

DRONES AT HOME: THE DEBATE OVER UNMANNED AIRCRAFT IN STATE LEGISLATURES

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INTRODUCTION: DEAR AMERICA, THE GOVERNMENT HAS JUST
TAGGED YOU IN A PHOTO!

I leave my apartment each morning for work around 7:30. I do not make any special effort to document my trip. Yet thanks to a government surveillance infrastructure that is growing every year, people like me create extensive records of our travels, even during trips as mundane as a morning commute.¹

Some of this infrastructure takes the form of cameras recording video.² On the corner that I pass every day, there is a convenience store that may own security cameras watching the sidewalk near the entrance. I would appear in the store's video logs nearly every day. Cameras in the train station and on other storefronts record me all the way to the office. While cameras such as these are owned by private companies or individuals, law enforcement can seek access to recordings from privately owned cameras.³ Police access is so routine that a New York state legislator proposed requiring all private entities register their security cameras with the police department, to streamline the process for law enforcement to acquire footage.⁴ There is a deep legal tradition distinguishing private surveillance from government action,⁵ but government access to pervasive private

¹ See, e.g., Heather Kelly, *After Boston: The Pros and Cons of Surveillance Cameras*, CNN (Apr. 26, 2013, 7:03 PM), <http://www.cnn.com/2013/04/26/tech/innovation/security-cameras-boston-bombings/>.

² *Id.*

³ See, e.g., Dave Maass, *Going to San Diego Comic-Con? Put On Your Mask for the Surveillance Camera Network*, ELEC. FRONTIER FOUND. (July 22, 2014), <https://www.eff.org/deeplinks/2014/07/operation-secure-san-diego> (discussing law enforcement access to private cameras in San Diego).

⁴ S.B. 945, 236th Ann. Legis. Sess. (N.Y. 2013), *available at* <http://open.nysenate.gov/legislation/bill/S945-2013> (“The purpose of the registry is to give the NYPD an inventory of all private security cameras looking upon public spaces in the city. . . . If there is a crime in the vicinity of one or more of the cameras, the NYPD will be able to access the registry for the location and owner/operator of the camera.”).

⁵ See *United States v. Jacobson*, 466 U.S. 109, 113–14 (1984) (“[The Supreme Court] has also consistently construed [Fourth Amendment] protection as proscribing only governmental action; it is wholly inapplicable ‘to a search or a seizure, even an unreasonable one, effected by a private individual not acting as an agent of the Government or with the participation or knowledge of any government official.’”) (quoting *Walter v. United States*, 447 U.S. 649, 662 (1980) (Blackmun, J., dissenting)); *Burdeau v. McDowell*, 256 U.S. 465, 475 (1921) (“[The Fourth Amendment’s] origin and history clearly show that it was intended as a restraint upon the activities of sovereign authority, and was not intended to be a limitation upon other than government agencies [.]”).

surveillance erodes the distinction.

My cell phone documents my entire trip to the office. Mobile phones, even those without GPS, automatically register with at least one nearby cell phone tower.⁶ This process enables the cell phone to connect to the network to send and receive calls.⁷ However, since cellular service providers know the locations of their towers, as soon as a phone registers with the nearest tower, the service provider has a record of where the cell phone—and probably its owner—are.⁸ Over time, the records create a precise map of a person's travels.⁹ By tracking multiple phones, it is also possible to make educated guesses about whom a target was traveling with, and for how long; an NSA program using this technique is called "CO-TRAVELER."¹⁰ Law enforcement agencies around the country seek records from cell service providers to track targets.¹¹ An ACLU study found that "[t]he overwhelming majority of the roughly 250 law enforcement agencies that provided documents engaged in at least some cell phone tracking[.]"¹² They are also increasingly using a technology called a "cell site simulator," a device that is not a cell tower but which tricks nearby phones into registering with it and divulging information about the phone and the person who owns it.¹³ Since

⁶ See *Cell Phone Location Tracking Public Records Request*, ACLU, <https://www.aclu.org/protecting-civil-liberties-digital-age/cell-phone-location-tracking-public-records-request> (last visited Oct. 18, 2014) ("All cell phones register their location with cell phone networks several times a minute, and this function cannot be turned off while the phone is getting a wireless signal.")

⁷ Hanni Fakhoury, *Mixed Signals in Cell Phone Location Decisions*, JURIST (Sept. 18, 2013, 12:00 PM), <http://jurist.org/hotline/2013/09/hanni-fakhoury-cell-phone.php>.

⁸ *Id.*

⁹ See, e.g., *Tell-all Telephone*, ZEIT ONLINE, <http://www.zeit.de/datenschutz/malte-spitz-data-retention> (last visited Oct. 18, 2014). A German politician acquired the location records from his cell phone for a six month period in 2009. He publicly released the information to demonstrate how precise cell phone location information can be. Zeit Online published an interactive visualization of the politician's movements. *Id.*

¹⁰ April Glaser & Kurt Opsahl, *Meet CO-TRAVELER: The NSA's Cell Phone Location Tracking Program*, ELEC. FRONTIER FOUND. (Dec. 5, 2013), <https://www.eff.org/deeplinks/2013/12/meet-co-traveler-nsas-cell-phone-location-tracking-program>.

¹¹ David Kravets, *Mobile-Phone Surveillance by Police Targets Millions Annually*, WIRED (July 9, 2012, 11:48 AM), <http://www.wired.com/2012/07/massive-phone-surveillance/>.

¹² *Cell Phone Location Tracking Public Records Request*, *supra* note 6.

¹³ *EPIC v. FBI – Stingray/Cell Site Simulator*, ELEC. PRIVACY INFO. CTR., <http://epic.org/foia/fbi/stingray/> (last visited Oct. 18, 2014) (describing how cell site simulators function).

I do not take steps such as keeping my cell phone in a “Faraday Cage,”¹⁴ I voluntarily keep a tracking device the government can access in my pocket all day long. You’re welcome, Uncle Sam.

If I drove a car to work, another set of specialized cameras would create records of my commute. Red light cameras, attached to the posts of stoplights, take pictures of cars that cross the intersection after the light has changed.¹⁵ Automatic license plate readers (ALPRs) capture images of every license plate that passes and store records of the plates for later law enforcement use.¹⁶ Law enforcement agencies across the country are using these cameras.¹⁷ There are also private companies that are collecting their own databases of license plate scans, and selling access to law enforcement agencies.¹⁸ Municipalities are even building or considering networks of ALPRs that are so pervasive the cameras track all movement in and out of city limits.¹⁹

Each year this surveillance infrastructure grows, covering more ground, evolving new technologies, and integrating disparate systems.

¹⁴ See Nathan Chandler, *How Faraday Cages Work*, HOWSTUFFWORKS, <http://science.howstuffworks.com/faraday-cage.htm> (last visited Oct. 18, 2014) (explaining that a Faraday Cage is a container that distributes electric charges in such a way that the interior of the container has no electric charge); see also Jenna Wortham, *Stealth Wear, Coming to a Store Near You*, N.Y. TIMES (Aug. 31, 2013, 8:57 AM), http://bits.blogs.nytimes.com/2013/08/31/stealth-wear-coming-to-a-store-near-you/?_php=true&_type=blogs&r=0 (noting that the counter-surveillance product “OFF Pocket” works as a Faraday cage for mobile devices “preventing the penetration of signals that transmit data and audio.”).

¹⁵ Tom Harris, *How Red-light Cameras Work*, HOWSTUFFWORKS (Aug. 27, 2001), <http://auto.howstuffworks.com/car-driving-safety/safety-regulatory-devices/red-light-camera1.com>.

¹⁶ Brian Alseth, *Automated License Plate Recognition: The Newest Threat to Your Privacy When You Travel*, ACLU (May 26, 2010), <https://www.aclu-wa.org/blog/automated-license-plate-recognition-newest-threat-your-privacy-when-you-travel#content>.

¹⁷ AM. CIVIL LIBERTIES UNION, *YOU ARE BEING TRACKED: HOW LICENSE PLATE READERS ARE BEING USED TO RECORD AMERICANS’ MOVEMENTS 12* (2013) (stating that almost three fourths of police agencies included in a 2011 survey reported using license plate readers).

¹⁸ *Id.* at 28–29.

¹⁹ See, e.g., Cyrus Farivar, *Your Car, Tracked: The Rapid Rise of License Plate Readers*, ARS TECHNICA (Sept. 27, 2012, 9:30 PM), <http://arstechnica.com/tech-policy/2012/09/your-car-tracked-the-rapid-rise-of-license-plate-readers/> (stating that Tiburon, California “was one of the first towns in the country to mount automated license plate readers (LPRs) at its city borders – the only two roads going in and out of town.”).

A. Privacy Advocacy in America

Protecting individuals against unreasonable intrusions on their privacy has been an important principle in the United States since the founding of the republic.²⁰ However, privacy law has traditionally been more concerned with preventing the government from physically intruding onto someone's property or person,²¹ and the surveillance infrastructure monitors individuals in public. Despite rapid technological changes in recent years, because of this tradition there are still currently few laws to limit the law enforcement monitoring, recording, and tracking of individuals in public.²²

Privacy advocates are apparently generally unsuccessful at convincing lawmakers to limit the surveillance infrastructure. The ACLU found that in 2013, “[o]nly five states have laws on the books governing license plate readers.”²³ There are many factors that may limit the success of privacy advocates. Public debate about whether surveillance is appropriate or whether there should be new limits to protect privacy tends to only happen occasionally, and only after the infrastructure has been in place for some time.²⁴ Sometimes this happens because the public does not even learn of a new surveillance technique until it is a well-established practice.²⁵ Even when there is evidence that a

²⁰ See Ted Widmer, *How Privacy Became an American Value: The Fourth Amendment Grew From a Showdown in Boston's North End*, BOSTON GLOBE (May 18, 2014), <http://www.bostonglobe.com/ideas/2014/05/17/how-privacy-became-american-value/fVrcUTX0h2M39HcjOtBbIN/story.html>.

²¹ See Sonia K. Katyal, *The New Surveillance*, 54 CASE W. RES. L. REV. 297, 301–02 (2003).

²² See generally *How the Government is Tracking Your Movements*, ACLU, <https://www.aclu.org/how-government-tracking-your-movements> (last visited Oct. 20, 2014) (stating that “[l]aw enforcement is taking advantage of outdated privacy laws to track Americans like never before.”).

²³ AM. CIVIL LIBERTIES UNION, *supra* note 17, at 31.

²⁴ See generally *NSA Surveillance: American Debate, British Denial*, GUARDIAN (Jan. 17, 2014, 3:09 PM), <http://www.theguardian.com/commentisfree/2014/jan/17/obama-nsa-speech-security-privacy> (suggesting that President Obama's speech on NSA surveillance was “overdue” as he had “presided for five years over the discredited and omnivorous data surveillance system” he was proposing to reform).

²⁵ See Ryan Lizza, *The Metadata Program in Eleven Documents*, NEW YORKER (Dec. 31, 2013), <http://www.newyorker.com/news/daily-comment/the-metadata-program-in-eleven-documents> (explaining that “[b]y the end of 2013, a great number of documents revealed the once-secret history of the National Security Agency's telephone-metadata program, which, since 2001, has collected the

particular kind of surveillance is happening, decision makers—judges, for example—may not wish to take action unless there are injuries in fact.²⁶ This, notwithstanding the fact that the history of surveillance techniques, from writs of assistance to electronic wiretaps,²⁷ provides strong evidence that surveillance tools are highly likely to be abused without clear limits and consistent oversight.

With every new surveillance technology, there are invariably economic arguments supporting governments' and companies' use of the technology. Drones and ALPRs create revenue and jobs, according to supporters.²⁸ The congressional committee that reported major 2011 federal legislation on unmanned aircraft declared that the unmanned aircraft industry would create "23,000 high-paying jobs in the United States."²⁹ A resolution from Louisiana, SCR 124, was even more optimistic, estimating that "once the Federal Aviation Administration establishes guidelines for commercial use, the drone industry expects more than one hundred thousand jobs to be created and nearly half a billion in tax revenue to be generated by 2025[.]"³⁰ There are also often industry groups that emerge to lobby for governments to use the technology.³¹

Finally, there is a pervasive argument that surveillance

phone records of virtually all Americans." Prior to the release of these documents, people were unaware of this metadata collection).

²⁶ See, e.g., *Amnesty Int'l U.S. v. Clapper*, 638 F.3d 118, 121, 149–50 (2d Cir. 2011) (holding that the plaintiffs, who were "[a]ttorneys, journalists, and labor, legal, media, and human rights organizations[,] had standing to challenge the FISA [Foreign Intelligence Surveillance Act of 1978] Amendments Act of 2008 because their fears and the steps they had taken to alleviate them were "reasonable" and "establishe[d] injuries in fact that [were] causally linked to the allegedly unconstitutional FAA.").

²⁷ David Gray & Danielle Citron, *The Right to Quantitative Privacy*, 98 MINN. L. REV. 62, 70, 108 (2013).

²⁸ See Carly Q. Romalino, *Gloucester County License Plate Readers Help Nab Suspended Drivers*, NJ.COM (Jan. 31, 2013, 8:33 AM), http://www.nj.com/gloucester-county/index.ssf/2013/01/automatic_license_plate_reader.html; Ben Wolfgang, *Drone Industry Predicts Explosive Economic Boost*, WASH. TIMES (Mar. 12, 2013), <http://www.washingtontimes.com/news/2013/mar/12/drone-industry-predicts-explosive-economic-boost/?page=all>.

²⁹ H.R. REP. NO. 112–29, Sec. 322 (2011).

³⁰ S. Con. Res. No. 124, Reg. Sess. (La. 2014).

³¹ See, e.g., *About Us*, AUVSI, <http://www.auvsi.org/home/aboutus/> (last visited Oct. 21, 2014) (describing the Association for Unmanned Vehicle Systems International as "the world's largest non-profit organization devoted exclusively to advancing the unmanned systems and robotics community.").

technologies make “law abiding citizens” safer and only threaten the “bad guys.”³² Every privacy advocate has heard someone—and probably many people—say, “I don’t really care what they’re watching. I’ve got nothing to hide.” Many authors have identified flaws with this perspective³³ so I will not repeat them here, despite the many critiques this argument endures.

B. *This Article’s Goal*

In this article I examine a policy debate over whether and how to regulate one surveillance technology—unmanned aircraft. The terms unmanned aircraft, also called Unmanned Aerial Vehicles, or drones, refer to any kind of aircraft that operate without a pilot on board.³⁴ The concept is not new—unmanned aircrafts, defined broadly, have existed for about as long as manned aircraft.³⁵ However the pace of change of technologies that enable unmanned aircraft are accelerating rapidly.³⁶ Already used overseas and in limited numbers in the United States,³⁷ it is becoming increasingly obvious that unmanned aircraft are going to be a significant presence in American airspace. They are likely to perform many kinds of tasks, including tasks related to law enforcement.

Like with many other technologies that enable surveillance, there is a lively policy debate going on in the public about unmanned aircraft. The debate surrounding unmanned aircraft

³² See DANIEL J. SOLOVE, NOTHING TO HIDE: THE FALSE TRADEOFF BETWEEN PRIVACY AND SECURITY 21–22 (2011).

³³ See, e.g., *id.* at 23, 26–27; Bruce Schneier, *The Eternal Value of Privacy*, WIRED (May 18, 2006), <http://archive.wired.com/politics/security/commentary/securitymatters/2006/05/70886>.

³⁴ Zachariah Rivenbark, *What Are Drones?*, JURIST, <http://jurist.org/feature/featured/drones/detail.php> (last visited Oct. 14, 2014).

³⁵ Jimmy Stamp, *Unmanned Drones Have Been Around Since World War I*, SMITHSONIAN.COM (Feb. 12, 2013), <http://www.smithsonianmag.com/arts-culture/unmanned-drones-have-been-around-since-world-war-i-16055939/>.

³⁶ See JEREMIAH GERTLER, CONG. RESEARCH SERV., R42136, U.S. UNMANNED AERIAL SYSTEMS 1 (2012).

³⁷ See Jennifer Lynch, *Customs & Border Protection Loaned Predator Drones to Other Agencies 700 Times in Three Years According to “Newly Discovered” Records*, ELEC. FRONTIER FOUND. (Jan. 14, 2014), <http://www.eff.org/deeplinks/2014/01/newly-discovered-drone-records-show-customs-border-protection-flew-its-predator> (drones used domestically); *Understanding Drones*, FRIENDS COMM. ON NAT’L LEGIS., http://fcn.org/issues/foreign_policy/understanding_drones/ (last visited Oct. 20, 2014) (highlighting the United States’ use of drones overseas).

has a key feature that makes it attractive for an examination that focuses on legislation. The legislative debate about unmanned aircraft in state legislatures has recently exploded, with legislation introduced in almost every single state in the country in just a few years.³⁸ Many states have seen more than one piece of legislation introduced.³⁹

The quantity and diversity of legislation makes it an interesting data set to examine. I collected around 200 pieces of legislation that state lawmakers have introduced between 2011 and 2014 that relate directly to unmanned aircraft.⁴⁰ There is a great deal of diversity in this population of bills and resolutions. There are legislative proposals supporting all sides of the policy debate.⁴¹ The diversity of the policy proposals indicates that the bills and resolutions capture a wide range of legislators' judgments about what aspects of the UAV debate deserve attention. Most proposals have not become law, but a handful have,⁴² and the trajectories of different kinds of proposals offers another dimension for investigation. These features make this population of legislative actions a useful body of texts to examine how states decide whether and how to regulate a new surveillance technology.

Others have already reviewed the substance of unmanned aircraft related legislation that states have actually adopted.⁴³ However the purpose of this article is not only to identify the

³⁸ See Appendix.

³⁹ See Appendix.

⁴⁰ The Appendix to this paper has a complete list of the legislation, along with other interesting information about each bill. Note on methodology: I relied on OpenStates.org, a project by the Sunlight Foundation, to help me find legislation as well as lists other organizations have compiled, such as the National Conference of State Legislatures. *About the Project*, OPEN STATES, <http://openstates.org/about/> (last visited Oct. 21, 2014); see, e.g., Rich Williams, *2014 State Unmanned Aircraft Systems (UAS) Legislation*, NCSL (Sept. 16, 2014), <http://www.ncsl.org/research/civil-and-criminal-justice/2014-state-unmanned-aircraft-systems-uas-legislation.aspx>. I organized the bills using a simple Ruby on Rails web application that pulls bill information from OpenStates. The source code of the web application is *available at* <https://github.com/NateV/StateDrones>.

⁴¹ See generally Williams, *supra* note 40 (Alaska and Illinois, among other states, enacted legislation establishing warrant procedures for conducting UAV surveillance while North Carolina prohibits any entity from conducting UAV surveillance).

⁴² *Id.*

⁴³ See *id.*; *2013 State Enactments Listed Alphabetically*, NCSL, <http://www.ncsl.org/research/civil-and-criminal-justice/unmanned-aerial-vehicles.aspx> (last visited Oct. 20, 2014).

rules that states have adopted. This article seeks to explore the debate, including both successful and unsuccessful policy proposals.

I hope that readers can use this article to help address two questions. First, what are the substantive policy options for regulating unmanned aircraft that legislatures are considering and which options usually appear together? The options discussed here can help advocates improve legislation in their own states. Second, what lessons can privacy advocates draw from the legislative debate surrounding unmanned aircraft to help guide campaigns to reform other components of the public surveillance infrastructure?

I. A BRIEF SUMMARY OF WHAT UNMANNED AIRCRAFT ARE AND HOW THEY CAN BE USED FOR SURVEILLANCE

The synonymous terms “unmanned aircraft” and “Unmanned Aerial Vehicle” (UAV) encompass many different kinds of flying vehicles.⁴⁴ Federal law uses the term “unmanned aircraft” and gives it the following definition: “The term ‘unmanned aircraft’ means an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.”⁴⁵ An important point to notice in this definition is that unmanned aircraft can, and most of them do, still have pilots.⁴⁶ A UAV pilot operates the craft from a station on the ground, or perhaps even in a manned aircraft that is following the UAV.⁴⁷ There are UAVs that can be operated without a pilot controlling the aircraft all the time, but for safety reasons it is unlikely that the FAA will allow widespread use of UAVs that operate this way in US airspace.⁴⁸ Someone operating this kind of autonomous unmanned aircraft could use navigational software to chart a

⁴⁴ GERTLER, *supra* note 36.

⁴⁵ FAA Modernization and Reform Act of 2012, 49 U.S.C. § 331(8) (2012).

⁴⁶ *See id.* at § 331(9).

⁴⁷ UAV/UAS, HYPERSPECTRAL IMAGING FOUND.,

<http://hyperspectralimagingfoundation.org/abtuavstemp.html> (last visited Oct. 20, 2014).

