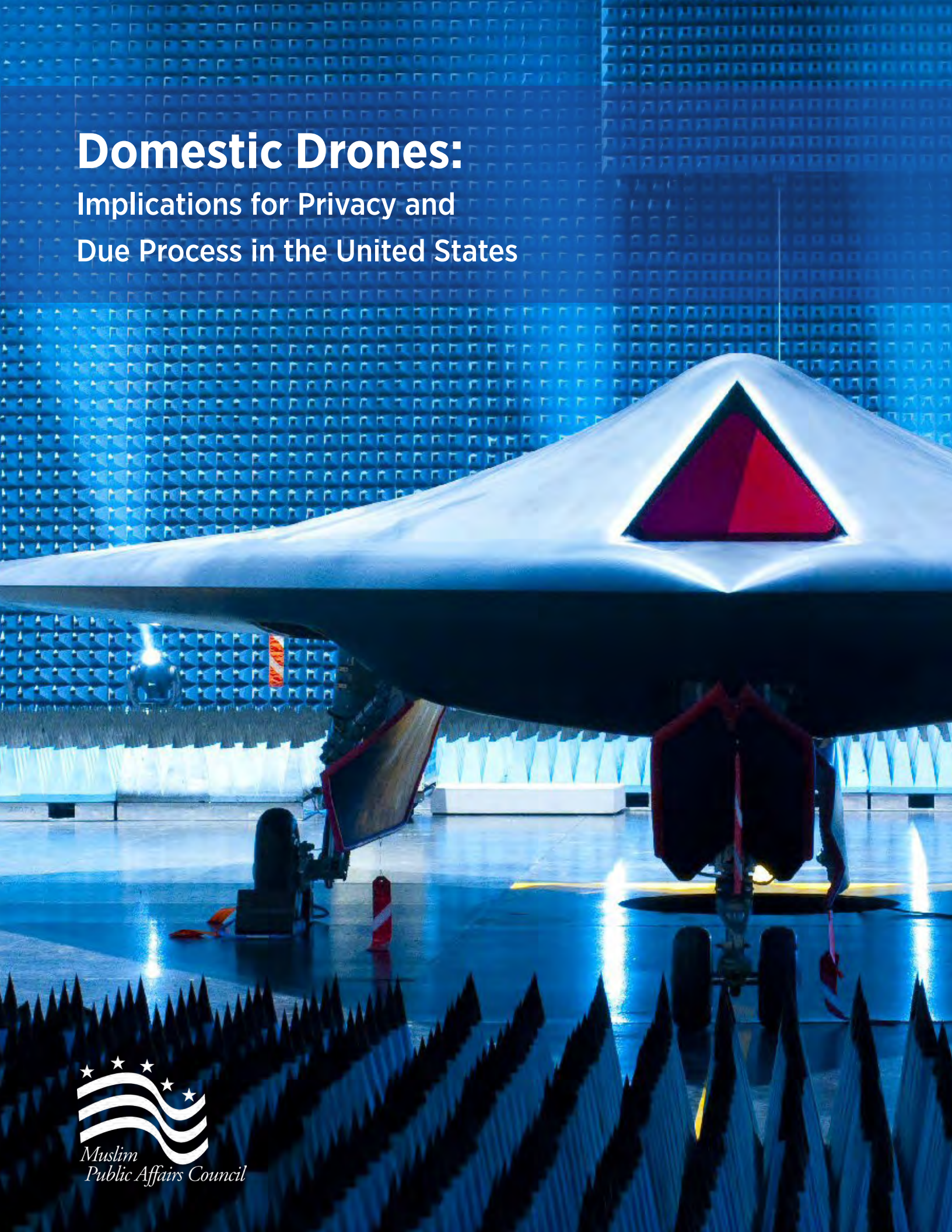
Domestic Drones:

Implications for Privacy and Due Process in the United States



Muslim Public Affairs Council

Image Source: QinetiQ Group
Front Cover Image: BAE Systems Taranis Unmanned Combat Aerial Vehicle

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Founded in 1988, MPAC is an American institution which informs and shapes public opinion and policy by serving as a trusted resource to decision makers in government, media and policy institutions. MPAC is also committed to developing leaders with the purpose of enhancing the political and civic participation of Muslim Americans.

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About MPAC

The Muslim Public Affairs Council is a public service agency working for the civil rights of American Muslims, for the integration of Islam into American pluralism, and for a positive, constructive relationship between American Muslims and their representatives. Since 1988, MPAC has worked diligently to promote a vibrant American Muslim community and enrich American society through exemplifying the Islamic values of Mercy, Justice, Peace, Human Dignity, Freedom, and Equality for all. Over the years, MPAC has built a reputation as a consistent and reliable resource for government and media, and is trusted by American Muslims as an authentic, experienced voice.

