constitutional doctrine. But it did so out of necessity. Technology has pervaded our lives and changed the way we interact with one another. It has also changed the way police interact with citizens. Starchase exemplifies this new, tech-centered approach to law enforcement. Many privacy advocates criticize *Jones* as inadequate to protect privacy rights in the twenty-first century.^[41] But as applied to Starchase, *Jones* sufficiently balances the privacy rights of citizens with the reasonable needs of law enforcement.

Installation of a GPS device is undoubtedly a significant physical intrusion on a citizen's private property. But in the limited circumstances in which Starchase is used, the governmental interests outweigh the suspect's privacy rights. As noted above, car chases put the public at serious risk of injury or death. The government has a significant interest in ending a chase safely and quickly. In contrast, the intrusion on the suspect's property is limited in time and extent. The search lasts only as long as the chase does, and the information gathered is only used for that purpose. In the end, Starchase does not evoke the specter of Orwellian dystopia as other kinds of GPS devices do.

[1]. John Hill, *High-speed Police Pursuits: Dangers, Dynamics, and Risk Reduction*, 71 FBI L. Enforcement Bull., July 1, 2002, at 14, 15–16, available at <http://leb.fbi.gov/2002-pdfs/leb-july-2002>.

[2]. Ad Hoc Committee on Law Enforcement Pursuits, *Law Enforcement Pursuits in Georgia: Review and Recommendations 3* (2006) [hereinafter *Pursuits in Georgia*], <http://www.gachiefs.com/pdfs/Pursuit%20Committee%20Recommendations%20Report.pdf>.

[3]. David P. Schultz, et al., *Evidence-Based Decisions on Police Pursuits: The Officer's Perspective*, FBI L. Enforcement Bull., Mar. 2010, at 1, 1, available at <http://www.fbi.gov/stats-services/publications/law-enforcement-bulletin/2010-pdfs/march10leb>.

[4]. Hill, *supra* note 1, at 16.

[5]. See Ric Simmons, *Why 2007 Is Not Like 1984: A Broader Perspective on Technology's Effect on Privacy and Fourth Amendment Jurisprudence*, 97 J. Crim. L. & Criminology 531, 533–34 (2007).

[6]. *Scott v. Harris*, 550 U.S. 372, 386 (2007).

[7]. *Frequently Asked Questions*, Starchase, <http://www.starchase.com/how-it-workss/faq.html> (last visited Apr. 10, 2014).

[8]. *Id.*

[9]. *United States v. Jones*, 132 S. Ct. 945, 949 (2012).

- [10]. *United States v. Knotts*, 460 U.S. 276, 281 (1983).
- [11]. *Id.* at 282.
- [12]. *United States v. Karo*, 468 U.S. 705, 714 (1984).
- [13]. *Id.* at 716.
- [14]. *Knotts*, 460 U.S. at 283.
- [15]. *Id.* at 284.
- [16]. *Jones*, 132 S. Ct. at 955 (Sotomayor, J., concurring).
- [17]. See generally Orin S. Kerr, *The Mosaic Theory of the Fourth Amendment*, 111 Mich. L. Rev. 311 (2012) (discussing how the mosaic theory would fundamentally change Fourth Amendment analyses).
- [18]. *Jones*, 132 S. Ct. at 955.
- [19]. See *Florida v. Jardines*, 133 S. Ct. 1409, 1414 (2013) (“When ‘the Government obtains information by physically intruding’ on persons, houses, papers, or effects, ‘a “search” . . . “undoubtedly occurred.””) (quoting *United States v. Jones*, 132 S. Ct. 945, 954 (2012) (Sotomayor, J., concurring)).
- [20]. *Jones*, 132 S. Ct. at 949.
- [21]. *Id.*
- [22]. *Id.*
- [23]. See *Frequently Asked Questions*, Starchase, <http://www.starchase.com/how-it-workss/faq.html> (last visited Apr. 10, 2014).
- [24]. *Jones*, 132 S. Ct. at 947.
- [25]. *Id.* at 953–4.
- [26]. *Carroll v. United States*, 267 U.S. 132, 144 (1925).
- [27]. *Id.* at 153.
- [28]. *United States v. Katzin*, 732 F.3d 187, 202 (3d Cir. 2013).
- [29]. See *Carroll*, 267 U.S. at 153.
- [30]. *Cardwell v. Lewis*, 417 U.S. 583, 590 (1974) (“A car has little capacity for escaping public scrutiny. It travels public thoroughfares where its occupants and its contents are in plain view.”).
- [31]. *Katzin*, 732 F.3d at 197 n.2.
- [32]. *Id.* at 203.

[33]. *Id.*

[34]. *Id.* at 204–05.

[35]. *United States v. Santana*, 427 U.S. 38, 42–43 (1976).

[36]. *Kentucky v. King*, 131 S. Ct. 1849, 1856 (2011).

[37]. *Missouri v. McNeely*, 133 S. Ct. 1552, 1558 (2013) (stating that the “hot pursuit” of a fleeing suspect” is an exigency justifying a warrantless search).

[38]. *Terry v. Ohio*, 392 U.S. 1, 25–26 (1968) (holding that a warrantless search must be “strictly circumscribed by the exigencies which justify its initiation”); see, e.g., *Mincey v. Arizona*, 437 U.S. 385, 393 (1978) (holding that no exigent circumstances existed to justify warrantless four-day search of defendant’s apartment where homicide took place when defendant was already in custody).

[39]. *Frequently Asked Questions*, Starchase, <http://www.starchase.com/how-it-workss/faq.html> (last visited Apr. 10, 2014).

[40]. *King*, 131 S. Ct. at 1858.

[41]. John A. Stratford, *Adventures on the Autobahn and Infobahn: United States v. Jones, Mandatory Data Retention, and a More Reasonable “Reasonable Expectation of Privacy,”* 103 J. Crim. L. & Criminology 985, 997 (2013) (“[P]rivacy advocates continue to argue that GPS technology . . . provides the government another ‘irresistible temptation’ to undertake unreasonably broad monitoring of individuals.”).