⁴⁸ *See* Craig Whitlock, *FAA Likely to Miss Drone Deadline*, WASH. POST, July 1, 2014, at A09 (noting safety concerns may prevent congressional approval for drones flights in U.S. airspace); Courtney Howard, *UAV Command, Control & Communications*, MIL. & AEROSPACE ELEC. (July 11, 2013), <http://www.militaryaerospace.com/articles/print/volume-24/issue-7/special-report/uav-command-control-communications.html>.

course for the aircraft to automatically follow.⁴⁹ While laws or legislation use different terms—usually UAV or “unmanned aircraft”—and some use slightly different definitions,⁵⁰ the key principles are consistent: a drone, UAV, or unmanned aircraft is any aircraft that operates without a human pilot in or on the aircraft.⁵¹

Another term, Unmanned Aircraft System (UAS) also appears in federal law and industry documentation.⁵² The term UAS refers to the entire system of which an aircraft is one part.⁵³ The entire system also includes any ground stations, follow aircraft, and any other facilities or communications tools that operators use to safely fly the UAV.⁵⁴

There are many different varieties of unmanned aircraft with many different capabilities.⁵⁵ One useful way to separate unmanned aircraft into a small number of categories is by dividing them according to size. Small unmanned aircraft are defined as those weighing under fifty-five pounds.⁵⁶ This division is useful for several reasons. Federal law employs this distinction.⁵⁷ The FAA Modernization and Reform Act of 2012 requires the FAA to establish one set of rules for all unmanned aircraft and another set of specific rules for “small unmanned

⁴⁹ See Howard, *supra* note 48.

⁵⁰ Compare 49 U.S.C. § 331(8) (using the term “unmanned aircraft”), with 725 ILL. COMP. STAT. ANN. 167/5 (West 2014) (using the term “drone”); compare 49 U.S.C. § 331(8) (using the term “unmanned aircraft” and defining it as “an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.”), with LA. REV. STAT. ANN. § 14:337(B)(4) (2014) (defining “unmanned aircraft system” as an aircraft without a civilian human operator—any aircraft operated by a federal government entity is not included in the definition).

⁵¹ 49 U.S.C. § 331(8).

⁵² *Id.* § 331(9); see *Fact Sheet - Unmanned Aircraft Systems (UAS)*, FED. AVIATION ADMIN. (Jan. 6, 2014), http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=14153 [hereinafter *Fact Sheet*].

⁵³ 49 U.S.C. § 331(9).

⁵⁴ *Id.* (“The term ‘unmanned aircraft system’ means an unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the pilot in command to operate safely and efficiently in the national airspace system.”); Major Keric D. Clanahan, *Wielding a “Very Long, People-Intensive Spear”: Inherently Governmental Functions and the Role of Contractors in U.S. Department of Defense Unmanned Aircraft Systems Missions*, 70 A.F. L. REV. 119, 137–38 (2013).

⁵⁵ See Clanahan, *supra* note 54, at 136; *Fact Sheet*, *supra* note 52.

⁵⁶ 49 U.S.C. § 331(6).

⁵⁷ *Id.*

aircraft,” which the act defines as any UAV that weighs less than fifty-five pounds.⁵⁸ The size of an unmanned aircraft also has a significant impact on how long it can fly⁵⁹ and how much it costs to purchase or operate.⁶⁰

A. Large Unmanned Aircraft

The most well-known varieties of large unmanned aircraft are probably fixed-wing aircraft such as the Predator and Reaper.⁶¹ Their images often appear in news coverage of air strikes in Pakistan, Yemen, and other places.⁶² The U.S. military and other federal agencies operate UAVs such as these to conduct surveillance, provide communications support, and to attack targets overseas.⁶³ The MQ-9 Reaper has a 66 foot wingspan and a range of 1,150 miles.⁶⁴ Reapers can conduct air strikes, surveillance, search and rescue, and other operations.⁶⁵ The Predator is similar to the Reaper, but slightly smaller, and also flies combat and non-combat missions abroad.⁶⁶ The U.S. military has also developed helicopters that can operate without a pilot on board.⁶⁷ These K-MAX aircraft ferry supplies between bases in combat areas.⁶⁸

Unmanned aircraft also appear in American skies where they

⁵⁸ *Id.* §§ 331(6), 332(b)(1), (b)(5)(B)(i).

⁵⁹ See generally *Considerations in Selecting a Small UAV for Police Operations*, AERYON LABS INC., <http://www.aeryon.com/applications/whitepapers/224-whitepaperpolice.html> (last visited Oct. 20, 2014) (“Most small UAV manufacturers publish flight times of similar duration. . . .Typically when a payload is attached to the system, the operational . . . flight time can be reduced by over 50%. . . .[T]he length of flight for small UAV is still shorter than most organizations feel they need[.]”).

⁶⁰ *See id.*

⁶¹ See Clanahan, *supra* note 54, at 130, 132.

⁶² *See id.* at 128.

⁶³ *Id.* at 127–28, 133.

⁶⁴ *Fact Sheet Display: MQ-9 Reaper*, U.S. AIR FORCE (Aug. 18, 2010), <http://www.af.mil/AboutUs/FactSheets/Display/tabid/224/Article/104470/mq-9-reaper.aspx>.

⁶⁵ *Id.*

⁶⁶ See *MQ-1 Predator: Persistent ISR and Strike Aircraft*, GEN. ATOMICS AERONAUTICAL, http://www.ga-asi.com/products/aircraft/pdf/MQ-1_Predator.pdf (last visited Oct. 20, 2014) (The MQ-1 Predator has a wingspan of 55 feet and a length of 27 feet.).

⁶⁷ Marcus Wohlsen, *Delivery Drones Already Exist—And They’re Way Bigger Than Amazon’s*, WIRED (Jan. 6, 2014, 9:30 AM), <http://www.wired.com/2014/01/delivery-drones-already-exist/>.

⁶⁸ *Id.*

engage in both training missions and surveillance operations.⁶⁹ Military units that operate combat UAVs overseas train in the United States.⁷⁰ For example, the 174th Attack Wing of the Air National Guard flies training missions using MQ-9 Reapers from a base in upstate New York.⁷¹ The unit insists the aircraft do not carry weapons and do not participate in local law enforcement, but they could be called upon by the State's governor to assist disaster response.⁷²

Several federal law enforcement agencies have considered operating unmanned aircraft in the United States to conduct surveillance.⁷³ In 2013 the Department of Justice released a report detailing an audit of the agency's funding for law enforcement UAVs.⁷⁴ At that time, the Federal Bureau of Investigation, the Bureau of Alcohol, Tobacco, Firearms and Explosives, the Drug Enforcement Administration, and the United States Marshals Service had all used unmanned aircraft either for testing or real operations.⁷⁵ The FBI and U.S. Customs may have the most active domestic operations.⁷⁶ The FBI confirmed in a letter to Senator Rand Paul in July 2013 that it

⁶⁹ See Letter from Stephen D. Kelly, Assistant Director, to Rand Paul, U.S. Senator (July 19, 2013), *available at* <http://www.paul.senate.gov/files/documents/071913FBIresponse.pdf> (Stephen Kelly, Assistant Director of the Office of Congressional Affairs of the FBI in a Letter responding to an inquiry from Sen. Rand Paul) [hereinafter Letter from Stephen Kelly]; Department of Homeland Security Office of the Inspector General, OIG-12-85, CBP's Use of Unmanned Aircraft Systems in the Nation's Border Security (May 2012), *available at* http://www.oig.dhs.gov/assets/Mgmt/2012/OIG_12-85_May12.pdf [hereinafter DHS Review]; U.S. Department of Justice Office of the Inspector General, Report 13-37, Interim Report on the Department of Justice's Use and Support of Unmanned Aircraft Systems 1 (Sept. 2013) [hereinafter DOJ Interim Report]; Shawn Musgrave, *The Mystery of US Customs' Crashed Drone*, MOTHERBOARD (Apr. 24, 2014, 4:00 PM), <http://motherboard.vice.com/read/the-mystery-of-us-customs-crashed-drone>.

⁷⁰ See *Careers & Jobs Unmanned Aircraft Systems Operator (15W)*, U.S. ARMY, <http://www.goarmy.com/careers-and-jobs/browse-career-and-job-categories/transportation-and-aviation/unmanned-aerial-vehicle-operator.html> (last visited Oct. 20, 2014).

⁷¹ Jeff Stein, *Drones to Fly Over Parts of Onondaga, Madison and Oswego Counties*, SYRACUSE.COM (Aug. 6, 2013, 2:37 PM), http://www.syracuse.com/news/index.ssf/2013/08/coming_soon_to_cny_sky_miles_above_you_military_training_drones.html.

⁷² *Id.*

⁷³ DOJ Interim Report, *supra* note 69, at 1.

⁷⁴ See *id.*

⁷⁵ See *id.*

⁷⁶ See *id.*; DHS Review, *supra* note 69, at 1–2.

had used unmanned aircraft in domestic operations ten times since 2006.⁷⁷ The letter explained that its operations “related to kidnappings, search and rescue operations, drug interdictions, and fugitive investigations.”⁷⁸ U.S. Customs and Border Patrol has employed unmanned aircraft for border surveillance for several years.⁷⁹ Additionally, documents obtained through Freedom of Information Requests by the Electronic Frontier Foundation (EFF) revealed that U.S. Customs ran a loan program through which the agency conducts domestic operations on behalf of other government agencies.⁸⁰ Even local law enforcement agencies participated in the program.⁸¹ The EFF documents show that between 2010 and 2012, Customs flew unmanned aircraft for county Sherriff offices thirteen times.⁸² Besides Department of Justice operations, the DOJ Audit also found that the Office of Community Oriented Policing has distributed funding to “local law enforcement agencies and non-profit organizations to purchase UAS for testing or use.”⁸³ The report noted that the agency did not track funding carefully enough to know exactly how much federal support went to local law enforcement UAV programs.⁸⁴

B. *Small Unmanned Aircraft*

Unmanned aircraft can get much smaller than the Predator and Reaper.⁸⁵ Three common varieties of small unmanned aircraft are (1) fixed-wing aircraft, which look like model airplanes, (2) aircraft that look like small helicopters, and (3) “quadrotors,” that use four powerful fans to fly, hover, and maneuver.⁸⁶ Small unmanned aircraft are likely to appeal to

⁷⁷ Letter from Stephen Kelly, *supra* note 69.

⁷⁸ *Id.*

⁷⁹ See DHS Review, *supra* note 69, at 2; Musgrave, *supra* note 69.

⁸⁰ Jennifer Lynch, *Drone Loans: Customs and Border Protection Records 500 Predator Flights for Other Agencies*, ELEC. FRONTIER FOUND. (Sept. 27, 2013), <https://www.eff.org/deeplinks/2013/09/500-cbp-drone-flights-other-agencies>.

⁸¹ See *id.*

⁸² *Customs and Border Protection Drone Flight List*, ELEC. FRONTIER FOUND., <https://www.eff.org/document/customs-border-protection-drone-flight-list> (last visited Oct. 20, 2014).

⁸³ DOJ Interim Report, *supra* note 69, at 1.

⁸⁴ See *id.* at 11–12.

⁸⁵ *Unmanned Aerial Warfare: Flight of the Drones*, ECONOMIST (Oct. 8, 2011), <http://www.economist.com/node/21531433>.

⁸⁶ See Steven Dent, *What You Need To Know About Commercial Drones*,

smaller government entities such as local law enforcement agencies. However, restrictions from the FAA currently limit the deployment of small unmanned aircraft.⁸⁷ Nonetheless universities, private companies, and law enforcement agencies around the country are experimenting with using small unmanned aircraft for a wide range of purposes, from police surveillance⁸⁸ to designing video games with realistic terrain.⁸⁹ Small unmanned aircraft typically cannot stay in the air for as long as large ones, but their small size makes them cheaper and easier to operate.⁹⁰

The designs and capabilities for unmanned aircraft are developing with tremendous speed. The cutting edge of UAV technology today may be obsolete in just a few years. Already the U.S. government has embraced unmanned aircraft as an essential tool for combat as well as domestic law enforcement.⁹¹ It seems all but inevitable that the role of unmanned aircraft in federal, state, and local law enforcement surveillance will expand in the years to come.

II. FEDERAL LAW LIMITS ON GOVERNMENT USE OF UNMANNED AIRCRAFT TO CONDUCT SURVEILLANCE IN PUBLIC

Currently, the federal constitution offers few privacy protections limiting law enforcement use of UAVs to conduct surveillance in public.⁹² There are indications, though, that the law could be in the process of making a significant change.⁹³

ENGADGET (June 13, 2014, 11:30 AM), [http://www.engadget.com/2014/06/13/commercial-drone-explainer/\(explaining-popular-drone-types,-like-rotary-drones,-including-quadrotors-and-octacopters,-as-well-as-fixed-wing-drones\).](http://www.engadget.com/2014/06/13/commercial-drone-explainer/(explaining-popular-drone-types,-like-rotary-drones,-including-quadrotors-and-octacopters,-as-well-as-fixed-wing-drones).)

⁸⁷ *Fact Sheet*, *supra* note 52.

⁸⁸ *See generally Public Safety Applications*, AERYON LABS INC., <http://www.aeryon.com/applications/public-safety.html> (last visited June 15, 2014) (The benefits of Aeryon's UAS are described in various circumstances, including many related to law enforcement).

⁸⁹ Patricia Hernandez, *Drones are Mapping the Entire Planet (For a Video Game)*, KOTAKU (Feb. 3, 2014, 8:30 PM), <http://kotaku.com/drones-are-mapping-the-entire-planet-for-a-video-game-1515384751>.

⁹⁰ *See Monitor: Joining the Drones Club*, ECONOMIST (Sept. 3, 2011), <http://www.economist.com/node/21527032>. *See generally Considerations in Selecting a Small UAV for Police Operations*, *supra* note 59.

⁹¹ *See generally Fact Sheet*, *supra* note 52.

⁹² *Blog of Rights: Domestic Drones*, ACLU, <https://www.aclu.org/blog/tag/domestic-drones> (last visited Oct. 20, 2014).

⁹³ *See, e.g., Allie Bohm, Status of 2014 Domestic Drone Legislation in the*

The federal constitution was written long before many of the surveillance technologies that exist today were invented, but the Fourth Amendment does offer some level of protection against government intrusions in individuals' lives:

The 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, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.⁹⁴

Throughout its history, the Fourth Amendment has limited government's access to tangible persons, places, or things.⁹⁵ One of the origins of the principles behind the Fourth Amendment was a colonial British practice of issuing "writ[s] of assistance."⁹⁶ The writs authorized officials to enter homes, break down doors, and crack open chests to search for smuggled goods without particularized suspicion of the owners of those homes, doors, and chests.⁹⁷ James Otis spoke out against the writs in a famous speech, declaring them to be inimical to English liberty.⁹⁸ Soon thereafter state constitutions such as the Massachusetts constitution adopted language that banned general searches and required government officials to obtain approval of limited searches before seeking out property.⁹⁹ The Fourth Amendment is rooted in tangible property—persons, houses, papers, and effects, and protecting tangible property was the original aim of the Fourth Amendment.¹⁰⁰

An emphasis on protecting tangible things appears in Fourth Amendment doctrine in many contexts and endures today. The "Open Fields Doctrine" provides that the Fourth Amendment does not prevent government officials observing (and later using as evidence) illegal conduct if that conduct took place in an "open field" because even though an open field might be private space,

States, ACLU (June 30, 2014, 10:32 AM), <https://www.aclu.org/blog/technology-and-liberty/status-2014-domestic-drone-legislation-states>.

⁹⁴ U.S. CONST. amend. IV.

⁹⁵ See *Katz v. United States*, 389 U.S. 347, 365 (1967).

⁹⁶ See, e.g., Robert M. Bloom, *Warrant Requirement—The Burger Court Approach*, 53 U. COLO. L. REV. 691, 693–94 (1982).

⁹⁷ *Id.*

⁹⁸ *Id.* at 695.

⁹⁹ *Id.* at 695–96.

¹⁰⁰ *Id.* at 696.

police observation does not involve a physical intrusion.¹⁰¹ The Supreme Court in 1924 explained, “the special protection accorded by the Fourth Amendment to the people in their ‘persons, houses, papers, and effects,’ is not extended to the open fields. The distinction between the latter and the house is as old as the common law.”¹⁰² Another line of cases holds that a person cannot seek the protection of the Fourth Amendment if he tells another person a fact in confidence, and the false co-conspirator shares the information with police.¹⁰³ In 1966, the Supreme Court heard James Hoffa’s claim that the government violated the Fourth Amendment by using an informant to learn about statements Hoffa made in private.¹⁰⁴ The majority of the Justices rejected Hoffa’s argument.¹⁰⁵ The Court explained that the Fourth Amendment only protects against physical government intrusion into private spaces.¹⁰⁶ For the purposes of the Fourth Amendment, it was immaterial that Hoffa did not know that the individual was a government informant.¹⁰⁷ The Fourth Amendment offers no help for “a wrongdoer’s misplaced belief that a person to whom he voluntarily confides his wrongdoing will not reveal it.”¹⁰⁸

For many years, changes in communication technology did not sway the Supreme Court. Comparing the court’s decisions in *Ex Parte Jackson* in 1877 with *Olmstead v. U.S.* in 1928, highlights the Court’s commitment to protecting physical property.¹⁰⁹ In 1877, the court upheld a federal law banning obscene materials from the U.S. Postal system.¹¹⁰ However the Fourth Amendment limited the government’s enforcement of the law: “regulations excluding matter from the mail cannot be enforced in a way which would require or permit an examination into letters, or sealed packages[.]”¹¹¹ The Fourth Amendment protected Americans against unreasonable seizures, “and seizures extends

¹⁰¹ *Hester v. United States*, 265 U.S. 57, 59 (1924).

¹⁰² *Id.* at 59 (citing 4 Bl. Comm. 223, 225, 226).

¹⁰³ See Tracey Maclin, *Informants and the Fourth Amendment: A Reconsideration*, 74 WASH. U. L.Q. 573, 598, 603–07 (1996).

¹⁰⁴ *Hoffa v. United States*, 385 U.S. 293, 294 (1966).

¹⁰⁵ *Id.* at 303.

¹⁰⁶ *Id.* at 301.

¹⁰⁷ See *id.* at 303.

¹⁰⁸ *Id.* at 302.

¹⁰⁹ Compare *Ex Parte Jackson*, 96 U.S. 727, 735–36 (1877), with *Olmstead v. United States*, 277 U.S. 438, 464–65 (1928).

¹¹⁰ *Ex Parte Jackson*, 96 U.S. at 736.

¹¹¹ *Id.* at 735.

to their papers, thus closed against inspection, wherever they may be. Whilst in the mail, they can only be opened and examined under like warrant[.]”¹¹² Then in 1928, the Supreme Court faced the question of whether the government had violated the Fourth Amendment by inserting small wires into the telephone wires that emerged from several suspects’ houses.¹¹³ Like the mail, a telephone allows a person to send a communication over a long distance. But the court rejected extending Fourth Amendment protection to telephone conversations:

It is plainly within the words of the amendment to say that the unlawful rifling by a government agent of a sealed letter is a search and seizure of the sender’s papers or effects. The letter is a paper, an effect The United States takes no such care of telegraph or telephone messages as of mailed sealed letters. The amendment does not forbid what was done here. There was no searching. There was no seizure. The evidence was secured by the use of the sense of hearing and that only. There was no entry of the houses or offices of the defendants.¹¹⁴

The Fourth Amendment has evolved along with communications technology. The Supreme Court transformed its analysis of Fourth Amendment claims in 1967 in *Katz v. United States*.¹¹⁵ The petitioner Mr. Katz had been convicted based on evidence obtained when police used an electronic device to eavesdrop on calls he made from a public telephone booth.¹¹⁶ The court refused to decide the case on the basis of whether the government had physically intruded on a “constitutionally protected area.”¹¹⁷ Instead, the majority concluded that because the petitioner had “justifiably relied” on the privacy of the telephone booth to prevent others from overhearing his speech, the government had no right to violate the expected privacy.¹¹⁸ The decision recognized that changes in telecommunications technology and its place in society expanded the role for the Fourth Amendment beyond the tangible papers and places of decisions like *Olmstead* and *Ex Parte Jackson*:

¹¹² *Id.* at 733.

¹¹³ *Olmstead*, 277 U.S. at 455.

¹¹⁴ *Id.* at 464.

¹¹⁵ *Katz v. United States*, 389 U.S. 347 (1967).

¹¹⁶ *Id.* at 348.

¹¹⁷ *Id.* at 350.