About the Author

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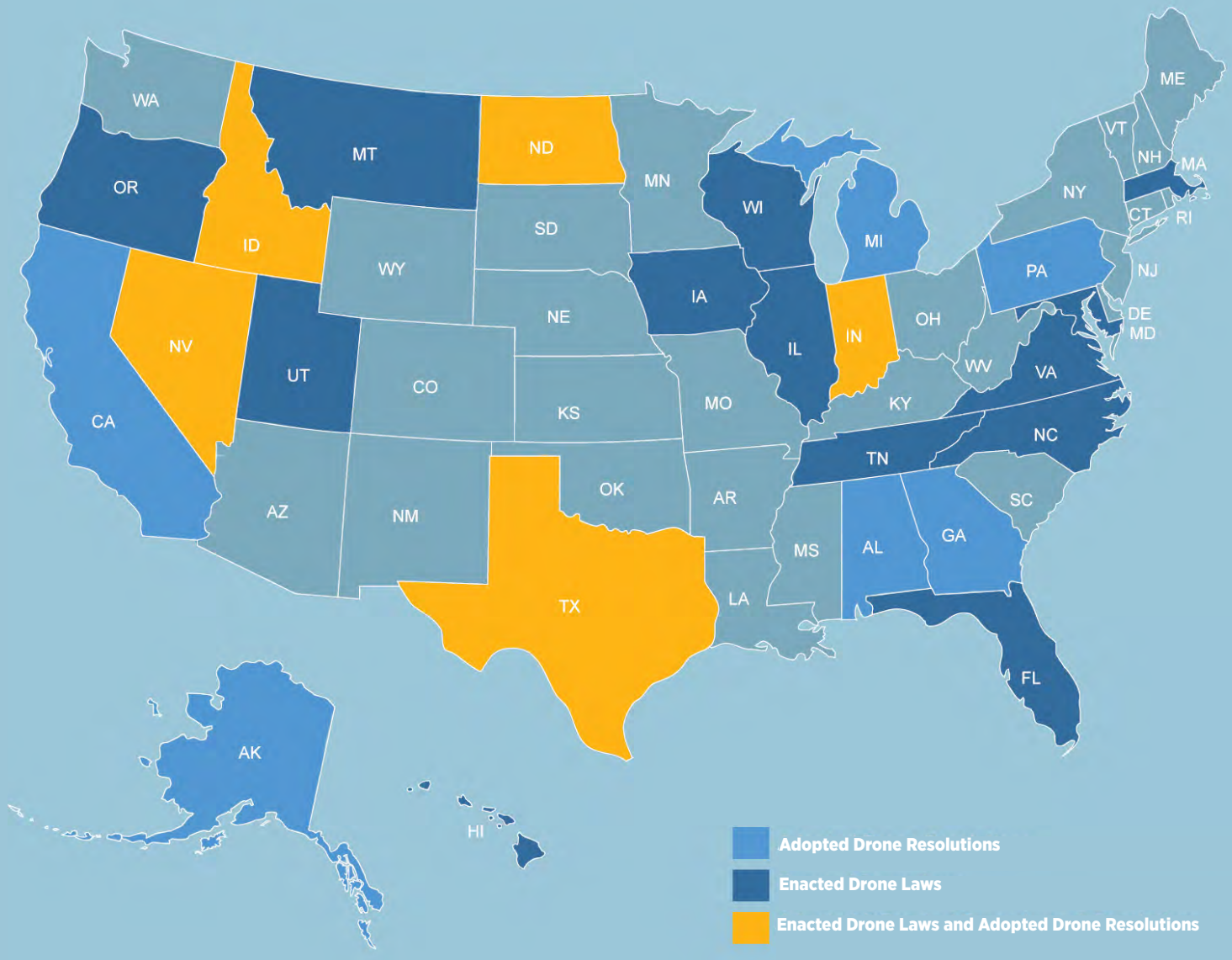
State Drone Legislation from 2013-2014



Executive Summary

Image Source: U.S. Army
General Atomics MQ-1C Gray Eagle

"I have seen firsthand the surveillance capabilities of drone aircrafts. Drones have the unique capability to peer into private homes and businesses and listen to private conversations…[There was] a demonstration in front of my house, and so, I went to the window to peek out and see who was there, and there was a drone right there, at the window, looking out at me." - Sen. Dianne Feinstein (D-CA), independent testimony on domestic drone usage, hearing of the Senate Committee on Commerce, Science, and Transportation, January 15, 2014 [1]

