

United States Senate Committee on the Judiciary

“The Future of Drones In America: Law Enforcement and Privacy Considerations”

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WRITTEN STATEMENT OF RYAN CALO
ASSISTANT PROFESSOR
UNIVERSITY OF WASHINGTON SCHOOL OF LAW

Thank you Chairman Leahy, ranking Member Grassley, and Members of the Committee for this opportunity to testify today.

My name is Ryan Calo and I am a law professor at the University of Washington. I am also the former director for privacy and robotics at the Stanford Law School Center for Internet and Society.

Last year, Congress charged the Federal Aviation Administration (FAA) with accelerating the integration of unmanned aircraft systems—known colloquially as “drones”—into domestic airspace.¹ Drones are not new; we deployed them for target practice throughout World War II.² What is new is the prospect of their widespread use over American cities and towns.

Drones have a lot of people worried about privacy—and for good reason. Drones drive down the cost of aerial surveillance to worrisome levels. Unlike fixed cameras, drones need not rely on public infrastructure or private partnerships. And they can be equipped not only with video cameras and microphones, but also the capability to sense heat patterns, chemical signatures, or the presence of a concealed firearm.

American privacy law, meanwhile, places few limits on aerial surveillance. We enjoy next to no reasonable expectation of privacy in public, or from a public vantage like the nation’s airways. The Supreme Court has made it clear through a series of decisions in the nineteen-eighties that there is no search for Fourth Amendment purposes if an airplane or helicopter permits officers to peer into your backyard.³ I see no reason why these precedents would not extend readily to drones.

¹ FAA Modernization and Reform Act of 2012, P.L. 112-95, 126 Stat. 11.

² LAWRENCE NEWCOME, UNMANNED AVIATION: A BRIEF HISTORY OF UNMANNED AERIAL VEHICLES 48 (2004).

³ See *Florida v. Riley*, 488 U.S. 445 (1989); *California v. Ciraolo*, 476 U.S. 207 (1986); *Dow Chem. Co. v. United States*, 476 U.S. 227 (1986).

Drones may also follow people around from place to place, even after the recent decision of *United States v. Jones*.⁴ *Jones* held that affixing a global positioning device to a vehicle for the purpose of tracking the location of the occupant is a search within the meaning of the Fourth Amendment. But it is far from certain how *Jones* would apply to surveillance by a drone, which need not be affixed to anything.

Citizens have no reasonable expectation of privacy in contraband. Dogs can sniff luggage or cars without triggering the Fourth Amendment because, courts assume, dogs only alert in the presence of narcotics or other illegal possessions.⁵ A logical extension of this precedent, it seems to me, is that drones could fly around testing the air for drug particles and report back suspicious activity to law enforcement without ever implicating the Constitution.⁶

I have heard it suggested that the Supreme Court's decision in *Kyllo v. United States* involving thermal imaging limits how drones might be used for surveillance. *Kyllo* holds, in essence, that officers need probable cause to peer into the home using technology that is unavailable to the general public.⁷ Setting aside whether drones would even draw a *Kyllo* analysis, the technology will indeed be available to the general public as soon as 2015 when the FAA relaxes its ban on commercial use.

The subject of today's hearing is drones and law enforcement. I pause only to note that, if anything, there are even fewer limits on the use of drones by individuals, corporations, or the press. The common law privacy torts such as intrusion upon seclusion tend to track the constitutional doctrine that there should be no expectation of privacy in public.⁸ Some might go further and argue that the press (at least) has a free speech interest in using technology to cover newsworthy events.⁹

This combination of cheap, powerful surveillance and inadequate privacy law has understandably resulted in a backlash against drones, one further compounded by our association of the technology with the theatre of war.

⁴ 132 S.Ct. 945 (2012).

⁵ See *Illinois v. Caballes*, 543 U.S. 405 (2005); *United States v. Place*, 462 U.S. 696, 707 (1983) ("A 'canine sniff' by a well-trained narcotics detection dog, however, does not ... expose noncontraband items that otherwise would remain hidden from public view.").

⁶ See Ryan Calo, *The Drone as Privacy Catalyst*, 64 STAN. L. REV. ONLINE 29, 31 (2011).

⁷ *Kyllo v. United States*, 533 U.S. 27 (2001).

⁸ *E.g.*, RESTATEMENT (SECOND) OF TORTS § 652B. *But see* *Daily Democrat v. Graham*, 276 Ala. 380, 381 (1964) (plaintiff—whose dress had been blown up by the wind in a public place—allowed to pursue privacy tort against defendant photographer).

⁹ *Cf.* *Glik v. Cunniffe*, 655 F.3d 78 (1st Cir. 2011) (holding that a citizen has a First Amendment right to videotape police during course of his arrest). Thank you to Margot Kaminiski for this pointer.

This is in many ways a shame. Drones have the potential to be a transformative technology, helping governments, empowering civilians, and fostering innovation in countless ways. As the Congressional Research Service recently stated in a report, “the extent of [drone’s] potential domestic application is bound only by human ingenuity.”¹⁰ Drones can be lifesavers in the hands of police and firefighters and flying smart phones in the hands of consumers and private industry.

I am very concerned that we will not realize the potential of this technology because we have been so remiss in addressing the legitimate privacy concerns that attend it. There are several ways the government could change this picture. Ideally, we would take the opportunity to finally drag privacy law into the twenty-first century by reexamining our outmoded doctrines. This is a slow process, but courts do seem to be making strides in recent years.

Several federal bills have proposed placing limits on drones. I think we should be very careful here for a few reasons. First, the problem is broader than unmanned aircraft systems: flight is not a prerequisite for threatening civil liberties. There are robots that climb the side of buildings, for instance, that would not be covered under the draft bills I’ve read. Second, there is likely some benefit to allowing individual states to adopt different approaches to drones and seeing what works and what does not.

There is one approach that I believe could act as stop-gap, and that is for Congress to instruct the FAA to take privacy into account as part of its mandate to integrate drones into domestic airspace.¹¹ The agency has been largely silent on the issue of privacy—only recently did members of the privacy community receive a letter from the FAA asking for input in connection with the selection of drone testing centers.

But the FAA could require public and eventually private applicants to furnish the agency with a plan to minimize their impact on privacy as part of the application. The agency could then consider the plan, and even withdraw the license for those who flout it. This might help allay reasonable concerns over drones in the short term while continuing to permit their innovative and lifesaving uses.

Thank you again for the opportunity to speak today. I look forward to your questions.

¹⁰ Allison Dolan and Richard Thompson II, *Integration of Drones into Domestic Airspace: Selected Legal Issues*, CRS Report for Congress, R42940 (Jan. 30, 2013).

¹¹ Representative Ed Markey made this suggestion in the Drone Aircraft Privacy and Transparency Act of 2012 (H.R. 6766) and the Electronic Privacy Information Center has formally petitioned the FAA to adopt privacy safeguards.