¹¹⁸ *Id.* at 353.

[A] person in a telephone booth may rely upon the protection of the Fourth Amendment. One who occupies it, shuts the door behind him, and pays the toll that permits him to place a call is surely entitled to assume that the words he utters into the mouthpiece will not be broadcast to the world. To read the Constitution more narrowly is to ignore the vital role that the public telephone has come to play in private communication.¹¹⁹

Justice Harlan, concurring, articulated the two step analysis that still guides Fourth Amendment jurisprudence today: “there is a twofold requirement, first that a person have exhibited an actual (subjective) expectation of privacy and, second, that the expectation be one that society is prepared to recognize as ‘reasonable.’”¹²⁰ A person in an open field would have no reasonable expectation of privacy, but a person in a home or a telephone booth might.¹²¹ Besides freeing courts from rigid limitations about tangible intrusions, the new rule also permitted the Fourth Amendment’s protection to evolve as technology developed.

Courts today still use the *Katz* test to analyze whether particular government conduct constitutes an unreasonable search.¹²² Whether a particular law enforcement activity—from entering a home to asking a question on a porch—is an unreasonable search depends on whether the person with whom a law enforcement officer is interacting has, in the words of *Katz*, a “reasonable expectation of privacy.”¹²³

Since unmanned aircraft will likely be most useful for surveillance of individuals’ movements in public, the contemporary Fourth Amendment is unlikely to limit government operations. Even *Katz* confirmed, “[w]hat a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection.”¹²⁴ If a law enforcement officer can legally be in a place, anything he can see from his

¹¹⁹ *Id.* at 352.

¹²⁰ *Id.* at 361 (Harlan, J., concurring).

¹²¹ *See id.* at 160–61.

¹²² *Kyllo v. United States*, 533 U.S. 27, 34 (2001) (the inside of a home is a place with an “expectation of privacy . . . that is acknowledged to be *reasonable*.”); *United States v. Rheault*, 561 F.3d 55, 59 (1st Cir. 2009) (determining whether if the defendant had “a subjective expectation of privacy” and if that “subjective expectation was reasonable.”).

¹²³ *Katz*, 389 U.S. at 361 (Harlan, J., concurring).

¹²⁴ *Id.* at 351 (majority opinion).

vantage point is not protected, even if is peering into a kitchen or bedroom.¹²⁵

There is no help for lawyers arguing Fourth Amendment motions from the fact that UAVs can fly to vantage points that a member of the public could not normally reach. Decisions from the 1980s approved of law enforcement surveillance using manned aircraft, even to observe private areas surrounding a home.¹²⁶ In *California v. Ciraolo*, police officers investigating a tip flew a private airplane 1000 feet above Mr. Ciraolo's backyard.¹²⁷ Mr. Ciraolo had installed a six foot high fence around his property that made it impossible for police to look at the yard from the ground, but the overflight revealed the marijuana plants that became the basis for the prosecution.¹²⁸ The court below, California's Court of Appeals, found

the height and existence of the two fences constitute objective criteria from which we may conclude he manifested a reasonable expectation of privacy by any standard. . . . “[A] person need not construct an opaque bubble over his or her land in order to have a reasonable expectation of privacy regarding the activities occurring there in all circumstances.”¹²⁹

The Supreme Court disagreed.¹³⁰ Applying the *Katz* test, the Court ruled that although the defendant had a subjective expectation that his backyard was private, that expectation was unreasonable.¹³¹ “The observations by Officers Shutz and Rodriguez in this case took place within public navigable airspace . . . in a physically nonintrusive manner Any member of the public flying in this airspace who glanced down

¹²⁵ *California v. Ciraolo*, 476 U.S. 207, 213 (1986) (“The Fourth Amendment protection of the home has never been extended to require law enforcement officers to shield their eyes when passing by a home on public thoroughfares.”).

¹²⁶ See *Florida v. Riley*, 488 U.S. 445 (1989) (finding police observation of defendant's greenhouse from a helicopter without a warrant not to violate the Fourth Amendment); *Ciraolo*, 476 U.S. at 209, 215 (finding police photographs taken of defendant's backyard from a plane without a warrant not to violate the Fourth Amendment); *Dow Chem. Co. v. United States*, 476 U.S. 227, 239 (1986) (finding aerial photographs of plant requested by EPA without a warrant not to violate the Fourth Amendment).

¹²⁷ *Ciraolo*, 476 U.S. at 209.

¹²⁸ *Id.* at 209–10.

¹²⁹ *People v. Ciraolo*, 208 Cal. Rptr. 93, 97–98 (Cal. Ct. App. 1st Dist. 1984) (citing *United States v. Allen*, 675 F.2d 1373, 1380 (9th Cir. 1980)).

¹³⁰ *Ciraolo*, 476 U.S. at 215.

¹³¹ *Id.* at 214.

could have seen everything that these officers observed.”¹³² The decision shows that pre-*Katz* reasoning still influenced the court; the defendant had no reasonable expectation of privacy because there was no physical intrusion on his property.¹³³

It is also worth noting that additional limits apply when law enforcement uses ‘sense-enhancing’ technology.¹³⁴ In *Kyllo v. United States*, the Supreme Court held that police violated the Fourth Amendment by using a heat scanner to look for marijuana lamps inside a suspect’s home.¹³⁵ Two arguments were critical to the court’s analysis. First, the heat sensor enabled police to gain information “that could not otherwise have been obtained without physical ‘intrusion into a constitutionally protected area.’”¹³⁶ Second, the heat sensor was a technology was “not in general public use.”¹³⁷

These decisions are still good law and permit law enforcement to operate unmanned aircraft just as officers can use manned aircraft—to view public or un-obscured private spaces without additional sense enhancing technology.¹³⁸ There are hints that the Fourth Amendment is in the midst of another transition in response to increasingly advanced surveillance technology. In *United States v. Jones*, the opinion of the court found law enforcement had violated the Fourth Amendment when installing a GPS tracker on a suspect’s car without a warrant.¹³⁹ But instead of making the decision based on the *Katz* test, Justice Scalia’s opinion applied the old trespass rule and invalidated the GPS tracker because police physically touched the suspect’s property.¹⁴⁰ Several justices in separate concurrences approved of the result, but argued instead that the court should have decided that individuals have a reasonable expectation of privacy in their

¹³² *Id.* at 213–14.

¹³³ *Id.* at 212–13.

¹³⁴ *Kyllo v. United States*, 533 U.S. 27, 29, 40 (2001) (holding that the use of a thermal imager, a device that detects that “which is not visible to the naked eye” and not in the public use, is impermissible under the Fourth Amendment without a warrant).

¹³⁵ *Id.* at 29–30.

¹³⁶ *Id.* at 34 (quoting *Silverman v. United States*, 365 U.S. 505, 512 (1961)).

¹³⁷ *Id.*

¹³⁸ John Villasenor, *Will “Drones” Outflank the Fourth Amendment?*, FORBES (Sept. 20, 2012, 3:59 PM), <http://www.forbes.com/sites/johnvillasenor/2012/09/20/will-drones-outflank-the-fourth-amendment/>.

¹³⁹ *United States v. Jones*, 132 S. Ct. 945, 949 (2012).

¹⁴⁰ *Id.* at 950–51.

movements that—even in public—would not be recorded over an extended period of time.¹⁴¹ This argument will become increasingly salient when law enforcement’s use of unmanned aircraft expands. Ad hoc overflights—unmanned versions of the flight that occurred in *Ciraolo*—may remain unprotected, but using unmanned aircraft to build a comprehensive picture of a person’s movements over a long period of time may become unconstitutional.

The limits of Fourth Amendment restraints on unmanned aircraft surveillance may be in flux, but it is clear that there is a role for legislation. Elected policymakers can establish statutory limitations on law enforcement surveillance that the Supreme Court is not inclined to impose through the Constitution.

III. LEGISLATION IN STATE LEGISLATURES

There are many reasons that state legislatures are important arenas for privacy advocates. States present an opportunity for advocates to experiment with varied legislative approaches. States are often described as “laborator[ies] for democracy,” where novel policy ideas can be introduced, refined, and shared.¹⁴² There has been a great deal of research into how states serve as test sites for various policies.¹⁴³

Privacy law also has particular features that suggest states should have at least some role in regulating the field. Although as researches have noted, the federal government “has a history of regulating law enforcement surveillance through the federal wiretap statute,” federal law commonly serves as a floor, rather than a ceiling for privacy protections.¹⁴⁴ There is an ongoing debate about whether it is better for the federal government or

¹⁴¹ *Id.* at 964 (Alito, J., concurring).

¹⁴² Roberta Romano, *The States as a Laboratory: Legal Innovation and State Competition for Corporate Charters*, 23 YALE J. ON REG. 209, 214 (2006).

¹⁴³ *E.g.*, *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932); Tammy Murray, *State innovation in Health Care: Congress’ Broad Spending Power Under a National Health Care System will Stifle State Laboratories of Democracy*, 3 IND. HEALTH L. REV. 263, 263 (2006); Romano, *supra* note 142, at 214.

¹⁴⁴ Margot E. Kaminski, *Drone Federalism: Civilian Drones and the Things They Carry*, 4 CALIF. L. REV. CIRCUIT 57, 58 (2013); see Paul M. Schwartz, *Preemption and Privacy*, 118 YALE L.J. 902, 919 (2009) (stating that some federal laws—like the Video Privacy Protection Act of 1988 and the Wiretap Act—only establish a floor, i.e. “a minimum standard that states may exceed.”).

states to take responsibility for privacy regulation.¹⁴⁵ Kaminski argues for both, emphasizing, “[s]tates have experience regulating many of the kinds of privacy violations contemplated by those who fear drones.”¹⁴⁶ States still have broad authority to regulate their law enforcement agencies.¹⁴⁷ Furthermore the source of privacy torts that private individuals can bring against each other—public disclosure of private facts, etc.—is state law.¹⁴⁸

For many advocates, though, the debate is framed in simpler terms. There is no shortage of legislation in Congress proposing new protections for individuals from government surveillance.¹⁴⁹ Yet in the last few years, there has been little to no progress on bills such as these, and little momentum for future progress.¹⁵⁰ For example, Sen. Ted Cruz introduced S. 505 in 2013, which would prohibit the federal government from using an unmanned aircraft “to kill a citizen of the United States who is located in the United States.”¹⁵¹ The bill even contains exceptions for imminent threats.¹⁵² If there is low hanging fruit for Congress, a bill such as this one should be it. However, the bill has stalled since a committee report in March 2013.¹⁵³ GovTrack, a website that monitors federal legislation and has developed an algorithm that predicts bills’ likelihood of passage, estimates that S.505 has only a twenty percent chance of becoming law.¹⁵⁴ GovTrack estimates

¹⁴⁵ See Patricia Bellia, *Federalization in Information Privacy Law*, 118 YALE L.J. 868, 876–77 (2009); Kaminski, *supra* note 144, at 64–65; Schwartz, *supra* note 144, at 922–23.

¹⁴⁶ Kaminski, *supra* note 144, at 67–68.

¹⁴⁷ See, e.g., Evan Caminker, *State Sovereignty and Subordinacy: May Congress Commandeer State Officers to Implement Federal Law?*, 95 COLUM. L. REV. 1001, 1015 (1995) (discussing that states remain autonomous decision makers that enjoy political existence separate from the federal government).

¹⁴⁸ Kaminski, *supra* note 144, at 65.

¹⁴⁹ See Brian Montopoli, *Lawmakers Move to Limit Domestic Drones*, CBS NEWS (May 16, 2013, 4:28 PM), <http://www.cbsnews.com/news/lawmakers-move-to-limit-domestic-drones/>.

¹⁵⁰ See *S. 505: A Bill to Prohibit the Use of Drones to Kill Citizens of the United States Within the United States*, GOVTRACK.US, <https://www.govtrack.us/congress/bills/113/s505> (last visited Oct. 20, 2014); *H.R. 637: Preserving American Privacy Act of 2013*, GOVTRACK.US, <https://www.govtrack.us/congress/bills/113/hr637> (last visited Oct. 20, 2014); *H.R. 2868: Drone Aircraft Privacy and Transparency Act of 2013*, GOVTRACK.US, <https://www.govtrack.us/congress/bills/113/hr2868> (last visited Oct. 2, 2014) (providing that all three bills have *at most* a twenty percent chance of being enacted).

¹⁵¹ S. 505, 113th Cong. § 1(b) (2013).

¹⁵² *Id.*

¹⁵³ *S. 505*, *supra* note 150.

¹⁵⁴ *Id.*

the likelihoods of passage for other privacy bills such as H.R. 637, “Preserving American Privacy Act”¹⁵⁵ and HR 2868, “Drone Aircraft Privacy and Transparency Act”¹⁵⁶ are even lower. So pragmatic privacy advocates ask, “If we can’t convince Congress to act, where else can we turn?”

To understand how state legislatures are attempting to regulate unmanned aircraft, it is important to review the federal regulatory context.

A. 2012 FAA Modernization Act

The federal government has claimed a significant role in regulating air traffic in the United States for decades.¹⁵⁷ Congress passed the Air Commerce Act of 1926.¹⁵⁸ President Eisenhower signed legislation creating the Federal Aviation Agency in 1958.¹⁵⁹ The 1958 Act charged the new agency to regulate air commerce and promote safe aviation in the United States.¹⁶⁰ The Act also declared that federal law preempted all state laws regulating air travel.¹⁶¹

In 2012, Congress passed the FAA Modernization and Reform Act. In the Act, Congress instructed the FAA (now an Administration, not an Agency), to integrate civilian unmanned aircraft systems into the National Airspace System.¹⁶² The Act requires the FAA to accomplish certain tasks according to a particular schedule.¹⁶³ The FAA must develop a comprehensive plan “to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system.”¹⁶⁴ The plan must include, among other features, a schedule for “a phased-in approach” to permitting unmanned aircraft in the domestic skies,¹⁶⁵ and a Five Year Roadmap for full integration, to be

¹⁵⁵ *H.R. 637*, *supra* note 150 (“16% chance of being enacted”).

¹⁵⁶ *H.R. 2868*, *supra* note 150 (“2% chance of being enacted”).

¹⁵⁷ *See History*, FED. AVIATION ADMIN., http://www.faa.gov/about/history/brief_history/ (last visited Oct. 20, 2014).

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ Federal Aviation Act of 1958, Pub. L. No. 85-726, § 103, 72 Stat. 731, 740 (1958).

¹⁶¹ Airline Deregulation Act of 1978, ch. 5, sec. 105(a), §§ 1305 & 1371, 92 Stat. 1708 (1978).

¹⁶² FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 332, 126 Stat. 11, 73 (2012).

¹⁶³ *Id.* §§ 332–334.

¹⁶⁴ *Id.* § 332(a)(1).

¹⁶⁵ *Id.* § 332(a)(2)(C).

updated annual.¹⁶⁶ Within 18 months of the passage of the Act, the FAA is instructed to propose a regulation to govern the operation of unmanned aircraft smaller than 55 pounds.¹⁶⁷ The Act also requires the FAA to establish a test program.¹⁶⁸ The FAA must select six sites around the country to help develop the technical and policy expertise needed to safely permit unmanned aircraft operations.¹⁶⁹

As of June 2014, the FAA was still proceeding through the steps mandated by Congress.¹⁷⁰ The FAA published the first edition of the Five Year Roadmap¹⁷¹ as well as the Comprehensive Plan in 2013.¹⁷² The agency has not yet released proposed regulations for small UAS. With no general regulation, the FAA is still requiring organizations that wish to use a UAV to apply for a “Certificate of Authorization.”¹⁷³ Each COA requires applicants to provide detailed information about each flight, including the technology involved, the location of the flight, and training of individuals involved.¹⁷⁴

The FAA announced the locations of the six test sites in December of 2013.¹⁷⁵ The six hosts are: the University of Alaska, the State of Nevada, New York’s Griffiss International Airport,

¹⁶⁶ *Id.* § 332(a)(5).

¹⁶⁷ *Id.* § 332(b)(1).

¹⁶⁸ *Id.* § 332(c)(1).

¹⁶⁹ *Id.* § 332(c)(1)–(3).

¹⁷⁰ *Press Release—FAA Announces Nevada UAS Test Site Now Operational*, FED. AVIATION ADMIN. (June 9, 2014), http://www.faa.gov/news/press_releases/news_story.cfm?newsId=16334; *Press Release—FAA Announces Texas UAS Test Site Now Operational*, FED. AVIATION ADMIN. (June 20, 2014), http://www.faa.gov/news/press_releases/news_story.cfm?newsId=16454.

¹⁷¹ *Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap*, FED. AVIATION ADMIN. (Nov. 7, 2013), http://www.faa.gov/uas/media/uas_roadmap_2013.pdf.

¹⁷² *Unmanned Aircraft Systems (UAS) Comprehensive Plan*, FED. AVIATION ADMIN. (Sept. 2013), http://www.faa.gov/about/office_org/headquarters_offices/agi/reports/media/UAS_Comprehensive_Plan.pdf.

¹⁷³ *See Certificates of Waiver or Authorization (COA)*, FED. AVIATION ADMIN., http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/syste_mops/aaim/organizations/uas/coa/ (last modified Aug. 19, 2014, 11:10 AM).

¹⁷⁴ *See, e.g., Sample COA Application*, FED. AVIATION ADMIN., http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/syste_mops/aaim/organizations/uas/media/COA%20Sample%20Application%20v%201-1.pdf (last visited Oct. 20, 2014).

¹⁷⁵ *Press Release—FAA Selects Unmanned Aircraft Systems Research and Test Sites*, FED. AVIATION ADMIN. (Dec. 30, 2013), http://www.faa.gov/news/press_releases/news_story.cfm?newsid=15576.

North Dakota Department of Commerce, Texas A&M University, and Virginia Polytechnic Institute and State University.¹⁷⁶ Each site has a slightly different set of goals. For example, Alaska's test site plans to test unmanned aircraft in varied climates, and New York's site plans "to focus its research on sense and avoid capabilities" for unmanned aircraft in "congested" airspace.¹⁷⁷

The FAA acknowledges that unmanned aircraft present privacy concerns for many Americans, and while the agency is constrained by its safety-oriented mandate, it will "require Test Site operators to comply with the Final Privacy Requirements."¹⁷⁸ In November 2013, the FAA concluded its consideration of public comments on a proposed privacy policy that all of the test sites would need to implement.¹⁷⁹ The FAA received comments making a wide variety of arguments.¹⁸⁰ On one hand, commenters urged the FAA to impose strict privacy rules on test sites to protect local communities from invasive surveillance by test site aircraft.¹⁸¹ Others argued that the FAA should focus only on safety of unmanned aircraft operations.¹⁸² Weighing the comments and the agency's statutory obligations, the FAA took a compromise position. The final regulation requires each test site to develop its own privacy policy and work with the public to regularly scrutinize and improve the policy.¹⁸³ In theory, this approach will allow test sites to experiment with the details of its privacy policies and enable the public and the FAA to identify best practices.

The federal regulatory landscape will continue to shift in late 2014 and into the future. The FAA is scheduled to invite public comment on a final rule for small unmanned aircraft in the fall of 2014.¹⁸⁴ As the test sites are beginning operations, they are releasing final privacy policies required by the FAA.¹⁸⁵ And there is controversy related to the FAA's authority to regulate small

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ Unmanned Aircraft System Test Site Program, 78 Fed. Reg. 68360, 68361 (Nov. 14, 2013) (to be codified at 14 C.F.R. pt. 91).

¹⁷⁹ *Id.* at 68360.

¹⁸⁰ *See id.* at 68361.

¹⁸¹ *Id.* at 68362.

¹⁸² *See id.*

¹⁸³ *Id.*

¹⁸⁴ Ben Gielow, *Small UAS Rule Release Delayed Until November 2014*, AUVSI (Jan. 14, 2014), <http://www.auvsi.org/1312014/1412014DOTSUASDelay>.

¹⁸⁵ *See, e.g., UAS Test Site Privacy Policy*, MID-ATLANTIC AVIATION PARTNERSHIP (June 2014), http://www.maap.ictas.vt.edu/?page_id=133.

UAS, based on the argument that the FAA has not regulated small model aircraft in the past.¹⁸⁶ Certainly this is an uncertain area of law for state legislatures to wade into. But the uncertainty may also be an opportunity. The rules and practices relating to unmanned aircraft are not well established at the federal level, so state legislatures could seize this moment to step in.