Drones are aircraft that can be operated without the possibility of human intervention on or within the aircraft[2]. The vast prevalence of domestic drones is nearly inevitable. In February 2012, Congress passed the Federal Aviation Administration (FAA) Modernization and Reform Act, which mandated that drones be further integrated into the national airspace by September 2015[3]. The Secretary of Transportation[4] and the FAA were delegated with the responsibility of making domestic drone operation a reality[5]. The FAA has already made progress toward this goal: in November 2013, the FAA produced a roadmap for the integration of drones and in December, the FAA selected six sites to test domestic drone integration.[6]

Although there are numerous uses for domestic drones, research by the Association for Unmanned Vehicle Systems International (AUVSI) has found that precision agriculture and public safety are the most profitable commercial and civil markets and may provide 90 percent of the total potential market for unmanned aerial systems. Drones are already in use by federal, state, and local agencies and aid in law enforcement. According to Gretchen West, Vice President of AUVSI, "[drone] technology is an extra tool to help an industry be more effective."[9]

There are economic incentives to making drones more prevalent in the national airspace. Industry leaders and policymakers maintain that the United States loses $10 billion in potential economic revenue each year that drone integration is delayed[10]. In 2013, several drone manufacturers paid nearly $26 million to AUVSI, which is lobbying for the expedited integration of unmanned vehicles and robotics.[11]

As domestic drones become more prevalent, however, several issues remain unresolved. These issues are particularly salient because drones are likely to transform the physical and legal landscapes of our country. An overview of existing law suggests that there are inadequate safeguards in place to protect privacy and due process rights.

Drones are capable of housing a variety of highly intrusive surveillance technologies. As such, drones will aid governmental agencies in conducting surveillance with high efficiency. How should drones be regulated in order to preserve privacy? How will existing privacy law affect domestic drones? As it turns out, existing privacy law is inadequate in addressing domestic drone operations. Although privacy statutes exist on the federal and state levels and the Fourth Amendment theoretically protects individuals from unwarranted surveillance, these measures prove inadequate because the statutes are out of step with today's technological realities and the standards set forth in case law may prove tenuous with the mass introduction of drones.

Drones also impact due process rights. Drones are perhaps best known for the role they play in conducting signature strikes against suspected militants abroad. Will civilians on American soil ever be subjected to drone attacks? Should civilians fear the weaponization of drones or their use in delivering lethal payloads? Although the Fifth and Fourteenth Amendments assure individuals of the right to due process before the deprivation of life, liberty, or property, these rights have already begun to erode due to the global war on terror and the use of drones to conduct signature strikes by virtue of executive decisions that are devoid of judicial review. With the mass introduction of domestic drones, there remains a threat and real fear that drones may be used to deprive individuals of life, liberty, or property with no opportunity to dispute the charges brought against them.

Americans of all ethnicities and creeds are likely to be affected by the domestic deployment of drones. American Muslims have a special contribution to make to this discussion. Having been subjected to special law enforcement attention and scrutiny, American Muslims find themselves particularly susceptible to infractions of civil liberties. As representatives of the American Muslim population and with the expertise to ground our analysis, the Muslim Public Affairs Council (MPAC) proposes the following guidelines to address the issues of law enforcement use of drones, data collection, weaponization of drones, due process, oversight, and transparency:

- Law enforcement use of drones should be restricted.
- Data collection should be strictly monitored.
- The FAA should require, not merely recommend, that test sites incorporate the Fair Information Principles into their privacy policies.
- The weaponization of drones should be prohibited.
- The right to due process should be preserved.
- States and individuals should have the ability to bring a cause of action against an entity that, in operating a drone, violates their rights.
- Drone deployment by federal agents must be subjected to Congressional oversight and local public drone use should be subjected to local city council oversight.
- The general public should be engaged in the development of policy guidelines by a public body intending to operate drones.
- In keeping with the principle of transparency, the FAA should make available to the public the names of drone applicants, the holders of Certificates of Authorization, other licensees, and privacy policies of drone-operating agencies.

Adequate protection of privacy is necessary to allow the public to take advantage of drone technology without becoming a society in which every movement is monitored by the authorities. Simultaneously, drone developers need regulations so that they can conduct research and development unimpeded by protests and news reports. Additionally, the weaponization of drones on domestic soil poses a threat to due process rights and public safety. This was acknowledged by Sen. Dianne Feinstein, who called for a total prohibition on the weaponization of domestic drones.[13] Indeed, politicians and policymakers representing a broad spectrum of political views advocate regulations for domestic drones.

