But what should the constitutional test be for GPS tracking and similar investigative techniques that do not involve a physical trespass? Although the Justices repeatedly posed that question during oral argument in United States v. Jones, they got no satisfactory answer from the lawyers and provided none in their own subsequent opinions. The Court did not adopt the government’s view that the Constitution places no constraints on GPS tracking, no matter how long it proceeds or how precisely it tracks a target’s movements. The Justices also rejected the defense lawyer’s suggestion that monitoring of more than a single trip in a single day of a single person would require a warrant, no doubt recognizing that such a rule would be difficult to apply (how will agents know in advance whether their monitoring will exceed a single trip?) and difficult to enforce (without judicial oversight, what would prevent an agent from failing to get a warrant for the second day or second person?). Justice Alito’s concurring opinion would establish no more than that prolonged surveillance to investigate most crimes counts as a search under the Fourth Amendment. In addition to not being the majority’s rule, that pronouncement leaves a lot unsaid; importantly it does not cover short-term surveillance nor explicitly require a warrant based on probable cause. The Jones opinions left the Justices without what they had requested at oral argument: a test that separates in a principled and defensible manner those investigatory techniques that require the protections of the warrant requirement from those that do not.

1 132 S.Ct. 945 (2012).
Historically, the reasonable expectation of privacy test has furnished the dividing line, but it too has raised as many questions as it has answered. In the 1967 *Katz* case,\(^2\) the Supreme Court required a warrant when law enforcement agents listened in on telephone calls. The *Katz* Court explained that the “vital role that the public telephone has come to play in private communication” requires finding people “entitled to assume” that the words they speak on the phone will not be “broadcast to the world.” Appellate courts have recently extended that reasoning to text messages (*Quon*\(^3\) – 9\(^{\text{th}}\) Circuit) and stored emails (*Warshak*\(^4\) – 6\(^{\text{th}}\) Circuit). But can an approach that has protected three types of private communications stretch to accommodate movements in our cars? What do people expect when it comes to rapidly evolving technology like GPS tracking? And what should they be entitled to expect?

The Justices seem uncomfortable using the entirely normative “vital role” inquiry to find GPS tracking subject to the Fourth Amendment. Relatedly, the Court in *Quon* expressed uneasiness about elaborating on the Fourth Amendment implications of new technology until its role in society had become clear. Text messaging technology seems relatively settled as compared to newly emerging GPS devices to track car movements. GPS tracking technology has evolved quickly, with increasingly inexpensive devices that can send detailed information about precise locations every few seconds. Moreover, as several of the Justices recognized, the rule formulated for GPS tracking may also apply to other

\(^3\) 529 F. 3d 892 (9\(^{\text{th}}\) Cir. 2008), reversed and remanded, 130 S.Ct. 2619 (2010).
\(^4\) 631 F. 3d 266 (6\(^{\text{th}}\) Cir. 2010).
investigatory methods that indicate location, such as by tracking location-aware services on smart phones, tablets and laptops.

A deeper look at the precedents reveals a constitutionally-based answer to questions about GPS tracking and related emerging technologies that offers more than a purely normative inquiry. In fact, the Supreme Court and federal appellate courts have identified four features of a law enforcement investigatory method that make it most in need of heightened Fourth Amendment protections. The Court used the four factor approach in the Berger case (though it did not call it that), when, six months prior to Katz, the Court struck down a New York state eavesdropping statute because it provided inadequate procedural protections. Then, in the mid-80’s to early nineties, seven federal court of appeals identified silent video surveillance (in places where targets have a reasonable expectation of privacy), as requiring the same heightened Fourth Amendment protections as in Berger. Like wiretapping and eavesdropping, video surveillance shares the four features that raise the risk of law enforcement abuse to its highest and require the most extensive judicial oversight to protect Fourth Amendment rights.

In other words, the courts have already identified a four factor test that identifies when a surveillance method intrudes on Fourth Amendment rights and requires heightened judicial oversight to protect against abuse. Besides being based in precedent, the four factor test makes sense. When the target is unaware of surveillance (it is hidden), the risk increases that law enforcement agents will initiate monitoring with insufficient justification or continue it when it is no longer

---

5 388 U.S. 41 (1967).
Intrusive surveillance affords law enforcement agents access to things people consider private, such as their phone calls and the pattern of their movements. Continuous surveillance represents a series of intrusions, each of which should meet the required level of justification and may not without adequate judicial oversight. Indiscriminate surveillance gathers up more information than necessary to establish guilt, and thereby produces unjustified intrusions. When a surveillance method shares these four features, then, by precedent and common sense it requires at least the judicial oversight included in the probable cause warrant requirement to rein it in to levels acceptable under the Fourth Amendment.\textsuperscript{7}

Unlike other tests, the four factor test does not depend on the facts of an individual case and does not present the same difficulties in application. It identifies which surveillance methods require extensive judicial oversight rather than which individual investigations do. As just discussed, the Court has identified wiretapping and eavesdropping as surveillance methods that always require substantial judicial oversight. Silent video surveillance also qualifies when it records in an area subject to a reasonable expectation of privacy. I have argued in my scholarship and amicus briefs that law enforcement acquisition of cell phone location data and stored e-mail also satisfy the four factor test. The Sixth Circuit has agreed that acquisition of stored email constitutes a search (\textit{Warshak}), and

\textsuperscript{7} Investigatory techniques that do not meet the four factor test could still be protected under a reasonable expectation of privacy test; the four factor test supplements the reasonable expectation of privacy test rather than replacing it.
lowers courts in Texas have agreed that acquisition of stored cell site location does as well.⁸

Courts should use the four-factor test to bring GPS-tracking under the highest level of judicial supervision. Rather than recording a single moment in time, which would not satisfy the four factor test, GPS tracking for any period of time (prolonged or not) records an individual’s movements and indicates where and how long that individual stays still. As does similar technology used to track location (i.e., without physical trespass) (e.g., cell site location data acquisition or the drone in the hypo) GPS tracking satisfies the four factor test because it is hidden from the target (devices identified by the targets tend to be removed), intrusive (as the D.C. Circuit court colorfully explained in describing the mosaic it reveals), continuous (GPS tracking’s usefulness inheres in its ability to track over time), and indiscriminate (even criminal’s use their cars to engage in non-culpable conduct).

Because GPS tracking and related technologies that track movements satisfy the four factor test, law enforcement agents should obtain a warrant based on probable cause before using such techniques. To rein in the power of executive branch investigators, the target of the investigation should receive notice (after the fact) and should be entitled to a remedy (suppression and damages) in cases of abuse. Ideally, GPS and related techniques should be used only after other less intrusive techniques (such as physical observation) have failed and agents should

---

⁸ The Fifth Circuit is currently considering the Fourth Amendment status of cell site location data, and I have submitted an amicus brief in support of finding protection based on the four factor test. Full disclosure: a few lower courts have cited my four factor test, but none have adopted it.
minimize the acquisition of non-incriminating information. The requirements come directly from the precedent cases (like Berger) involving the four factor test.

By providing meaningfully clear answers to the questions the Jones case raises, and by doing so in a way that reflects precedents concerned with preserving Fourth Amendment rights in the face of new technology, the four factor test is just the answer Justices sought in Jones and did not find. It is also just the answer we need.