B. Preexisting State Surveillance Rules

In addition to federal rules that affect state level regulation of unmanned aircraft, some states already have laws that predate unmanned aircraft that will impact unmanned aircraft surveillance.¹⁸⁷

For example, several states prohibit the recording of a conversation unless all parties to the conversation consent.¹⁸⁸ So called “two-party consent” rules exist in states including Maryland, New Hampshire, Massachusetts, and Pennsylvania.¹⁸⁹ In a state without such a rule, one party to a conversation, such as an undercover officer, could authorize the government to use a UAV to record the other parties in the conversation.¹⁹⁰ Such an operation would be prohibited in a state that requires all parties to consent to recording.¹⁹¹

Some states also already have laws that limit government video surveillance.¹⁹² New York requires law enforcement to obtain a warrant to conduct video surveillance.¹⁹³ The warrant is only required when video surveillance would, in the absence of a warrant infringe on a target’s “reasonable expectation of privacy” under the state or federal constitution.¹⁹⁴ New York’s Attorney General interpreted this as allowing local governments to install

¹⁸⁶ See, e.g., *Huerta v. Pirker*, CP-217, 2014 WL 3388631 (N.T.S.B.) (Mar. 6, 2014); Administrator’s Appeal Brief, *Huerta v. Pirker*, 2014 WL 3388631 (N.T.S.B.) (Mar. 6, 2014) (No. CP-217).

¹⁸⁷ See REP. COMM. FOR FREEDOM OF THE PRESS, REPORTER’S RECORDING GUIDE 2 (2012).

¹⁸⁸ *Id.*

¹⁸⁹ *Id.*; Kaminski, *supra* note 144, at 65–66.

¹⁹⁰ See, e.g., REP. COMM. FOR FREEDOM OF THE PRESS, *supra* note 187, at 19.

¹⁹¹ Kaminski, *supra* note 144, at 66.

¹⁹² See Somini Sengupta, *Rise of Drones in U.S. Drives Efforts to Limit Police Use*, N.Y. TIMES (Feb. 15, 2013), http://www.nytimes.com/2013/02/16/technology/rise-of-drones-in-us-spurs-efforts-to-limit-uses.html?pagewanted=all&_r=0.

¹⁹³ N.Y. CRIM. PROC. § 700.05(9) (McKinney 2014).

¹⁹⁴ *Id.*

permanent public security cameras,¹⁹⁵ so unless that interpretation is challenged, this statute would probably only prevent unmanned aircraft from conducting surveillance in homes and other private spaces.

C. Study of Legislative Responses

Legislators in forty-six states and Puerto Rico have introduced almost 200 bills that relate to unmanned aircraft during legislative sessions from 2011 to 2014.¹⁹⁶ They cover an array of topics, from regulating government surveillance to promoting the UAV industry.¹⁹⁷ Examining the legislation that has been filed and how legislation progresses through states shows that there is a robust debate surrounding unmanned aircraft throughout the United States. The review also shows, however, that there is little national consensus about how unmanned aircraft should be regulated; there are hundreds of ideas, but no widely recognized solutions.

D. Quantity

States vary greatly in the quantity of legislation their elected lawmakers have introduced. In Hawaii, legislators have introduced at least nineteen bills that relate directly to unmanned aircraft between 2011 and 2014.¹⁹⁸ Legislators in most states have introduced at least two.¹⁹⁹

I was not able to find legislation relating to unmanned aircraft in only four states: Colorado, Delaware, Mississippi, and South Dakota. This does not mean that unmanned aircraft are not a controversial policy question in these states. In Colorado, the town of Deer Trail held a referendum on a proposal to issue licenses allowing residents to shoot down unmanned aircraft

¹⁹⁵ N.Y. ATTORNEY GEN., INFORMAL OPINION NO. 97-47 (Oct. 23, 1997), available at <http://www.ag.ny.gov/sites/default/files/opinion/I%2097-47%20pw.pdf>.

¹⁹⁶ See Appendix (bills from these forty-six states and Puerto Rico are listed in the Appendix, organized alphabetically by state abbreviation).

¹⁹⁷ See Appendix (various “subject tags” include, *inter alia*, “Government Surveillance” and “Promoting Industry”).

¹⁹⁸ See Appendix (Hawaiian legislation is designated in the appendix by “HI”).

¹⁹⁹ See Appendix (most states have more than one piece of legislation noted by more than one bill under a certain state abbreviation).

within the town.²⁰⁰ The measure failed.²⁰¹ Also, the Colorado Parks and Wildlife Commission has banned using unmanned aircraft to assist hunting.²⁰² The question of state level regulation of unmanned aircraft may also have been addressed by other legislation. In 2014, Colorado's governor signed HB14-1152.²⁰³ The bill limits "passive surveillance" by law enforcement. "Passive surveillance" is "the use by a government entity of [any camera] to capture moving or still pictures or images of human activity on a routine basis or for security or other purposes."²⁰⁴ The bill sets out rules for how government agencies manage records of passive surveillance and requires old records to be destroyed.²⁰⁵ The new law will regulate government use of unmanned aircraft as well as government use of other public surveillance technologies including Automatic License Plate Readers and CCTV cameras.²⁰⁶

So even in the few states without state legislation to regulate unmanned aircraft, the issue can still be a hotly debated one in many policy-making institutions.

E. Partisanship

Overall, legislators from all parts of the political spectrum have sponsored legislation that relates to unmanned aircraft.²⁰⁷ Legislation that supports unmanned aircraft and legislation that attempts to regulate them both receive support from multiple

²⁰⁰ Nidhi Subbaraman, *Open Season on Drones? Town Split over Licenses to Hunt Unmanned Aircraft*, NBC NEWS (Aug. 8, 2013, 3:36 PM), <http://www.nbcnews.com/tech/tech-news/open-season-drones-town-split-over-licenses-hunt-unmanned-aircraft-f6C10876014>.

²⁰¹ Matt Pearce, *Colorado Town Shoots Down Drone-Hunting Ordinance*, L.A. TIMES (Apr. 2, 2014, 11:58 AM), <http://www.latimes.com/nation/nationnow/la-na-nn-drone-hunting-law-rejected-colorado20140402-story.html>.

²⁰² Scott Willoughby, *No Room for Drones in Colorado Hunting, But There is Room for Satire*, DENVER POST (Jan. 15, 2014, 12:01 AM), http://www.denverpost.com/outdoors/ci_24913154/no-room-drones-colorado-hunting-but-there-is.

²⁰³ H.B. 1152, 69th Gen. Assemb., 2d Reg. Sess. (Colo. 2014) (codified at COLO. REV. STAT. ANN. § 24-72-113 (West 2014)).

²⁰⁴ *Id.*

²⁰⁵ *Id.*

²⁰⁶ See Jeffrey A. Roberts, *Passive Surveillance Bill Passes Colorado House*, CFOIC (Feb. 24, 2014), <http://coloradofaic.org/passive-surveillance-bill-passes-house-committee/>.

²⁰⁷ See Appendix (the Appendix's "sponsorship" column provides whether or not each bill was bipartisan sponsored or sponsored by democrats or republicans exclusively).

political parties.²⁰⁸ Around a third of the bills that related to government surveillance had bipartisan sponsors.²⁰⁹ Almost half the states had bipartisan bills related to government surveillance.²¹⁰ Bills that aim to promote the commercial UAV industry also had sponsors from throughout the political spectrum.²¹¹

F. Subject Matter

For each of the bills I identified, I noted what subjects the bill covered. For example, Alabama's SB 317 contains provisions dealing with government surveillance, warrant requirements, a private remedy against government, and the admissibility of evidence at trial.²¹² All of the tags associated with each bill can be found in the Appendix.

The proposals of legislators across the country cover a large number of subjects. The variety shows the range and diversity of the policy debate over this subject. Legislators have certainly failed to agree on whether to regulate unmanned aircraft surveillance, but even those who wish to regulate support a diverse collection of very different ideas. There is some degree of clustering—most bills that regulate government surveillance propose requiring law enforcement acquire a warrant, for instance.²¹³ But there are deeper divisions about other issues, such as whether to grant individuals a right to sue the government for violations of the unmanned aircraft rules.

1. Studying Unmanned Aircraft

Bills in several states propose creating task forces to study the

²⁰⁸ See Appendix (a bill's "subject tag" in the Appendix describes the nature of the bill, whether or not it supports unmanned aircraft or seeks to limit the use of unmanned aircraft, for example. Sponsorship, whether bipartisan, democratic, or republican is noted in the "Sponsorship" column).

²⁰⁹ See Appendix (subject tag, "Government Surveillance" and sponsorship "bipartisan").

²¹⁰ See Appendix (subject tag, "Government Surveillance" and sponsorship "bipartisan").

²¹¹ See Appendix (subject tag, "Promoting Industry" and the "sponsorship" column).

²¹² See Appendix (the entry for AL SB 317 has the following subject tags: "Government Surveillance," "Warrants," "Private Remedy Against Government," and "Evidence Admissibility").

²¹³ Joseph M. Hanna, *The Drones Are Coming! Is New York Ready?*, 86 N.Y. St. B.J. 10, 12 (2014).

impact of unmanned aircraft in various contexts.²¹⁴ Many study bills would establish a committee composed of public and private sector experts to examine how unmanned aircraft will impact citizens' privacy.²¹⁵ For example Illinois Senate Resolution 217 would assemble seventeen experts from business, government, and the general public to "study the various ways in which drones are used, including, but not limited to, the use of drones for surveillance by law enforcement[.]"²¹⁶ The resolution calls on the assembled committee to "evaluate whether and how to limit the use of drones by law enforcement, other government entities, and private citizens[.]"²¹⁷

Several bills incorporate studies into a framework that also imposes new rules such as warrant requirements for law enforcement use of unmanned aircraft.²¹⁸ Other study bills focus on hoped-for positive effects of unmanned aircraft. Citing the economic impact of commercial unmanned aircraft use and applications such as "identify[ing] insect problems, spot[ting] watering issues, assess[ing] crop yields and track[ing] down cattle that have wandered off[.]" Senate Concurrent Resolution No. 124 in Louisiana proposes a study group to examine "the use and application of UAVs or drones for agricultural purposes[.]"²¹⁹

Legislators from left-leaning and right-leaning parties have sponsored legislation to study the effects of unmanned aircraft. North Dakota, North Carolina, Washington, and Indiana all had bipartisan study proposals.²²⁰ Louisiana and Illinois both had proposals with only Democratic sponsors.²²¹ Tennessee, Ohio, and Oregon all had proposals with only Republican sponsors.²²²

²¹⁴ See Appendix (subject tag, "Study UAVs"); see, e.g., S. Res. 217, 98th Gen. Assemb. (Ill. 2013); Jason Reagan, *Drone Laws in the States*, DRONELIFE.COM (July 19, 2014), <http://dronelife.com/2014/07/19/state-drone-laws/>.

²¹⁵ See generally Allie Bohm, *Drone Legislation: What's Being Proposed in the States?*, ACLU (Mar. 6, 2013, 3:15 PM), <https://www.aclu.org/blog/technology-and-liberty-national-security/drone-legislation-whats-being-proposed-states>.

²¹⁶ Ill. S. Res. 217.

²¹⁷ *Id.*

²¹⁸ See, e.g., H.B. 1373, 63rd Leg. Assemb. (N.D. 2013) (explaining warrant requirements for the use of unmanned aircraft).

²¹⁹ S. Con. Res. 124, 2014 Reg. Sess. (La. 2014).

²²⁰ See Appendix (see state tags "ND," "NC," "WA," and "IN," subject tag, "Study UAVs," and sponsorship "Bipartisan").

²²¹ See Appendix (see state tags "LA" and "IL," subject tag, "Study UAVs," and sponsorship "Democratic").

²²² See Appendix (see state tags "TN," "OH," and "OR," subject tag, "Study UAVs," and sponsorship "Republican").

Most of these proposals did not pass.²²³ However North Carolina's SB 402, an appropriations package, contained two provisions related to unmanned aircraft.²²⁴ The bill placed a moratorium on government use of unmanned aircraft until July 1, 2015, and it directed the state's Chief Information Officer and the Department of Transportation "to determine[] [whether] there is a requirement for unmanned aircraft systems for use by State or local agencies[.]"²²⁵ The state released the report in March 2014.²²⁶ The final report examines current laws governing unmanned aircraft and considers what additional rules, including new privacy protections, would be appropriate.²²⁷ The report acknowledges that "[c]itizens are concerned about personal privacy, particularly as it relates to the use of UAS technology by law enforcement agencies."²²⁸ Unfortunately the report does not make any specific recommendations about how the state could enhance privacy protections, concluding only that policymakers should "work with members of the law enforcement community . . . to address these issues."²²⁹

For privacy advocates, a bill to study the privacy implications of a new technology such as unmanned aircraft might seem like a useful strategy. "Study" legislation does not ask legislators to actually vote for limits on law enforcement or industry, merely to support an inquiry. A study might help convince legislators to take more concrete action later on. However there does not seem to be evidence that legislation calling for studies has helped substantive reforms pass. Many of the study proposals have not succeeded.²³⁰ In North Carolina, the study proposal that passed was part of legislation that also contained the only substantive reform that has passed in the state—a moratorium on government use of unmanned aircraft.²³¹ Furthermore, the legislation did not require the study to focus on government surveillance, and the final report avoided significantly

²²³ See Appendix (subject tag, "Study UAVs" and "Died" or "Failed").

²²⁴ S.B. 402, 2013 Gen. Assemb. (N.C. 2013).

²²⁵ *Id.*

²²⁶ CHRIS ESTES, OFFICE OF INFO. TECH. SERVS., UNMANNED AIRCRAFT USE IN NORTH CAROLINA: REPORT TO THE JOINT LEGISLATIVE OVERSIGHT COMMITTEE ON INFORMATION TECHNOLOGY, JOINT LEGISLATIVE TRANSPORTATION OVERSIGHT COMMITTEE, FISCAL RESEARCH DIVISION (2014).

²²⁷ *Id.* at 4–5, 21.

²²⁸ *Id.* at 17.

²²⁹ *Id.*

²³⁰ See Appendix (subject tag, "Study UAVs" and "Died" or "Failed").

²³¹ S.B. 402, 2013 Gen. Assemb. (N.C. 2013).

considering the issue.²³² At least so far, study proposals do not seem to be an effective way to ease legislators into supporting stronger reforms later.

2. Moratoriums

A handful of states have considered placing moratoriums on the use of unmanned aircraft.²³³ As discussed above, North Carolina passed an appropriations act in 2013 that included a moratorium on government use of UAS.²³⁴ The moratorium did not completely prohibit the use of unmanned aircraft; instead the bill required any government entity that wished to use an unmanned aircraft to get explicit approval from the State's Chief Information Officer.²³⁵ Virginia passed H.B. 2012 in 2013.²³⁶ The legislation banned state law enforcement agencies from operating unmanned aircraft until July 1, 2015.²³⁷ The bill makes several exceptions, including search-and-rescue operations and National Guard training.²³⁸ The bill also entirely bans local agencies from deploying or using any "weaponized" unmanned aircraft.²³⁹ Finally, legislators in Pennsylvania introduced a measure that is nearly identical to the Virginia moratorium.²⁴⁰

3. Weapons

Several dozen bills ban installing weapons on unmanned aircraft.²⁴¹ Weapon prohibitions are invariably part of larger proposals, usually relating to surveillance by government officials of private entities. Weapon bans often focus on the government's ability to use weapons on unmanned aircraft.²⁴² Montana's S.B. 150 would have prohibited any government entity from "own[ing], utiliz[ing], contract[ing] for, or otherwise obtain[ing] any services from an unmanned aerial vehicle containing an antipersonnel

²³² ESTES, *supra* note 226, at 17.

²³³ See, e.g., N.C. S. B. 402.

²³⁴ *Id.*

²³⁵ *Id.*

²³⁶ H. B. 2012, 2013 Gen. Assemb., Reconvened Sess. (Va. 2013).

²³⁷ *Id.*

²³⁸ *Id.*

²³⁹ *Id.*

²⁴⁰ S. B. 875, 2013 Gen. Assemb., Reg. Sess. (Pa. 2013).

²⁴¹ See Appendix (subject tag, "Weapon Ban").

²⁴² See, e.g., S. B. 150, 63rd Leg., Reg. Sess. (Mont. 2013).

device.”²⁴³ However, there are bills that limit weapons that choose to exclude law enforcement from the armament rules.²⁴⁴ While Hawaii’s S.B. 2582 regulates law enforcement in other ways, including requiring warrants for certain uses of information obtained by a UAV, the bill only bans the installation of weapons on unmanned aircraft used for commercial purposes, and leaves government operated armed unmanned aircraft alone.²⁴⁵

4. Surveillance

Most of the legislation that attempts to directly regulate unmanned aircraft relates to surveillance by public or private entities.²⁴⁶ It is probably not surprising that this is the case. What may be less expected are the range of ideas for regulating surveillance, as well as the identities of a few interest groups that have joined this debate.

G. Surveillance by Public Entities

Around half the bills identified in this paper attempt to regulate government surveillance, as opposed to surveillance by private individuals or organizations.²⁴⁷ These bills share some common features.

1. Warrants

Almost all of these bills require law enforcement to acquire a warrant to conduct surveillance.²⁴⁸ Warrant requirements in the legislation are also invariably and subject to exceptions. Bills waive the warrant requirement when the person who is the subject of surveillance consents to disclosure of information captured with an unmanned aircraft.²⁴⁹ Bills also provide exceptions in exigent circumstances or emergencies, such as when there is an immediate threat to a person’s life or safety.²⁵⁰ Florida’s S.B. 92 permits warrantless use “to forestall the

²⁴³ *Id.*

²⁴⁴ *See, e.g.*, S. B. 2582, 27th Leg., Reg. Sess. (Haw. 2014).

²⁴⁵ *Id.*

²⁴⁶ *See, e.g.*, S. B. 783, 27th Leg., Reg. Sess. (Haw. 2013).

²⁴⁷ *See* Appendix (subject tag, “Government Surveillance”).

²⁴⁸ *See, e.g.*, Haw. S. B. 783.

²⁴⁹ *See, e.g., id.*

²⁵⁰ *See, e.g., id.*

imminent escape of a suspect or the destruction of evidence”²⁵¹ Oklahoma S.B. 2043 permits warrantless UAV operations “to locate an escaped prisoner”²⁵² In a few bills, the lists of exceptions are so long that there is little left of the warrant requirement at all.²⁵³ H.B. 912 in Texas allows law enforcement agencies to use an unmanned aircraft not only pursuant to a warrant, but also for documenting crime scenes and for “conducting a high-risk tactical operation[.]” among other exceptions.²⁵⁴

2. Evidence Admissibility

The vast majority of bills that regulate government surveillance with unmanned aircraft prohibit information illegally obtained using an unmanned aircraft from use in court or other legal proceedings.²⁵⁵ The traditional remedy for unconstitutional searches is the exclusion of illegally obtained evidence from court.²⁵⁶ By excluding illegally obtained evidence, legislators are attempting to incorporate the traditional remedy for Fourth Amendment unreasonable searches into UAV law. S.B. 1587 in Illinois is explicit about the link between the Fourth Amendment exclusionary rule and the proposal to exclude evidence illegally obtained using a UAV.²⁵⁷ The bill provides that if a court decides “by a preponderance of the evidence that a law enforcement agency used a drone to gather information in violation of [this law,] then the information shall be presumed to be inadmissible”²⁵⁸ The government can rebut this presumption of inadmissibility “by proving the applicability of a judicially recognized exception to the exclusionary rule of the Fourth Amendment to the U.S. Constitution or . . . the Illinois [State] Constitution”²⁵⁹ Other bills propose similar rules but are less explicit that the exclusion of evidence emulates the Fourth Amendment doctrine.²⁶⁰ While excluding evidence is a

²⁵¹ S.B. 92, 2013 Leg., Reg. Sess. (Fla. 2013).

²⁵² S.B. 2043, 54th Leg., 2d Reg. Sess. (Okla. 2014).

²⁵³ See Haw. S.B. 783; Fla. S.B. 92.

²⁵⁴ H.B. 912, 2013 Leg., 83rd Sess. (Tex. 2013).

²⁵⁵ See, e.g., H.B. 2334, 51st Leg., 2d Reg. Sess. (Ariz. 2014); H.B. 159, 28th Leg., 1st Sess. (Alaska 2013).

²⁵⁶ *Mapp v. Ohio*, 367 U.S. 643, 655 (1961).

²⁵⁷ S.B. 1587, 98th Gen. Assemb., Reg. Sess. (Ill. 2013).

²⁵⁸ *Id.*

²⁵⁹ *Id.*

²⁶⁰ See, e.g., S.B. 1892, 108th Gen. Assemb., Reg. Sess. (Tenn. 2014) (enacted).

typical remedy in UAV bills regulating government surveillance, there is some variation in the proceedings from which UAV obtained information is banned. Florida's S.B. 92 only prohibits evidence illegally collected from use in criminal court.²⁶¹ While Tennessee S.B. 1892 not only provides that illegally obtained information "[m]ay not be used as evidence in any criminal or juvenile proceeding, civil action, or administrative proceeding[.]" but that such information "[i]s not subject to discovery, subpoena, or other means of legal compulsion for its release."²⁶²

These "government surveillance" bills are more evenly divided along how the legislation deals with other policy questions.

3. Private Remedy Against Government Surveillance

Around half of the bills that regulate government surveillance offer members of the public the right to sue the government for using an unmanned aircraft illegally.²⁶³ Some bills, such as Florida's S.B. 92 offer broad relief, including both retrospective and prospective relief.²⁶⁴ The bill authorizes any "aggrieved party [to] initiate a civil action against a law enforcement agency to obtain all appropriate relief in order to *prevent or remedy* a violation of this act."²⁶⁵ Other states offer more limited remedies.²⁶⁶ New Jersey's Assembly Bill 4091 proposed making a law enforcement officer liable only after "knowingly" violating the act.²⁶⁷

4. Collection Minimization and Data Retention Limits

Around a third of the bills that would regulate government surveillance impose rules for how the government should manage data that unmanned aircraft acquire.²⁶⁸ Some require the government to minimize the amount of information that unmanned aircraft collect about individuals or places other than the specific target of an investigation.²⁶⁹ H.B. 2683 in Kansas requires that "[w]hen unmanned aerial vehicles are used

²⁶¹ S.B. 92, 2013 Leg., Reg. Sess. (Fla. 2013).

²⁶² Tenn. S.B. 1892.

²⁶³ See Appendix (subject tag, "Private Remedy Against Government").

²⁶⁴ Fla. S.B. 92.

²⁶⁵ *Id.* (emphasis added).

²⁶⁶ See, e.g., Assemb. B. 4091, 215th Leg., Reg. Sess. (N.J. 2013).

²⁶⁷ *Id.*

²⁶⁸ See, e.g., H.B. 2683, 85th Leg., Reg. Sess. (Kan. 2014).

²⁶⁹ See, e.g., *id.*

pursuant to this section, they shall be operated in a manner to collect data only on the target and to avoid data collection on individuals, homes or areas other than the target.”²⁷⁰ Some bills require the government destroy records that relate to entities other than the target.²⁷¹ H.B. 2683 in Kansas has one of these provisions as well, mandating that “data collected on an individual, home or area other than the target that justified deployment . . . must be deleted as soon as possible and in no event later than 24 hours after collection.”²⁷²

There are several less common features of bills offering limits to government surveillance.

5. Biometrics

A small number of bills identify advanced surveillance technologies that law enforcement would be banned from employing.²⁷³ In Massachusetts, S.B. 1664 contains typical language; the bill would ban the use of “[f]acial recognition and other biometric matching technology . . . except to identify the subject of [the] warrant.”²⁷⁴ The exception may nearly swallow the rule, since it would necessarily allow law enforcement to use biometric matching technologies to analyze images collected by the UAV in order to determine if the image contained the target.

H. Criminal Penalties, Criminal Offense for Law Enforcement

A small set of bills explicitly state that law enforcement personnel that violate the UAV rules will be guilty of a criminal offense.²⁷⁵ H.B. 560 in Georgia does not even require an officer to possess a particular intent: “[a]ny law enforcement agent of the State of Georgia who utilizes an unmanned aerial vehicle for any purpose whatsoever within the airspace of the State of Georgia without first obtaining a warrant shall be guilty of a misdemeanor.”²⁷⁶ The bill also creates an identical offense that applies to federal agents.²⁷⁷ H.B. 1566 in New Hampshire also

²⁷⁰ *Id.*

²⁷¹ *Id.*

²⁷² *Id.*

²⁷³ *See, e.g.*, S.B. 1664, 188th General Court (Mass. 2013).

²⁷⁴ *Id.*

²⁷⁵ *See, e.g.*, H.B. 560, 2013 Gen. Assemb., Reg. Sess. (Ga. 2013); H.B. 1566, 163rd General Court, Reg. Sess. (N.H. 2014).

²⁷⁶ Ga. H.B. 560.

²⁷⁷ *Id.*

creates an offense specifically for improper government use of a UAV.²⁷⁸ However, H.B. 1566 requires a law enforcement officer to have violated the act “purposely.”²⁷⁹

I. Banning Surveillance of First Amendment Activities

A few pieces of legislation specifically ban the use of unmanned aircraft to conduct surveillance based on religious or political affiliations.²⁸⁰ Massachusetts’s S.B. 1664 would prohibit the use of unmanned aircraft “to track, collect or maintain information about the political, religious or social views, associations or activities of any individual, group, association, organization, corporation, business or partnership or other entity”²⁸¹ The government could only avoid this prohibition by meeting two criteria.²⁸² First, the protected activities would need to relate “directly to investigation of criminal activity[.]”²⁸³ Second, the government would need to have “reasonable grounds to suspect the subject of the information is involved in criminal conduct.”²⁸⁴ New York’s A.B. 6370 singles out places of religious worship for special protection but not other forms of First Amendment association and expression.²⁸⁵

J. Limit Altitude of Law Enforcement Unmanned Aircraft

One bill makes a particularly unusual proposal.²⁸⁶ After proposing to ban law enforcement from using a UAV “to gather any evidence or engage in any other law enforcement activity[.]”²⁸⁷ or enforcing certain land use laws, the bill would bar all law enforcement from operating any UAV “at an altitude that is greater than 350 feet.”²⁸⁸

²⁷⁸ N.H. H.B. 1566.

²⁷⁹ *Id.*

²⁸⁰ *See, e.g.*, S.B. 1664, 188th General Court (Mass. 2013).

²⁸¹ *Id.*

²⁸² *Id.*

²⁸³ *Id.*

²⁸⁴ *Id.*

²⁸⁵ Assemb. B. 6370, 236th Leg., Reg. Sess. (N.Y. 2013).

²⁸⁶ *See* Assemb. B. 4091, 215th Leg., Reg. Sess. (N.J. 2013).

²⁸⁷ *Id.*

²⁸⁸ *Id.*

K. Surveillance by Private Entities

A smaller collection of bills—around two dozen—propose limits to private surveillance.²⁸⁹ Some of these bills create a private remedy that allows individuals to sue private UAV operators for invasion of privacy; others make it a crime for a person to capture images of another person using a UAV.²⁹⁰ Some only prohibit using unmanned aircraft from recording when a subject has a “reasonable expectation of privacy.”²⁹¹ For example, Wisconsin’s A.B. 203 would make it a Class A misdemeanor “to photograph, record, or otherwise observe another individual in a place where the individual has a reasonable expectation of privacy.”²⁹² But not all bills contain such limiting language. Tennessee’s S.B. 1892 proposes charging with a misdemeanor a person who “[u]ses an unmanned aircraft to capture an image of an individual or privately owned real property in this state with the intent to conduct surveillance on the individual or property captured in the image[.]”²⁹³

1. Non-surveillance Conduct with Unmanned Aircraft

Another group of bills regulate private conduct other than surveillance using unmanned aircraft.²⁹⁴

L. Nuisance

Three bills proposed in Hawaii would have criminalized operating an unmanned aircraft in a way that causes a “nuisance” to a person or property.²⁹⁵ One defines “nuisance” with reference to the state’s “Right to Farm Act,” which describes a “nuisance” as “any interference with reasonable use and enjoyment of land, including but not limited to smoke, odors, dust, noise, or vibration; provided that nothing in this chapter shall in any way restrict or impede the authority of the State to

²⁸⁹ See Appendix (subject tag, “Private Invasion of Privacy”).

²⁹⁰ See Appendix (subject tag, “Private Invasion of Privacy”).

²⁹¹ See, e.g., Assemb. B. 203, 101st Leg., Reg. Sess. (Wis. 2013).

²⁹² *Id.*

²⁹³ S.B. 1892, 108th Gen. Assemb., Reg. Sess. (Tenn. 2014) (enacted).

²⁹⁴ See S.B. 240, 2014 Leg., Reg. Sess. (Ala. 2014); H.B. 1657, 27th Leg., Reg. Sess. (Haw. 2014); H.B. 2421, 27th Leg., Reg. Sess. (Haw. 2014); S.B. 2152, 27th Leg., Reg. Sess. (Haw. 2014); H.B. 1775, 27th Leg., Reg. Sess. (Haw. 2014); H.B. 30, 2014 Leg., Budget Sess. (Wyo. 2014).

²⁹⁵ Haw. H.B. 1657; Haw. H.B. 2421; Haw. S.B. 2152.

protect the public health, safety, and welfare.”²⁹⁶

M. Hunting

Several pieces of legislation take different sides in a debate over the relationship between unmanned aircraft and hunting.²⁹⁷

Wyoming’s H.B. 30 and Hawaii’s H.B. 1775 prohibit using an unmanned aircraft to hunt animals.²⁹⁸ The bill in Hawaii would only ban hunting with a UAV on public land or water.²⁹⁹ The bill in Wyoming would not prohibit using an unmanned aircraft to hunt “predatory animals.”³⁰⁰

Bills in another collection prohibit using an unmanned aircraft to interfere with hunting.³⁰¹ A typical example is S.B. 1332 in Pennsylvania, which would make it a summary offense to use “an unmanned aircraft in a manner that interferes with another person’s lawful taking of game or wildlife”³⁰² Using unmanned aircraft to protect animals from hunters is apparently something that is actually happening. PETA is marketing small quadrotor UAVs called “Air Angels” as “*The New Hobby for Animal Protectionists*.”³⁰³ The organization’s website explains how to protect wildlife with the aircraft: “Using your hobby drone, you can collect instant to-your-phone video footage of hunters engaging in illegal activity”³⁰⁴ Bills in this collection seek to protect hunters from activists using Air Angels and similar UAVs.

N. Private Ownership

Two pieces of legislation ban private ownership or possession of unmanned aircraft.³⁰⁵ A.B. 3157 in New Jersey would hold a

²⁹⁶ HAW. REV. STAT. § 165-2 (West 2014).

²⁹⁷ Compare Ala. S.B. 240 (prohibiting the use of drones to harass hunters and fishermen) and Haw. H.B. 1775 (prohibiting the use of drones to hunt wildlife), with Wyo. H.B. 30 (permitting the use of drones to kill predatory animals but not other wildlife).

²⁹⁸ Haw. H.B. 1775; Wyo. H.B. 30.

²⁹⁹ Haw. H.B. 1775.

³⁰⁰ Wyo. H.B. 30.

³⁰¹ See, e.g., S.B. 1332, 198th Gen. Assemb., Reg. Sess. (Pa. 2014).

³⁰² *Id.*

³⁰³ *Air Angels Drones*, PETA CATALOG, <http://www.petacatalog.com/homepersonalbeauty/airangelsdrone/> (last visited Oct. 7, 2014).

³⁰⁴ *Id.*

³⁰⁵ See H.B. 11, 2014 Leg., Reg. Sess. (Ky. 2014); Assemb. B. 3157, 215th

person guilty of a “disorderly persons offense[]” who “purchases, owns, or possesses an unmanned aerial system”³⁰⁶ In Kentucky, H.B. 11 would impose special limitations on how corporations could use unmanned aircraft.³⁰⁷ The bill includes foreign and domestic corporations in a list of “prohibited agenc[ies].”³⁰⁸ Prohibited agencies would be forbidden from using an unmanned aircraft with a “lethal payload” or gathering “evidence or other information.”³⁰⁹ Banning corporations from using unmanned aircraft to gather “information” would, in effect, ban much of the nascent unmanned aircraft industry.

1. Support for UAV Industry

Yet another collection of bills support UAV use in a variety of ways. At least eight states passed resolutions calling the FAA to select the state to host a UAS Test Site or another aerospace project.³¹⁰ A typical example is H. Con. R. 140 in Hawaii.³¹¹ The resolution explains how hosting a UAS test site would benefit the state: the site would “create high-paying jobs, and generate extramural revenue streams”³¹² The resolution then instructs a state agency to prepare and submit to the FAA a proposal for Hawaii to host a UAS test site.³¹³

A hotly debated topic in the unmanned aircraft industry is how liability for accidents involving UAVs will be shared among operators and manufacturers.³¹⁴ In Ohio, H.B. 1556 proposed a clear solution to at least some of manufacturers’ concerns.³¹⁵ No manufacturer could be held liable when a person or entity using an unmanned aircraft conducted illegal surveillance.³¹⁶

Legislation in Virginia would protect unmanned aircraft use by

Leg., Reg. Sess. (N.J. 2012).

³⁰⁶ N.J. Assemb. B. 3157.

³⁰⁷ See Ky. H.B. 11.

³⁰⁸ *Id.*

³⁰⁹ *Id.*

³¹⁰ See Appendix (subject tags, “Test Site,” & “Requesting FAA Choose State for Test Site”).

³¹¹ H. Con. Res. 140, 26th Leg., Reg. Sess (Haw. 2012).

³¹² *Id.*

³¹³ *Id.*

³¹⁴ See Erin Coe, *Commercial Drones Herald Product Liability, Privacy Suits*, LAW360 (Jan. 16, 2014, 9:48 PM), <http://www.law360.com/articles/500825/commercial-drones-herald-product-liability-privacy-suits>.

³¹⁵ See H.R. 1556, 54th Leg., 1st Sess. (Okla. 2013).

³¹⁶ *Id.*

universities.³¹⁷ Public universities would be exempt from a proposal's restraints on government use of UAVs and authorized to employ unmanned aircraft systems for "research or academic purposes[.]"³¹⁸

2. Legislation Sources

Most legislation does not cite any particular sources, but there are a few exceptions that are worth mentioning. A few pieces of legislation explicitly reference or even incorporate model policy developed by non-governmental organizations. Four bills proposed in Hawaii instruct the state police to implement recommendations by the International Association of Chiefs of Police.³¹⁹ The International Association of Chiefs of Police (IACP) engages in policy advocacy, research, and education to support law enforcement.³²⁰ Its Aviation Committee published guidelines in August of 2012.³²¹ The guidelines warn that "[d]espite [UAVs'] proven effectiveness, concerns about privacy threaten to overshadow the benefits this technology promises . . ."³²² The recommendations encourage law enforcement to exercise modest restraint in using unmanned aircraft.³²³ The recommendations suggest agencies obtain a warrant, although only if "there are specific and articulable grounds to believe that the UA will collect evidence of criminal wrongdoing and if the UA will intrude upon reasonable expectations of privacy . . ."³²⁴ Three of the same bills also explain that the purpose of the legislation is to adopt recommendations developed jointly by the Aerospace States Association, the Council of State Governments, and the National Council of State Legislatures.³²⁵ Advocates may note that none of the bills citing sources cite to rights advocacy groups such as the

³¹⁷ H.B. 1616, 2013 Gen. Assemb., Reg. Sess. (Va. 2013).

³¹⁸ *Id.*

³¹⁹ S.B. 2582, 27th Leg., Reg. Sess. (Haw. 2014); S.B. 2152, 27th Leg., Reg. Sess. (Haw. 2014); H.B. 1657, 27th Leg., Reg. Sess. (Haw. 2014); H.B. 2421, 27th Leg., Reg. Sess. (Haw. 2014).

³²⁰ *See What We Do*, INT'L ASS'N OF CHIEFS OF POLICE, <http://www.theiacp.org/What-We-Do>, (last visited Oct. 8, 2014).

³²¹ INT'L ASS'N OF CHIEFS OF POLICE AVIATION COMM., RECOMMENDED GUIDELINES FOR THE USE OF UNMANNED AIRCRAFT 1 (Aug. 2012), *available at* http://www.theiacp.org/portals/0/pdfs/iacp_uaguidelines.pdf.

³²² *Id.*

³²³ *See id.* at 3.

³²⁴ *Id.*

³²⁵ S.B. 2152, 27th Leg., Reg. Sess. (Haw. 2014); H.B. 2421, 27th Leg., Reg. Sess. (Haw. 2014); H.B. 1657, 27th Leg., Reg. Sess. (Haw. 2014).

American Civil Liberties Union.

3. UAV Governance Mechanisms

The last major category identifies bills that propose new mechanisms for governing how unmanned aircraft are used.³²⁶

The tactic that does the most to empower members of the public to limit government UAV operations is legislation that gives communities the power to veto local government UAV acquisitions. At least twenty pieces of legislation in states around the country proposed requiring government agencies to seek approval from another public body before using an unmanned aircraft.³²⁷ A typical example is a provision in Michigan H.B. 4455 from 2013.³²⁸ A paragraph of Section 3 states, “[t]his state or a local unit of government shall not acquire an unmanned aerial vehicle until the legislature or the legislative body of the local unit of government seeking to acquire an unmanned aerial vehicle first approves its acquisition.”³²⁹

Bills in Indiana, Ohio, and Oregon suggest establishing licensing or registration schemes for unmanned aircraft.³³⁰ Indiana’s S.B. 336 would require all UAV operators—public and private—to meet certain licensing requirements, including training.³³¹ Oregon’s H.B. 2710 and S.B. 853 focus on government UAV operations and mandates all public bodies register any unmanned aircraft with the Oregon Department of Aviation.³³²

These bills in Oregon would also modify the state’s Aviation Board to charge the board with a UAV oversight function.³³³ Under both bills, the Aviation Board would manage the state’s registry of all publicly operated unmanned aircraft and require disclosures from operators including information such as “[t]he frequency of use of drones by the public body” and “[t]he purposes for which the drones have been used by the public body during the preceding calendar year.”³³⁴ Oregon H.B. 2710 even gives the

³²⁶ See Appendix (subject tag, “Pre-Acquisition Approval”).

³²⁷ See Appendix (subject tag, “Pre-Acquisition Approval”).

³²⁸ H.B. 4455, 97th Leg., Reg. Sess. (Mich. 2013).

³²⁹ *Id.*

³³⁰ S.B. 336, 118th Gen. Assemb., 2d Reg. Sess. (Ind. 2014); H.B. 364, 130th Gen. Assemb., Reg. Sess. (Ohio 2014); H.B. 2710, 77th Leg. Assemb., Reg. Sess. (Or. 2013); S.B. 853, 77th Leg. Assemb., Reg. Sess. (Or. 2013).

³³¹ Ind. S.B. 336.

³³² Or. H.B. 2710; Or. S.B. 853.

³³³ Or. H.B. 2710; Or. S.B. 853.

³³⁴ Or. H.B. 2710.

state Aviation Board authority to create additional regulations as “necessary” to operate the registry.³³⁵

Others stop short of creating public control over government UAV programs, but instead focus on transparency, offering the public greater awareness if government UAV operations are taking place. Several dozen bills would establish some variety of public reporting scheme for UAV operators.³³⁶ Illinois’s S.B. 1587, which became law in August of 2013, simply requires the state government to annually publish “a concise report that lists every law enforcement agency that owns a drone, and for each of those agencies, the number of drones that it owns.”³³⁷ Other reporting schemes are more elaborate. For example, a proposal in Minnesota requires every governmental entity that operates a UAV to publish its own report.³³⁸ The reports must include a long list of information, including “the number of times an unmanned aerial vehicle was used,” “the number of criminal investigations aided by the use of unmanned aerial vehicles,” “the frequency and type of data collected on individuals or areas other than targets[,]” and “the total cost of the entity’s unmanned aerial vehicle program.”³³⁹ While reporting schemes such as these do not permit members of the public to directly limit government UAV operations, they at least inform the public about government surveillance and could help privacy advocates build support for more significant reforms in the future.

One bill, while proposing privacy protections, as well as registration and transparency requirements for unmanned aircraft, also proposes reducing the influence that local communities can have over unmanned aircraft.³⁴⁰ Oregon’s H.B. 2710 expressly forbids local communities from passing additional limits on UAV use.³⁴¹ The bill declares that “the authority to regulate the ownership or operation of drones is vested solely in the Legislative Assembly.”³⁴² It may be that this provision is an attempt at compromise: while it imposes some restraints on government UAV operations, it also prevents local communities from placing additional burdens on local agencies.

³³⁵ *Id.*

³³⁶ See Appendix (subject tag, “Public Disclosure”).

³³⁷ S.B. 1587, 98th Gen. Assemb., Reg. Sess. (Ill. 2013) (enacted).

³³⁸ H.B. 2553, 88th Leg. Sess., 2d Reg. Sess. (Minn. 2014).

³³⁹ *Id.*

³⁴⁰ See H.B. 2710, 77th Leg. Assemb., Reg. Sess. (Or. 2013).

³⁴¹ *Id.*

³⁴² *Id.*

O. Final Thoughts on UAV Legislation Subject Matter

This review demonstrates that there is tremendous diversity in UAV legislation. It also illustrates a point that when a complicated topic becomes controversial, legislation from all perspectives on the topic is likely to appear. Advocates for limiting government surveillance should be prepared for many different legislative proposals from their opponents as well as potential friends. They should also be prepared for legislative proposals that cater to constituencies that might become allies. For instance legislation that bans using UAVs to interfere with hunting may indicate there is an opportunity to craft an alliance between civil rights advocates and the hunting community.

IV. ADVOCACY IN PARTICULAR STATES

The paper next looks at how legislation evolved in just a couple of states. These examples illustrate how many paths there are for privacy advocacy to take in a legislature.

A. Case: Hawaii

Legislators in Hawaii introduced at least nineteen legislative proposals related to unmanned aircraft from 2011 and 2014.³⁴³ All of the proposals in 2011 offered support for unmanned aircraft in some way. They encouraged the industry or requested the FAA choose the state for UAV development.³⁴⁴ Support for unmanned aircraft came from both Democratic and Republican legislators, and Hawaii legislators adopted two of these proposals.³⁴⁵

The legislative activity by 2014 looked substantially different. There were still a couple of proposals supportive of the industry,³⁴⁶ but most of the thirteen bills introduced that session offered new restraints on unmanned aircraft operations.³⁴⁷ None of the proposals to regulate unmanned aircraft passed.³⁴⁸ S.B.

³⁴³ See Appendix (state, "HI").

³⁴⁴ See Appendix (session, "HI 2011 Regular Session").

³⁴⁵ See H.C.R. 140, 26th Leg., Reg. Sess. (Haw. 2012) (adopted proposal); S.C.R. 137, 26th Leg., Reg. Sess. (Haw. 2012) (adopted proposal); Appendix (subject tag, "Requesting FAA Choose State For Test Site, Adopted").

³⁴⁶ See H.B 2627, 27th Leg., Reg. Sess. (Haw. 2014) (supporting commercial potential of the technology).

³⁴⁷ See Appendix (subject tag, "HI 2014 Regular Session").

³⁴⁸ *Id.*

2608 passed the Senate in 2014 but could not pass out of the House.³⁴⁹ One of the groups to express concern was Hawaii's Nature Conservancy.³⁵⁰ A spokesperson told a reporter, "the Conservancy could use drones to track invasive plants that attack forests."³⁵¹ In Hawaii, the apparent enthusiasm of legislators to act on the issue has not turned into actual legislative changes.

B. Case: Texas

Texas legislators have introduced fewer pieces of legislation, but the state passed a bill regulating unmanned aircraft that is widely considered an outlier.³⁵² One of the key differences is that the bill focuses on controlling private use of unmanned aircraft rather than government surveillance.³⁵³ Perhaps even more unusual is the bill's structure. The bill contains a universal prohibition on the use of an unmanned aircraft to capture images or to possess, disclose, display, distribute, or otherwise use an image captured with an unmanned aircraft.³⁵⁴ Another section of the new law then sets out approximately twenty different exceptions to the general prohibition.³⁵⁵ The exceptions authorize a wide range of unmanned aircraft activities. Universities may use UAVs to conduct research; the military may use UAVs; electric or natural gas utilities may use UAVs "for operations and maintenance of utility facilities"; real estate brokers may use UAVs "in connection with the marketing, sale, or financing of real property[.]"³⁵⁶ Law enforcement may use UAVs not only with a warrant, but also for the purpose of investigating the scenes of certain enumerated offenses.³⁵⁷

The legislation in Texas received significant support from both

³⁴⁹ S.B. 2608, 27th Leg., Reg. Sess. (Haw. 2014) (passed the Senate); Megan Moseley, *Drone Bill Dies in Committee*, HAW. TRIB.-HERALD (Mar. 19, 2014, 1:00 AM), <http://hawaii.tribune-herald.com/news/drone-bill-dies-committee>.

³⁵⁰ See Jim Mendoza, *Senate Bill Restricts Drone Use*, HAW. NEWS NOW (Feb. 17, 2014, 10:55 PM), <http://www.hawaiinewsnow.com/story/24748003/senate-bill-restricts-drone-use>.

³⁵¹ *Id.*

³⁵² See Dan Solomon, *Texas's Drone Law is Pretty Much the Opposite of Every Other State's Drone Law*, TEX. MONTHLY (Sept. 16, 2013, 7:24 PM), <http://www.texasmonthly.com/daily-post/texass-drone-law-pretty-much-opposite-every-other-states-drone-law>.

³⁵³ *Id.*

³⁵⁴ H.B. 912, 83rd Leg. (Tex. 2013).

³⁵⁵ *Id.*

³⁵⁶ *Id.*

³⁵⁷ *Id.*

sides of the aisle. The bill's primary author, Rep. Lance Gooden, is a Republican, but of the 103 legislators eventually listed as additional authors of the bill, thirty-five were Democrats.³⁵⁸

The "broad prohibition with listed exceptions" approach has appeared in a few other states.³⁵⁹ Tennessee's H.B. 1779, which passed, and New York's S.B. 7639, which did not, both emulate the Texas bill.³⁶⁰

The story of legislation in Texas illustrates some of the risks of beginning a campaign to pass legislation without a strong coalition allied behind a single vision of legislation. The Texas bill began with a broad prohibition of UAV use, but was structured in a way that made it possible to add exception after exception. The final result is a Swiss cheese of legislation that appears to clearly reflect the influence of particular lobby groups.

C. Case: Maine

In Maine, S.B. S.P. 72, which proposed restraints to government surveillance including a warrant requirement, passed the legislature but fell to a veto from Republican Governor Paul LePage.³⁶¹ The bill's sponsors were all Democrats, except for one Independent.³⁶² The bill only barely passed the Senate but the House approved the bill by a wide margin.³⁶³

³⁵⁸ *Elected Officials Directory-Texas House*, TEX. TRIB., <http://www.texastribune.org/directory/> (last visited Oct. 12, 2014); see *Authors*, TEX. LEGIS. ONLINE, <http://www.capitol.state.tx.us/BillLookup/Authors.aspx?LegSess=83R&Bill=HB912> (last visited Oct. 1, 2014).

³⁵⁹ See, e.g., H.B. 1779, 108th Gen. Assemb., Reg. Sess. (Tenn. 2014); S.B. 7639, 237th Leg., Reg. Sess. (N.Y. 2014).

³⁶⁰ See Tenn. H.B. 1779 (enumerating UAV use exceptions); N.Y. S.B. 7639 (enumerating UAV use exceptions); LEGISCAN, <http://legiscan.com/gaits/search?state=TN&bill=1779> (last visited Oct. 3, 2014).

³⁶¹ S.B. 236, 126th Leg., 1st Reg. Sess. (Me. 2013); *2013 Bill Tracking*, LEXISNEXIS, <https://advance.lexis.com/document/?pdmfid=1000516&crd=b8ba5ef0-8591-4c1e-a844-f3321cb71db8&pddocfullpath=%2Fshared%2Fdocument%2Fstatutes-legislation%2Furn%3AcontentItem%3A57N1-7H10-B70N-DODP-00000-00&pddocid=urn%3AcontentItem%3A57N1-7H10-B70N-DODP-00000-00&pdcontentcomponentid=5038&ecomp=vhyg&earg=sr1&prid=6ee0c20c-343a-473b-9e30-dbc19182ba4f>.

³⁶² See Me. S.B. 236 (illustrating Representative Chipman, an Independent, as a sponsor).

³⁶³ See *Roll-Calls for LD 236*, STATE OF ME. LEGISLATURE, <http://www.mainelegislature.org/LawMakerWeb/rollcalls.asp?ID=280046602> (last visited Oct. 3, 2014).

In his veto letter, the governor explained his decision rejecting the bill.³⁶⁴ He expressed concern that the bill would damage a nascent industry in the state.³⁶⁵ He also argued that for the state police “buying drones is a long way off”; that Maine currently does not have “a drone problem”; and that the bill would only serve to create more litigation and “do nothing to help our overburdened court system”³⁶⁶ Governor LePage did acknowledge the need to protect the public from invasive surveillance; instead of signing the legislature’s bill, he stated an intention to order the state’s Commissioner of Public Safety to establish guidelines for UAV use.³⁶⁷

Examining the organizations that lobbied or testified on legislation can provide some insight into the interest groups that shaped a bill’s progress through the legislature. Three organizations registered to lobby on the UAV bill that was ultimately vetoed: the American Civil Liberties Union, the Maine Municipal Association, and the Maine Society of Land Surveyors.³⁶⁸ The ACLU supported the legislation because of the privacy protections it proposed.³⁶⁹ But the Maine Society of Land Surveyors apparently had “concerns” because land surveyors wanted to be able to use unmanned aircraft for aerial photography.³⁷⁰

Eleven individuals presented testimony about the legislation, including: representatives of the ACLU, the state Department of Public Safety, the Sherriff of Cumberland County, the Office of the Attorney General, a forester, and the CEO of a UAV manufacturer.³⁷¹ Unsurprisingly, the Attorney General expressed

³⁶⁴ Letter from Paul R. LePage, Governor of Maine, to the 126th Maine Legislature (July 8, 2013), *available at* <http://www.maine.gov/tools/whatsnew/attach.php?id=559403&an=1>.

³⁶⁵ *Id.*

³⁶⁶ *Id.*

³⁶⁷ *Id.*

³⁶⁸ *Lobbying Information*, ME. COMM’N ON GOVERNMENTAL ETHICS AND ELECTION PRACTICES, <https://secure.maine-campaign-finance.com/PublicSite/SearchPages/LobbyingInfoSearch.aspx> (last visited Oct. 4, 2014).

³⁶⁹ See Press Release, ACLU, ACLU of Maine Responds to Governor’s Executive Order on Drones (Aug. 16, 2013), <https://www.aclu.org/technology-and-liberty/aclu-maine-responds-governors-executive-order-drones>.

³⁷⁰ Michael Shepard, *Maine Bill Seeks to Regulate Police Use of Drones*, PORTLAND PRESS HERALD (Feb. 26, 2013), <http://www.pressherald.com/2013/02/26/maine-bill-seeks-to-regulate-drones/>.

³⁷¹ See *An Act To Protect the Privacy of Citizens from Domestic Unmanned Aerial Vehicle Use: Public Hearing on S.B. 236*, 126th Leg., 1st Reg. Sess. (Me.

an interest in allowing UAVs for public safety purposes.³⁷² Perhaps less expected was testimony from D. Gordon Matt, a Maine forester, who pointed out that “[i]n forestry we are eagerly waiting for the ability to get inexpensive aerial imagery to lay out roads and recreational trails . . . and any number of other useful applications.”³⁷³

The case of Maine illustrates two features of UAV legislation that make them difficult to pass. First, UAV legislation not only proposes limits to law enforcement—a powerful lobby on its own—it also limits a governor’s control over what law enforcement can do. In Maine, the Governor was apparently willing to limit law enforcement use of UAVs, but felt a need to have those limits defined and enforced entirely by the executive branch.³⁷⁴

Second, UAV legislation steps on surprising toes. Privacy advocates may not have foreseen the interest of land surveyors and foresters in obstructing limits to drones, but objections about negative effects on individuals’ jobs always receive attention from legislators.

D. Case: Florida

A conservative legislature made Florida one of the first states to pass legislation limiting government surveillance using unmanned aircraft.³⁷⁵ The bill’s sponsors were all Republican, and the bill passed through both chambers of the legislature with unanimous support.³⁷⁶

At least part of the bill’s success seems due to the fact the

2013), *available at*

http://www.mainelegislature.org/legis/bills/display_ps.asp?snum=126&paper=SP0072PID=1456.

³⁷² *Testimony of Attorney General Janet T. Mills to the Joint Standing Committee on Judiciary*, S.B. 236, 126th Leg., 1st Reg. Sess. (Me. 2013) (statement of Janet T. Mills, Attorney General of Maine), *available at* <http://www.mainelegislature.org/legis/bills/getTestimonyDoc.asp?id=1747>.

³⁷³ E-Mail from D. Gordon Mott, Maine Forester, to Susan Pinette (Feb. 26, 2013, 10:37 AM), *available at* <http://www.mainelegislature.org/legis/bills/getTestimonyDoc.asp?id=1738>.

³⁷⁴ See LePage, *supra* note 364.

³⁷⁵ Joe Wolverton, II, *Florida Legislature Passes Flawed but Forceful Anti-drone Bill*, NEW AM. (Apr. 21, 2013), <http://www.thenewamerican.com/usnews/constitution/item/15166-florida-legislature-passes-flawed-but-forceful-anti-drone-bill>.

³⁷⁶ S.B. 92, 115th Reg. Sess. (Fla. 2013); *see* Wolverton, *supra* note 375.

authors won support from law enforcement agencies.³⁷⁷ The bill as filed banned all law enforcement UAV operations except in the event of a terrorist attack.³⁷⁸ Representatives of law enforcement agencies voiced opposition to the original bill.³⁷⁹ But eventually at least some members of the law enforcement community accepted the bill after legislators adopted several exceptions, including permitting UAV operations with a search warrant or in exigent circumstances.³⁸⁰ The commander of the Miami-Dade police department's aviation unit told reporters that his agency would not object to the bill, explaining that his unit could use unmanned aircraft within the proposed rules.³⁸¹

V. LESSONS ABOUT PRIVACY ADVOCACY

A. *Advocates Should Prepare Early, and For Anything*

Perhaps the feature of the policy debate surrounding unmanned aircraft that emerges most quickly is the variety in both the policies and the politics. Legislators around the country have introduced bills addressing predictable surveillance issues such as warrants,³⁸² and data retention³⁸³ as well as more surprising topics, such as the altitude of unmanned aircraft flights.³⁸⁴ And the trajectories of legislation have also been highly varied. There are partisan and bipartisan bills throughout the country.³⁸⁵ Legislation supporting the unmanned aircraft industry and legislation imposing limits on unmanned aircraft have passed in predominantly conservative as well as liberal

³⁷⁷ Jennifer Curington, *Senate Panel Passes Anti-Drone Bill with Law Enforcement Exceptions*, ORLANDO SENTINEL (Jan. 15, 2013), http://articles.orlandosentinel.com/2013-01-15/news/os-drone-ban-bill-passes-20130115_1_anti-drone-law-enforcement-law-enforcement.

³⁷⁸ Freedom from Unwarranted Surveillance Act, S.B. 92 (Fla. 2013), <http://www.flsenate.gov/Session/Bill/2013/0092/?Tab=BillText> (introduced 12/5/2012).

³⁷⁹ Curington, *supra* note 377.

³⁸⁰ *Id.*

³⁸¹ Jennifer Curington, *Bill Curbing Drones Passes Committee*, ORLANDO SENTINEL (Mar. 12, 2013), http://articles.orlandosentinel.com/2013-03-12/news/os-surveillance-drone-limits-20130312_1_small-drones-surveillance-drones-unwarranted-surveillance-act.

³⁸² See Appendix (subject tag, "Warrants").

³⁸³ See Appendix (subject tag, "Data Retention").

³⁸⁴ See, e.g., Assemb. B. 534, 216th Leg., 1st Ann. Sess. (N.J. 2014); Assemb. B. 4091, 215th Leg., 2d Ann. Sess. (N.J. 2013).

³⁸⁵ See Appendix (sponsorship).

states.³⁸⁶ The story of every state and every bill seems to be different. Given the variety, it appears difficult at first to draw any general conclusions about the unmanned aircraft policy debate or useful guidance for broader privacy advocacy.

But recognizing the unpredictability of the trajectory of a campaign for privacy protections is a valuable first step for advocates. Advocates who appreciate that they may find friends—and opponents—in surprising places, and advocates who accept that most legislation never actually becomes law, can better ride changing political currents.

Advocates can build partnerships inside and outside of the legislature before introducing legislation. Evidence from around the country indicates that it may be difficult to identify the interest groups that will wish to weigh in on unmanned aircraft and other technologies that implicate privacy rights. Groups supporting or opposing hunting, for example, have turned out to be a loud voice in this policy debate, prompting the introduction of eleven bills in eight states.³⁸⁷ In Florida, privacy advocates were able to find support from law enforcement.³⁸⁸ Legislators from both major parties can be found supporting legislation that would regulate or encourage unmanned aircraft.³⁸⁹ Advocates should want to find as many friends as possible as to avoid being surprised by unexpected opposition once the legislature starts moving a bill. Committee or floor votes are a vulnerable moment for legislation, and advocates are in a stronger position if the supporting coalition is clear and well-educated. Accordingly, it may be advisable to do coalition-building and public education before leaping into the vote-counting and hand-holding inherent in any effort to pass a specific bill.

Advocates can also plan from the beginning how a bill can be useful in other ways than actually becoming law. The vast majority of proposed legislation related to unmanned aircraft never became law. Of more than two hundred bills introduced between 2011 and 2014, only thirty-two became law, including

³⁸⁶ Compare S.B. 196, 63rd Leg., Reg. Sess. (Mont. 2013) (enacted) (conservative state bill regulating government surveillance), with H.B. 100, 433rd Gen. Assemb., Reg. Sess. (Md. 2014) (liberal state appropriations bill encouraging the unmanned aircraft industry).

³⁸⁷ See Appendix (subject tags, “No Hunting with UAV” & “Protects Hunters”).

³⁸⁸ See *supra* Part IV.D.

³⁸⁹ See Appendix (sponsorship, “Bipartisan”).

some resolutions that only required one-house approval.³⁹⁰ So from the beginning of a campaign, the odds that any particular bill will become law are low.³⁹¹ But that does not mean that legislation that does not pass is useless. Bills can be valuable tools for rallying support, drawing media attention, or focusing public conversations.³⁹² Advocates can plan during the drafting process to use a piece of legislation for purposes beyond the substantive statutory changes proposed in the text. Those expanded purposes do mean that advocates should draft legislation with those other purposes in mind. Highly technical, detailed, and elaborate language may make for precise rules, but may confuse the legislation which might make it harder to use the bill as fodder for public debate. Instead of focusing only on drafting the most comprehensive statutes, privacy advocates should draft legislation that will be useful in many other contexts.

B. Bills That Propose Studies Do Not Seem To Be Effective at Paving the Way For Substantive Reforms

It can be tempting for privacy advocates to turn to legislation that proposes a government study of the impact of unmanned aircraft or other surveillance technologies. Such legislation can disarm many policy counterarguments; a study would not “endanger jobs” or “help criminals avoid the law.” A legislative study of unmanned aircraft can be seen as a useful tool to expand the public conversation about unmanned aircraft and privacy more broadly.³⁹³ Advocates might turn to a study as a way to soften opposition to future substantive reforms and build an

³⁹⁰ See *2013 Unmanned Aircraft Systems (UAS) Legislation*, NCSL (Oct. 4, 2014), <http://www.ncsl.org/research/civil-and-criminal-justice/unmanned-aerial-vehicles.aspx>; Bohm, *supra* note 93.

³⁹¹ See *Only Four Percent of Bills Become Law*, HUFFINGTON POST (May 25, 2011, 1:55 PM), http://www.huffingtonpost.com/wires/2009/08/25/the-vast-majority-of-bill_ws_268630.html (highlighting that “[t]he vast majority of bills are essentially dead upon arrival.”).

³⁹² See *id.*; see, e.g., Michael McNutt, *Oklahomans Concerned About Unmanned Aircraft Attend State Capitol Rally*, NEWSOK (Feb. 24, 2013), <http://newsok.com/oklahomans-concerned-about-unmanned-aircraft-attend-state-capitol-rally/article/3758662> (providing an example of rallying support).

³⁹³ See *The Legislative Process*, THE UNIV. OF IOWA OFFICE OF GOVERNMENTAL RELATIONS, http://www.uiowa.edu/~govrel/staterelations/background/legis_process.htm (last visited Oct. 4, 2014) (explaining “study bills are used to determine reception of an issue by the [Legislature].”).

official record to support the need for real privacy protections.

However, the trajectories of study legislation around the country indicate that advocates should be reluctant to attempt the tactic. Studies were proposed in at least a dozen states.³⁹⁴ Just two studies passed: Indiana's S.R. 27 and North Carolina's S.B. 402.³⁹⁵ In neither state did any other substantive reform bills pass.³⁹⁶

There are several explanations that may contribute to the weakness of study legislation at supporting later legislation. One explanation is that legislators make up their minds quickly about issues and are not likely to be convinced by debate within the legislature. Either there are enough legislators in a state willing to adopt substantive reforms or there are not. A study can exert little pressure on hostile members. Another frailty of a study bill comes from the short lifespan of privacy policy issues.³⁹⁷ For unmanned aircraft, the issue swept into almost every state legislature between 2011 and 2014.³⁹⁸ But legislators' focus will inevitably shift elsewhere; there has been a moment to regulate unmanned aircraft, and that moment is unlikely to last much longer. Legislative studies of unmanned aircraft in the state risk delaying substantive reforms until after the issue has fallen off of legislators' agendas and out of the public's attention.

Other forces undoubtedly also contribute to the difficulty of using legislative studies to prepare legislators to accept later substantive reforms. Given the weaknesses of "study bills," substantive reforms should be a higher priority for privacy advocates.

C. UAV Legislation Can Go Too Far Without Careful Attention to Appropriate Limits

Whether because of ideological disagreements of the scope of state legislative authority or careless drafting, legislation proposed in many states face possible constitutional challenges. Some bills may be preempted by federal law and unenforceable

³⁹⁴ See Appendix (subject tag, "Study UAVs").

³⁹⁵ S. Res. 27, 118th Gen. Assemb., 1st Reg. Sess. (Ind. 2013); S.B. 402, 2013 Gen. Assemb., Reg. Sess. (N.C. 2013).

³⁹⁶ See Appendix (for other UAV related bills from Indiana and North Carolina).

³⁹⁷ See B. Guy Peters & Brian W. Hogwood, *In Search of the Issue-Attention Cycle*, 47 J. POL. 238, 240 (1985).

³⁹⁸ See generally Appendix (for list of states enacting legislation).

because of the Supremacy Clause.³⁹⁹ Several others may go too far in their attempt to protect privacy and infringe on the public's right to record images with unmanned aircraft.⁴⁰⁰ The law in this area is certainly not settled, but advocates on all sides must be aware of the pitfalls in order to draft legislation that accomplishes their goals without inviting legal challenges or infringing other important rights.

1. Preemption

Some bills propose rules that may be preempted by federal law. The Supreme Court explained the basic principles in *English v. General Electric Co.*⁴⁰¹ Federal statutes preempt state statutes in three situations. First, federal law preempts when the federal statute explicitly states that it preempts conflicting state laws.⁴⁰² Second, federal law preempts state law when the state law "regulates conduct in a field that Congress intended the Federal Government to occupy exclusively."⁴⁰³ In other words, even if the federal statute does not explicitly preempt state law, the federal statute will still preempt if there is a showing that Congress intended the federal law to be supreme.⁴⁰⁴ The third way in which federal law may preempt state law is when a state law "actually conflicts with federal law . . . the [Supreme] Court has found preemption where it is impossible for a private party to comply with both state and federal requirements[.]"⁴⁰⁵

In Georgia, H.B. 560 would explicitly require federal law enforcement to get a warrant before operating an unmanned aircraft "for any purpose whatsoever within the airspace of the State of Georgia"⁴⁰⁶ Federal law enforcement officers who fail to comply would be guilty of a misdemeanor.⁴⁰⁷ There are at least two preemption problems with the proposal. Federal law grants jurisdiction over all national airspace to the FAA. 49 U.S.C. § 40103 explicitly states that "[t]he United States

³⁹⁹ See U.S. CONST. art. VI, cl. 2; see, e.g., Kaminski, *supra* note 144, at 58, 60.

⁴⁰⁰ See, e.g., H.B. 560, 152nd Gen. Assemb., Reg. Sess. (Ga. 2013); S.B. 2152, 27th Leg., Reg. Sess. (Haw. 2014); H.F. 990, 88th Leg. (Minn. 2013).

⁴⁰¹ See *English v. Gen. Elec. Co.*, 496 U.S. 72, 78–79 (1990).

⁴⁰² *Id.* at 78 (citing *Shaw v. Delta Air Lines, Inc.*, 463 U.S. 85, 95–98 (1983)).

⁴⁰³ *Id.* at 79.

⁴⁰⁴ See *id.*

⁴⁰⁵ *Id.* (citing *Fla. Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142–43 (1963)).

⁴⁰⁶ H.B. 560, 2013 Gen. Assemb., Reg. Sess. (Ga. 2013).

⁴⁰⁷ *Id.*

Government has exclusive sovereignty of airspace of the United States.⁴⁰⁸ Courts have found, in a variety of circumstances, that non-federal entities lack authority to limit use of airspace.⁴⁰⁹ For example, local communities have from time to time passed ordinances regulating aircraft flying nearby, and courts have routinely struck down the ordinances, finding them preempted by federal law.⁴¹⁰ Unmanned aircraft operations are extensively regulated by the FAA, to the extent that currently every single unmanned aircraft operation must receive approval from the FAA.⁴¹¹ It could be argued that imposing additional requirements on federal law enforcement unmanned aircraft operations would conflict with the regulations Congress charged the FAA to create.

2. First Amendment

Other bills, in their efforts to protect privacy, may cross constitutional protections for speech. Hawaii's H.B. 1561 would impose a number of restraints on using UAVs to collect images.⁴¹² The bill bans private entities from using a UAV to "[c]onduct surveillance or observation of . . . [a]n individual or a dwelling owned by an individual without the individual's written consent . . . [.]"⁴¹³ Private entities also could not "[p]hotograph an individual, without the individual's written consent, for the purpose of publishing or otherwise publicly distributing the photograph."⁴¹⁴ Finally, the bill contains an exception for "the use of an unmanned aircraft system for the purpose of taking photographs of gatherings of the public on public or private lands."⁴¹⁵

The provisions in Hawaii's H.B. 1561 and similar provisions in other bills⁴¹⁶ seem to engage in "content-based discrimination";

⁴⁰⁸ 49 U.S.C. § 40103 (2012).

⁴⁰⁹ *See, e.g.,* City of Burbank v. Lockheed Air Terminal Inc., 411 U.S. 624, 625–26, 638–40 (1973) (holding that an ordinance limiting certain aircraft from landing at night was preempted by federal aviation law).

⁴¹⁰ *See id.*

⁴¹¹ *See supra* Part III.A.

⁴¹² H.B. 1561, 27th Leg., Reg. Sess. (Haw. 2014).

⁴¹³ *Id.*

⁴¹⁴ *Id.*

⁴¹⁵ *Id.*

⁴¹⁶ *Id.*; S.B. 330, 2014 Leg., 40th Reg. Sess. (La. 2014) (making it an offense to possess or distribute images illegally obtained from a UAV, and containing an exception for using a UAV to document offenses other than misdemeanors); S.B. 1134, 62nd Leg., Reg. Sess. (Idaho 2013) (exception allowing UAV photography of large groups of people).

they would permit some speech and ban other speech based on the content of the speech.⁴¹⁷ It is reasonably well established that taking photographs is a form of expression protected by the First Amendment, although the scope of protection may depend on the purpose of the photographs.⁴¹⁸ Laws that involve content-based discrimination receive a heightened level of scrutiny from courts: “[f]or the State to enforce a content-based exclusion it must show that its regulation is necessary to serve a compelling state interest and that it is narrowly drawn to achieve that end.”⁴¹⁹ It is difficult to imagine that provisions like these could satisfy this test. Assuming that protecting individuals’ privacy, when they are in public, is a compelling state interest, these provisions are unlikely to be considered narrowly drawn. For example, the ban in H.B. 1561 on photographing individuals without their consent would prohibit using an unmanned aircraft to photograph political figures, such as an elected official caught meeting with a secret donor or law enforcement. The exemption for large groups complicates the situation further⁴²⁰—how many people can assemble together before they lose protection against being photographed? These prohibitions would almost certainly restrain or chill conduct protected by the First Amendment;⁴²¹ the likelihood that these provisions could survive court challenges is low.

D. On the Horizon

The public policy debate over unmanned aircraft and their role in law enforcement is not over. The rush of legislation does seem likely to slow down over the next couple years. With legislation in forty-seven states, one might argue that if a state was inclined to regulate unmanned aircraft, it has done so.⁴²² However, the

⁴¹⁷ See John Fee, *Speech Discrimination*, 85 B.U. L. REV. 1103, 1123 (2005) (explaining content-based discrimination).

⁴¹⁸ See Bill Kenworthy, *Photography and the First Amendment*, FIRST AMENDMENT CENTER (Jan. 1, 2012), <http://www.firstamendmentcenter.org/photography-the-first-amendment> (discussing the parameters of free speech protection for photography).

⁴¹⁹ *Perry Educ. Ass’n v. Perry Local Educators Ass’n*, 460 U.S. 37, 45 (1983) (citing *Carey v. Brown*, 447 U.S. 455, 461 (1980)).

⁴²⁰ See Idaho S.B. 1134.

⁴²¹ See Monica Youn, *The Chilling Effect and the Problem of Private Action*, 66 VAND. L. REV. 1473, 1474–75 (2013) (discussing the First Amendment chilling effect).

⁴²² See generally Appendix (for list of states enacting legislation).

changing federal landscape will maintain attention on unmanned aircraft and may keep state legislators' focus.⁴²³ By October 2014, all six test sites were operational: in Texas,⁴²⁴ Nevada,⁴²⁵ Alaska,⁴²⁶ North Dakota,⁴²⁷ New York,⁴²⁸ and Virginia.⁴²⁹ Proposed rules to allow small unmanned aircraft systems may be out sometime in 2014.⁴³⁰ There is still time, although perhaps not a great deal, for privacy advocates to engage in education, coalition building, and even legislative advocacy related to unmanned aircraft.

Even if the regulation of unmanned aircraft fades from prominence as a distinct state-level policy issue, other surveillance technologies are sure to emerge. Cities are now installing gunfire-detection microphones that are intended to alert law enforcement to weapons fire.⁴³¹ These microphones can be used to record other sounds as well, prompting privacy concerns about audio surveillance in public places becoming as pervasive as video surveillance.⁴³² Law enforcement agencies have tested terahertz scanners: portable devices that can scan

⁴²³ See Matthew Berry & Nabiha Syed, *The FAA's Slow Move to Regulate Domestic Drones*, WASH. POST (Sept. 24, 2014), <http://www.washingtonpost.com/news/volokh-conspiracy/wp/2014/09/24/the-faas-slow-move-to-regulate-domestic-drones/> (discussing federal government's treatment of drones).

⁴²⁴ *Press Release – FAA Announces Texas UAS Test Site Now Operational*, *supra* note 170.

⁴²⁵ *Press Release – FAA Announces Nevada UAS Test Site Now Operational*, *supra* note 170.

⁴²⁶ *Press Release – FAA Announces Alaska UAS Test Site Begins Research Flights*, FED. AVIATION ADMIN. (May 5, 2014), http://www.faa.gov/news/press_releases/news_story.cfm?newsId=16194.

⁴²⁷ *Press Release – FAA Announces First UAS Test Site Operational*, FED. AVIATION ADMIN. (Apr. 21, 2014), http://www.faa.gov/news/press_releases/news_story.cfm?newsId=16154.

⁴²⁸ *Press Release – NUAIR Cleared to Begin its First Flights of Unmanned Aircraft Systems*, NUAIRALLIANCE (Aug. 7, 2014), <http://nuairalliance.org/news/view/141>.

⁴²⁹ See *Sixth and Final UAS Test Program Now Operational*, NAT'L BUS. AVIATION ASS'N (Aug. 28, 2014), <http://www.nbaa.org/ops/airspace/20140828-sixth-and-final-unmanned-aircraft-system-test-program-now-operational.php> (indicating all test sites became operational in 2014).

⁴³⁰ Berry & Syed, *supra* note 423.

⁴³¹ Erica Goode, *Shots Fired, Pinpointed, and Argued Over*, N.Y. TIMES (May 28, 2012), http://www.nytimes.com/2012/05/29/us/shots-heard-pinpointed-and-argued-over.html?pagewanted=all&_r=0.

⁴³² See Brian Fraga, *ShotSpotter Recording of Street Argument Raises Potential Privacy Issues*, SOUTHCOAST TODAY (Jan. 11, 2012), <http://www.southcoasttoday.com/apps/pbcs.dll/article?AID=/20120111/NEWS/201110339>; Goode, *supra* note 431.

pedestrians on public streets for concealed weapons.⁴³³ There are concerns that the scanners may reveal more than just weapons and allow law enforcement to conduct invasive and unjustified searches.⁴³⁴

Thus one more lesson to glean from the legislative debate over unmanned aircraft is that every new surveillance technology is both a new challenge and a new opportunity for advocates. Each new technology has the potential to intrude in new ways into privacy rights and expectations. Each also offers another chance for advocates to make the case for thoughtful policy.

⁴³³ See, e.g., Rocco Parascandola, *NYPD Commissioner Says Department Will Begin Testing a New High-Tech Device that Scans for Concealed Weapons*, N.Y. DAILY NEWS (Jan. 23, 2013, 10:27 AM), <http://www.nydailynews.com/new-york/nypd-readies-scan-and-frisk-article-1.1245663>.

⁴³⁴ See *NYPD, Feds Testing Gun-Scanning Technology, But Civil Liberties Groups Up In Arms*, CBS NEW YORK (Jan. 17, 2012), <http://newyork.cbslocal.com/2012/01/17/nypd-testing-gun-scanning-technology/>; Parascandola, *supra* note 433.

APPENDIX

<u>State</u>	<u>Bill</u>	<u>Session</u>	<u>Subject Tags</u>	<u>Sponsorship</u>
AK	HB 159	28	Evidence Admissibility, Warrants, Private Invasion Of Privacy	Democratic
AK	HB 209	28	Evidence Admissibility, Government Surveillance, Weapon Ban	Republican
AK	HCR 6	28	Requesting FAA Choose State For Test Site, Adopted	Bipartisan
AL	HR 381	2013rs	Adopted, Requesting FAA Choose State For Test Site	Republican
AL	SB 317	2013rs	Government Surveillance, Warrants, Private Remedy Against Government, Evidence	Republican
AL	SB 240	2014rs	Admissibility	Democratic
AR	HB 1904	2013	Protects Hunters Government Surveillance, Warrants, Biometrics, Data Retention, Public Disclosure	Democratic
AZ	HB 2574	51st-1st-regular	Government Surveillance, Warrants, Evidence Admissibility, Private Remedy Against Government	Republican
AZ	HB 2334	51st-2nd-regular	Evidence Admissibility	Republican
AZ	HB 2538	51st-2nd-regular	Warrants, Government Surveillance	Republican
CA	AB 1326	20132014	Tax Break	Bipartisan
CA	AB 1327	20132014	Government Surveillance, Public Disclosure, Data Retention, Weapon Ban, Passed One Chamber, Warrants, Public Notice, Limit Intragovernment Sharing, Weapon Ban, Minimization	Bipartisan
CA	AB 1524	20132014	Identifying UAVs, Exempt Model Planes	Bipartisan
CA	AB 1997	20132014	Tax Break	Republican
CA	AB 2306	20132014	Private Invasion Of Privacy	Democratic
CA	AJR 6	20132014	Requesting FAA Choose State	Democratic

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				For Test Site, Adopted	
				Warrants, Data Retention,	
				Private Invasion Of Privacy,	
				Public Notice, Limit	
CA	SB 15	2013		Intragovernment Sharing	Democratic
CA	SCR 16	2013		Promoting Industry, Adopted	Bipartisan
				UAV Aggravate Offenses,	
				Government Surveillance,	
				Warrants, Minimization,	
				Biometrics, Evidence	
				Admissibility, Public Disclosure,	
CT	HB 5217	2014		Regulate Non-NAS Airspace	Bipartisan
				Adopted, Government	
				Surveillance, Warrants,	
				Evidence Admissibility, Private	
FL	S 92	2013		Remedy Against Government	Republican
				Warrants, Criminal Offense For	
GA	HB 560	2013_14		Cops, Evidence Admissibility	Republican
GA	HR 80	2013_14		Promoting Industry, Adopted	Bipartisan
GA	HR 81	2013_14		Promoting Industry, Adopted	Bipartisan
				Government Surveillance,	
GA	SB 200	2013_14		Warrants, Weapon Ban	Republican
GA	SR 172	2013_14		Adopted, Promoting Industry	Bipartisan
		2011	Regular	Requesting FAA Choose State	
HI	HCR 140	Session		For Test Site, Adopted	Bipartisan
		2011	Regular		
HI	HCR 39	Session		Promoting FAA Rules	Democratic
				Promoting Industry, Requesting	
		2011	Regular	FAA Choose State For Test Site,	
HI	SCR 137	Session		Adopted	Bipartisan
		2011	Regular	Requesting FAA Choose State	
HI	SR 73	Session		For Test Site	Bipartisan
		2013	Regular		
HI	SB 1221	Session		Promoting Industry, Adopted	Democratic
				Government Surveillance,	
				Warrants, Minimization,	
				Biometrics, Data Retention,	
				Evidence Admissibility,	
				Administrative Discipline, Public	
		2013	Regular	Disclosure, Pre-Acquisition	
HI	SB 783	Session		Approval	Bipartisan
HI	HB 1561	2014	Regular	Government Surveillance,	Democratic

		Session		Warrants, Evidence Admissibility, Weapon Ban, Agricultural Surveillance Ban, Private Invasion Of Privacy, Private Remedy Against Government IACPAC Recs, NCSL Recs, Private Nuisance, Weapon Ban, Private Invasion Of Privacy, Exempt Model Planes	Republican
HI	HB 1657	2014 Session	Regular	Warrants, Evidence Admissibility, Government Surveillance, Exempt Model Planes, Private Remedy Against Government	Republican
HI	HB 1691	2014 Session	Regular	Government Surveillance, Minimization, Public Disclosure, Evidence Admissibility, Private Remedy Against Government, No Hunting With UAV	Democratic
HI	HB 1775	2014 Session	Regular	Pre-Acquisition Approval, Minimization, Warrants, Government Surveillance, Evidence Admissibility, Data Retention, Public Disclosure	Democratic
HI	HB 1827	2014 Session	Regular	Warrants, Government Surveillance, IACPAC Recs, Weapon Ban, Private Nuisance	Bipartisan
HI	HB 2421	2014 Session	Regular	Promoting Industry	Democratic
HI	HB 2627	2014 Session	Regular	Promoting Industry	Democratic
HI	HB 725	2014 Session	Regular	Government Surveillance, Private Remedy Against Government, Evidence Admissibility, Warrants	Bipartisan
HI	SB 2150	2014 Session	Regular	Private Nuisance, Weapon Ban, IACPAC Recs, Private Invasion Of Privacy	Bipartisan
HI	SB 2152	2014 Session	Regular	Warrants, Weapon Ban, IACPAC Recs	Bipartisan
HI	SB 2582	2014 Session	Regular	Government Surveillance, Public	Democratic
HI	SB 2608	2014 Session	Regular		

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		Session	Regular	Disclosure, Warrants, Data Retention, Limit Intragovernment Sharing, Private Remedy Against Government, Public Disclosure	
HI	SB 3053	2014 Session	Regular	FAA Test Site Operations UAV Aggravate Offenses, Government Surveillance, Warrants, Data Retention, Pre-Acquisition Approval, Private Invasion Of Privacy, Weapon Ban, Public Disclosure	Democratic
IA	HF 2289	2013-2014		Government Surveillance, Warrants	Public Safety
IA	HF 427	2013-2014		Warrants, Agricultural Surveillance Ban, Evidence Admissibility, Private Remedy Against Government, Private Invasion Of Privacy	Republican
IA	SF 2157	2013-2014		Government Surveillance, Warrants, Agricultural Surveillance Ban, Private Remedy Against Government	Republican
IA	SF 2314	2013-2014		Government Surveillance, Warrants, Evidence Admissibility, Minimization, Biometrics, Data Retention, Public Disclosure	Judiciary
IA	SSB 3145	2013-2014		Government Surveillance, Warrants, Evidence Admissibility, Private Remedy Against Government	Bipartisan
ID	S 1051	2013		Government Surveillance, Private Remedy Against Government, Evidence	Committee
ID	S 1067	2013		Admissibility Protecting Certain Private UAV Use, Civil Cause Of Action, Adopted, Exempt Model Planes, Warrants, Government	Committee
ID	S 1134	2013		Surveillance, Agricultural	Committee

			Surveillance Ban, Private Invasion Of Privacy	
ID	SCR 103	2013	Promoting Industry, Adopted	Committee
IL	SR 792	97th	Repeal FAA Act	Democratic
IL	HB 1652	98th	Adopted, Protects Hunters	Bipartisan
			Oppose Drone Strikes, Support Federal Bill	
IL	HR 141	98th	Government Surveillance, Warrants, Weapon Ban, Evidence Admissibility, Data Retention, Public Disclosure, Adopted	Republican
			Government Surveillance, Government Access To Third Party Data, Warrants	
IL	SB 2937	98th	Study UAVs, Died	Bipartisan
IL	SR 217	98th	Private Invasion Of Privacy, No Public Money For UAVs	Democratic
IN	SB 20	2013	Study UAVs, Adopted	Republican
IN	SR 27	2013	UAV Licenses	Bipartisan
IN	SB 336	2014	Government Surveillance, Weapon Ban, Private Remedy Against Government, Evidence Admissibility	Republican
KS	HB 2394	2013-2014	Tax Break	Committee
KS	HB 2542	2013-2014	Weapon Ban, Pre-Acquisition Approval, Limit Intragovernment Sharing, Warrants, Evidence Admissibility, Minimization, Biometrics, Private Remedy Against Government, Public Disclosure	Committee
KS	HB 2683	2013-2014	Weapon Ban, Pre-Acquisition Approval, Public Disclosure, Government Surveillance, Warrants, Private Remedy Against Government	Committee
KS	SB 409	2013-2014	Government Surveillance, Warrants, Private Remedy Against Government, Evidence Admissibility	Committee
KY	HB 454	2013RS		Democratic

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KY	HB 11	2014RS	Government Surveillance, Warrants, No Corporate- Operated UAVs	Bipartisan
KY	HB 342	2014RS	Weapon Ban, Protecting Certain Private UAV Use, Government Surveillance, Warrants, Minimization, Biometrics, Evidence Admissibility	Bipartisan
LA	SB 330	2014	Private Invasion Of Privacy, Protecting Certain Private UAV Use, Government Surveillance, Warrants, Evidence	Republican
LA	SB 356	2014	Admissibility, Civil Penalties, Private Remedy Against Government, Public Disclosure	Republican
LA	SCR 124	2014	Critical Infrastructure Ban Study UAVs	Democratic
MA	H 1357	188th	Government Surveillance, Warrants, Minimization, Biometrics, No Surveillance Of Political Beliefs, Data Retention, Public Disclosure	Democratic
MA	S 1664	188th	Government Surveillance, Warrants, Evidence Admissibility, Minimization, Biometrics, No Surveillance Of Political Beliefs, Data Retention, Disclosure To Targets, Public Disclosure	Republican The Speaker (By Request – Administration)
MD	HB 100	2013	Promoting Industry, Adopted Government Surveillance, Warrants, Private Remedy Against Government, Evidence Admissibility	Republican The President (By Request – Administration)
MD	HB 1233	2013	Promoting Industry	Bipartisan
MD	SB 125	2013	Promoting Industry	Bipartisan
MD	HB 468	2014	Government Surveillance, Warrants, Evidence	Bipartisan
MD	HB 785	2014	Government Surveillance, Warrants, Evidence	Bipartisan

			Admissibility, Agricultural Surveillance Ban, Private Invasion Of Privacy, Private Remedy Against Government Government Surveillance, Warrants, Biometrics, Minimization, Data Retention, Weapon Ban, Public Disclosure, Administrative Penalties	Bipartisan
MD	HB 847	2014		
			Government Surveillance, Warrants, Minimization, Biometrics, Data Retention, Weapon Ban, Administrative Discipline, Public Disclosure	Bipartisan
MD	SB 926	2014		
			Pre-Acquisition Approval, Government Surveillance, Warrants, Minimization, Biometrics, Data Retention, Evidence Admissibility, Public Disclosure, Vetoed	Bipartisan
ME	SP 72	126		
			Requesting FAA Choose State For Test Site	Bipartisan
MI	SR 169	2011-2012		
			Pre-Acquisition Approval, Government Surveillance, Warrants, Weapon Ban, Minimization, Data Retention, Biometrics, Evidence Admissibility, Administrative Discipline, Public Disclosure, Criminal Penalties	Bipartisan
MI	HB 4455	2013-2014		
			Requesting FAA Choose State For Test Site	Bipartisan
MI	HCR 16	2013-2014		
			Requesting FAA Choose State For Test Site	Bipartisan
MI	HCR 17	2013-2014		
			Requesting FAA Choose State For Test Site	Bipartisan
MI	HR 279	2013-2014		
			Requesting FAA Choose State For Test Site	Bipartisan
MI	HR 280	2013-2014		
			Promoting Industry	Bipartisan
MI	HR 329	2013-2014		
			Promoting Industry	Bipartisan
MI	HR 87	2013-2014		
			Requesting FAA Choose State For Test Site	Bipartisan
MI	SR 107	2013-2014		

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MN	HF 1076	2013-2014	Criminal Penalties, Government Surveillance, Warrants, Evidence Admissibility, Private Remedy Against Government	Republican
MN	HF 1620	2013-2014	Criminal Penalties, Government Surveillance, Search Warrant, Limit Federal Agency UAV Use, Private Remedy Against Government, Evidence Admissibility	Bipartisan
MN	HF 1994	2013-2014	Government Surveillance, Warrants, Evidence Admissibility, Private Remedy Against Government	Bipartisan
MN	HF 2552	2013-2014	Government Surveillance, Warrants, Pre-Acquisition Approval, Minimization, Biometrics, Weapon Ban, Data Retention, Evidence Admissibility, Disclosure To Targets, Private Remedy Against Government, Public Disclosure	Democratic-Farmer-Labor
MN	HF 2553	2013-2014	Government Surveillance, Warrants, Limit Intragovernment Sharing, Pre-Acquisition Approval, Evidence Admissibility, Biometrics, Minimization, Data Retention, Notice To Targets, Private Remedy Against Government, Public Disclosure	Democratic-Farmer-Labor
MN	HF 612	2013-2014	Government Surveillance, Warrants, Evidence Admissibility, Regulate Non-NAS Airspace, Weapon Ban, Government Surveillance, Warrants, Private Invasion Of Privacy, Public Disclosure, Evidence Admissibility, Criminal Penalties	Republican
MN	HF 990	2013-2014		Republican

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			Criminal Penalties, Government Surveillance, Warrants, Evidence Admissibility, Limit Federal Agency UAV Use, Private Remedy Against	
MN	SF 1506	2013-2014	Government	Republican
			Government Surveillance, Warrants, Evidence Admissibility, Private Remedy	
MN	SF 2037	2013-2014	Against Government	Bipartisan
			Government Surveillance, Warrants, Pre-Acquisition Approval, Minimization, Biometrics, Data Retention, Evidence Admissibility, Notice To Targets, Private Remedy	
MN	SF 2687	2013-2014	Against Government, Public Disclosure	Republican
			Government Surveillance, Warrants, Private Remedy	
MN	SF 485	2013-2014	Against Government, Evidence Admissibility	Bipartisan
			Government Surveillance, Warrants, Private Invasion Of Privacy, Agricultural Surveillance Ban, Private	
MO	HB 46	2013	Remedy Against Government, Evidence Admissibility	Republican
			Government Surveillance, Warrants, Private Invasion Of Privacy, Agricultural Surveillance Ban, Protecting	
MO	HB 1204	2014	Certain Private UAV Use, Private Remedy Against	Republican
MT	SR 28	2011	Government, Evidence Admissibility	Republican
			Government Surveillance, Evidence Admissibility, Weapon	
MT	SB 150	2013	Ban	Democratic
			Government Surveillance, Warrants, Evidence	
MT	SB 196	2013		Republican

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			Admissibility, Adopted	
			Government Surveillance,	
			Evidence Admissibility,	
			Warrants, Minimization,	
			Biometrics, Criminal Penalties,	
			Data Retention, Public	
NC	HB 312	2013	Disclosure	Bipartisan
			Moratorium, Study UAVs,	
NC	SB 402	2013	Adopted	Bipartisan
			Government Surveillance,	
			Warrants, Evidence	
			Admissibility, Data Retention,	
			Study UAVs, Public Disclosure,	
ND	HB 1373	63	Notice To Targets, Failed	Bipartisan
			Government Surveillance,	
			Warrants, Weapon Ban, Private	
			Invasion Of Privacy, No	
			Surveillance Of Political Beliefs,	
			Evidence Admissibility, Data	
ND	HB 1373	63	Retention, Study UAVs	Bipartisan
ND	HCR 3012	63	Delete	Bipartisan
ND	SB 2018	63	Promoting Industry, Adopted	Appropriations
			Government Surveillance,	
			Private Remedy Against	
			Government, Evidence	
NE	LB 412	103	Admissibility	Nonpartisan
			Criminal Penalties, Private	
NH	HB 619	2013	Invasion Of Privacy	Republican
NH	HB 1307	2014	No Public Money For UAVs	Bipartisan
			Government Surveillance,	
			Evidence Admissibility,	
			Warrants, Private Remedy	
NH	HB 1361	2014	Against Government	Republican
			Government Surveillance,	
			Warrants, Criminal Penalties,	
NH	HB 1566	2014	Criminal Offense For Police	Republican
			Government Surveillance,	
			Warrants, Data Retention,	
			Evidence Admissibility, Weapon	
			Ban, Private Remedy Against	
			Government, Private Invasion Of	
NH	HB 1620	2014	Privacy, Criminal Penalties,	Republican

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			Extra Penalty For Hacking UAV	
			Government Surveillance,	
			Warrants, Public Disclosure,	
			Evidence Admissibility, Ban	
NJ	A 3157	215	Private Ownership Or Possession	Bipartisan
			Government Surveillance,	
			Evidence Admissibility, Private	
NJ	A 3929	215	Remedy Against Government	Bipartisan
			Government Surveillance,	
			Evidence Admissibility, Data	
			Retention, Public Disclosure,	
			Weapon Ban, Ban 3d Party	
NJ	A 4073	215	Disclosure	Bipartisan
			Government Surveillance,	
			Private Remedy Against	
			Government, Evidence	
			Admissibility, Limit Altitude Of	
NJ	A 4091	215	Law Enforcement UAV	Republican
			Government Surveillance,	
NJ	A 4381	215	Warrants, Minimization	Republican
			Government Surveillance,	
			Warrants, Data Retention, Ban	
			3d Party Disclosure, Evidence	
			Admissibility, Public Reporting,	
NJ	S 2702	215	Weapon Ban	Bipartisan
			Government Surveillance,	
			Private Remedy Against	
			Government, Evidence	
			Admissibility, Limit Altitude Of	
NJ	A 534	216	Law Enforcement UAV	Republican
			Requesting FAA Choose State	
NM	HJM 6	2012	For Test Site	Democratic
			Government Surveillance,	
			Agricultural Surveillance Ban,	
			Warrants, Criminal Penalties,	
			Private Remedy Against	
			Government, Evidence	
NM	SB 556	2013	Admissibility	Democratic
NV	AB 507	77	Promoting Industry, Adopted	Committee
			Requesting FAA Choose State	
NV	SCR 7	77	For Test Site	Bipartisan
NY	A 6244	2013-2014	Government Surveillance,	Bipartisan

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			Warrants, Evidence	
			Admissibility	
			Government Surveillance,	
			Warrants, Special Protection For	
			Place Of Worship, Evidence	
			Admissibility, Private Remedy	
			Against Government, Criminal	
NY	A 6370	2013-2014	Penalties	Bipartisan
			Government Surveillance,	
			Warrants, Data Retention,	
			Weapon Ban, Administrative	
			Discipline, Public Disclosure,	
			Evidence Admissibility, Pre-	
NY	A 6541	2013-2014	Acquisition Approval	Democratic
NY	A 8091	2013-2014	Private Invasion Of Privacy	Republican
NY	A 9697	2013-2014	No Hunting With UAV	Bipartisan
			Government Surveillance,	
			Warrants, Special Protection For	
			Place Of Worship, Criminal	
			Penalties, Private Remedy	
NY	S 4537	2013-2014	Against Government	Republican
			Government Surveillance,	
			Warrants, Pre-Acquisition	
			Approval, Public Disclosure,	
			Administrative Penalties,	
NY	S 4839	2013-2014	Weapon Ban, Data Retention	Democratic
			Government Surveillance,	
			Warrants, Evidence	
NY	S 6412	2013-2014	Admissibility	Democratic
NY	S 7474	2013-2014	No Hunting With UAV	Republican
			Protect University Use, Private	
			Invasion Of Privacy, Criminal	
NY	S 7639	2013-2014	Penalties	Republican
			Requesting FAA Choose State	
OH	SCR 19	129	For Test Site	Republican
			Government Surveillance,	
			Warrants, Evidence	
			Admissibility, Private Remedy	
OH	HB 207	130	Against Government	Republican
OH	HB 292	130	Study UAVs	Republican
			UAV Licenses, Public Notice,	
OH	HB 364	130	Limit Intragovernment Sharing,	Republican

				Warrants, Evidence Admissibility, Notice To Targets, Weapon Ban, Private Remedy Against Government, Administrative Discipline, Public Disclosure Requesting FAA Choose State For Test Site	Republican
OH	HCR 44	130		Government Surveillance, Pre- Acquisition Approval, Limit Intragovernment Sharing, Warrants, Evidence Admissibility, Minimization, Biometrics, Weapon Ban, Administrative Penalties, Public Disclosure	Republican
OH	SB 189	130		Government Surveillance, Warrants, Criminal Penalties, Private Remedy Against Government, Evidence Admissibility, Minimization, Data Retention, Weapon Ban, No Mfr Liability	Republican
OK	HB 1556	2013-2014		Empty	Republican
OK	HB 1795	2013-2014		Empty	Republican
OK	HB 3035	2013-2014		Empty	Republican
OK	HB 3039	2013-2014		Government Surveillance, Weapon Ban, Criminal Penalties, Private Invasion Of Privacy, Evidence Admissibility	Republican
OK	SB 2043	2013-2014		Requesting FAA Choose State For Test Site	Bipartisan
OR	HJM 20	Session	Regular	Government Surveillance, Warrants, UAV Licenses, Evidence Admissibility, Public Disclosure, Weapon Ban, Criminal Penalties, Civil Cause Of Action, Private Remedy Against Government, Preempt Local Rules, Adopted	Bipartisan
OR	HB 2710	2013 Session	Regular	Government Surveillance, Warrants, Minimization, Data	Bipartisan
OR	SB 524	2013 Session	Regular		Bipartisan

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				Retention, Weapon Ban, Pre-Acquisition Approval	
				Government Surveillance, Warrants, Evidence Admissibility, Minimization, Biometrics, Disclosure To Targets, UAV Licenses,	
		2013	Regular	Oversight Board, Study UAVs,	
OR	SB 853	Session		Died	Republican
PA	HB 2516	2011-2012		Government Surveillance	Bipartisan
PA	HB 961	2013-2014		Government Surveillance	Bipartisan
PA	HR 172	2013-2014		Delete	Bipartisan
PA	SB 1332	2013-2014		Protects Hunters	Bipartisan
PA	SB 1334	2013-2014		Protects Hunters	Bipartisan
PA	SB 875	2013-2014		Weapon Ban, Moratorium	Bipartisan
PR	RS 483	2013-2016		Study UAVs, Died	Partido Popular Democratico
				Pre-Acquisition Approval, Weapon Ban, Government Surveillance, Warrants, Evidence Admissibility, Disclosure To Targets, Private Remedy Against Government, Data Retention, Public Disclosure	
RI	HB 5780	2013		Government Surveillance, Warrants, Private Remedy Against Government, Evidence Admissibility	Democratic
RI	SB 411	2013		Pre-Acquisition Approval, Government Surveillance, Warrants, Minimization, Biometrics, Disclosure To Targets, Evidence Admissibility, Private Remedy Against Government, Data Retention, Public Disclosure	Republican
RI	HB 7170	2014		Government Surveillance, Warrants, Evidence Admissibility, Private Remedy Against Government, Data Retention, Public Disclosure	Democratic
RI	SB 2362	2014		Against Government	Bipartisan
SC	H 3415	2013-2014		Government Surveillance,	Republican

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			Warrants, Evidence	
			Admissibility	
			Government Surveillance,	
			Warrants, Private Invasion Of	
SC	H 3514	2013-2014	Privacy, Biometrics	Republican
			Government Surveillance,	
SC	S 395	2013-2014	Warrants	Republican
			Government Surveillance,	
TN	SB 3047	107	Warrants	Republican
TN	HB 1669	108	Tax Break	Republican
			Private Invasion Of Privacy,	
TN	HB 1779	108	Evidence Admissibility, Adopted	Republican
TN	HB 1952	108	Protects Hunters	Republican
TN	HB 2391	108	Study UAVs	Republican
			Government Surveillance,	
			Private Remedy Against	
			Government, Evidence	
TN	HB 591	108	Admissibility	Republican
TN	SB 1752	108	Tax Break	Republican
TN	SB 1777	108	Protects Hunters	Republican
			Criminal Penalties, Private	
			Invasion Of Privacy, Evidence	
TN	SB 1892	108	Admissibility, Adopted	Republican
TN	SB 2438	108	Study UAVs	Republican
			Government Surveillance,	
			Warrants, Private Remedy	
			Against Government, Evidence	
TN	SB 796	108	Admissibility, Adopted	Republican
			Protecting Certain Private UAV	
			Use, Government Surveillance,	
			Warrants, Criminal Penalties,	
			Civil Cause Of Action, Public	
TX	HB 912	83	Disclosure, Adopted	Bipartisan
TX	HCR 217	83	Public Reporting, Adopted	Republican
TX	HR 3035	83	Public Reporting, Adopted	Republican
			Requesting FAA Choose State	
TX	HR 866	83	For Test Site	Republican
TX	SB 1704	83	Cooperating With Feds	Democratic
TX	SR 1084	83	Delete	Republican
			Government Surveillance,	
			Warrants, Data Retention,	
UT	SB 167	2014	Public Disclosure	Republican

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VA	HB 2324	2011	Promoting Industry	Bipartisan
VA	SB 1485	2011	Promoting Industry	Bipartisan
			Government Surveillance, Minimization, Disclosure To Targets, Protect University Use, Evidence Admissibility, Data Retention, Weapon Ban, Public Disclosure, Pre-Acquisition	
VA	HB 1616	2013	Approval, Biometrics	Bipartisan
VA	HB 2012	2013	Moratorium, Adopted	Republican
VA	SB 1331	2013	Moratorium, Adopted	Democratic
VA	SB 954	2013	Protects Hunters	Republican
			Government Surveillance, Warrants, Minimization, Biometrics, Evidence Admissibility, Weapon Ban, Public Disclosure	
VT	H 540	2013-2014	Government Surveillance, Warrants, Biometrics, Evidence Admissibility, Minimization, Weapon Ban, Public Disclosure	Bipartisan
VT	S 169	2013-2014	Weapon Ban, Public Disclosure	Democratic
WA	HB 1919	2011-2012	Tax Break	Bipartisan
WA	SB 5641	2011-2012	Tax Break	Democratic
			Government Surveillance, Pre-Acquisition Approval, Minimization, Warrants, Notice To Targets, Evidence Admissibility, Data Retention, Private Remedy Against	
WA	HB 1771	2013-2014	Government, Public Disclosure Ban Certain Private Use, Government Surveillance, Criminal Penalties, Private Invasion Of Privacy, Private Remedy Against Government	Bipartisan
WA	HB 2178	2013-2014	Vetoed, Government Surveillance, Pre-Acquisition Approval, Public Notice, Public Comment Period, Warrants, Notice To Target, Study UAVs, Evidence Admissibility, Ban 3d	Democratic
WA	HB 2789	2013-2014	Party Disclosure, Data	Bipartisan

				Retention, Private Remedy Against Government, Public Disclosure	
				Government Surveillance, Pre- Acquisition Approval, Warrants, Notice To Target, Evidence Admissibility, Ban 3d Party Disclosure, Data Retention, Private Remedy Against Government, Public Reporting	Bipartisan
WA	SB 6172	2013-2014		Government Surveillance, Warrants, Weapon Ban, Criminal Penalties, Private Invasion Of Privacy, Evidence Admissibility	Bipartisan
WI	AB 203	2013 Session	Regular	Adopted, Government Surveillance, Weapon Ban, Private Invasion Of Privacy	Bipartisan
WI	SB 196	2013 Session	Regular	Government Surveillance, Weapon Ban, Warrants, Private Remedy Against Government, Evidence Admissibility	Bipartisan
WV	HB 2732	2013		Government Surveillance, Evidence Admissibility, Private Remedy Against Government	Democratic
WV	HB 2948	2013		Government Surveillance, Warrants, Weapon Ban, No Surveillance Of Political Beliefs, Private Remedy Against Government, Evidence Admissibility, Data Retention	Bipartisan
WV	HB 2997	2013		Government Surveillance, Warrants, Weapon Ban, Ban Certain Private Use, No Surveillance Of Political Beliefs, Evidence Admissibility, Data Retention, Disclosure To Targets	Republican
WV	HB 2997	2014		Government Surveillance, Warrants, Fresh Pursuit Exception, Evidence Admissibility	Republican
WY	HB 242	2013		Government Surveillance,	Republican
WY	HB 105	2014		Government Surveillance,	Republican

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WY	HB 30	2014	No Hunting With UAV		Republican