Many proposed bills have attempted to address the issues discussed in MPAC's guidelines. Since 2013, 14 bills were introduced in Congress. For instance, Sen. Edward Markey's (D-MA) Drone Aircraft Privacy and Transparency Act of 2013, in part, would require private drone operators to submit a data collection statement to the FAA before operating any drones, which provides details on who will operate the drone, where it will be operated, and the kind of information it will collect. Because of its strong safeguards of individual privacy, MPAC supports the Drone Aircraft Privacy and Transparency Act of 2013. Additionally, because of its prohibition on the weaponization of drones, MPAC supports Rep. Michael Burgess' (R-TX) No Armed Drones Act of 2013.[14]

In 2013, over 100 bills were introduced in 43 states addressing drone usage. Of these, 13 states enacted 16 new laws addressing domestic drone usage and 11 states adopted 16 resolutions. Many of the 2013 bills have been carried over to 2014; thus far, six bills have been enacted in 2014. This brings the total number of enacted drone legislation to 22 laws in 17 states and 16 resolutions in 11 states. The vast majority of these bills include some elements of MPAC's guidelines. For instance, almost all of the bills introduced require law enforcement to acquire a probable cause warrant before using a drone in an investigation, which will significantly protect the public from unreasonable, unwarranted surveillance by local law enforcement. Of the bills enacted in 2013, Oregon's HB 2710 is the most comprehensive in addressing privacy rights. Oregon's HB 2710 also prohibits public bodies from flying weaponizeddrones. As such, MPAC supports Oregon's legislation. [15]

Drones pose an unprecedented threat to civil liberties. They can be utilized to conduct incessant mass surveillance through the mutual coordination of multiple drones over a given neighborhood. This report presents an overview of the existing law on privacy and due process and an analysis of legislative proposals in order to ascertain whether they will adequately protect civil liberties or whether more is required. Part I lays out existing law on privacy and due process and addresses the integration of drones into the national airspace from those vantage points. Part II proposes guidelines for regulations, while Part III describes the various bills and other measures being taken to regulate drones.

Prox Dynamics AS Black Hornet Nano Unmanned Aerial Vehicle

I. What are Drones?

Drones are aircraft that can be operated without the possibility of human intervention on or within the aircraft.[16] Drones may be remotely-piloted or pre-programmed.[17] Drones may come in the shape of a remote-controlled toy helicopter or the 32,000-pound, $222.7 million Global Hawk, renowned for its surveillance capabilities[18] Drones have variously been described as Unmanned Aerial Vehicles (UAVs), Remotely Piloted Vehicles (RPVs), Remotely Piloted Aircraft (RPAs), robot planes, and pilotless aircraft. When UAVs are referred to in conjunction with their ground control systems and data links, they are referred to as Unmanned Aerial Systems (UASs).[19] In this report, we refer to them simply as drones.

Touting the role of drones in intelligence collection and reconnaissance, the U.S. Department of Defense defines UAVs as, "powered aerial vehicles sustained in flight by aerodynamic lift over most of their flight path and guided without an onboard crew. They may be expendable or recoverable and can fly autonomously or piloted remotely."[20] The United States military has been researching and employing drones since 1917, with the invention of the unmanned Kettering Aerial Torpedo, nicknamed "Bug."[21] Drone technology has advanced rapidly, with the result of drones that can now be weaponized and equipped with sophisticated surveillance technology.[22]

Although drones can be used for beneficial purposes such as agriculture, even small drones can be equipped with video cameras, thermal imaging devices, GPS tracking technology, and cell phone eavesdropping implements.[23] Drones may be equipped with heat sensors, radars, infrared cameras, live-feed video cameras,[24] motion detectors, automated license plate readers,[25] and high resolution "gigapixel" cameras.[26] They can further be furnished with facial recognition technology, license plate readers, and advanced forms of radar detection.[27] These capabilities make drone technology highly valuable for military and law enforcement purposes. The U.S. currently has the greatest number and variety of drones, although up to 87 nations in all are amassing drones.[28]

A drone may be designated as public or civil based on the identity of the main operator. According to the FAA, "[a] public aircraft is one that is only for the United States government or owned and operated by the government of a state, the District of Columbia, or a territory or possession of the U. S. or a political subdivision. Operators of public aircraft include the Department of Defense, Department of Justice, Department of Homeland Security, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, state/local agencies and qualifying universities." This distinction extends to drones as well: a public drone is only for the use of a governmental agency, while civil drones are other than public drones and may include drones used by civilians and companies.[29]

Drone technology has advanced rapidly, with the result of drones that can now be weaponized and equipped with sophisticated surveillance technology.

II. The FAA Modernization and Reform Act of 2012

The prevalence of drones in the national airspace is nearly inevitable. Through the Federal Aviation Administration (FAA) Modernization and Reform Act of 2012 (FMRA), Congress decreed that civil drones[30] be integrated into the national airspace by September 2015.[31] The FMRA required the Secretary of Transportation to develop a plan that provided recommendations for rulemaking (e.g. concerning acceptable standards for operation and certification of civil drones) and a phased-in plan for the integration of drones into the national airspace.[32]

The Secretary of Transportation was further required to make publicly-available a five-year roadmap for the integration of civil drones into the national airspace; this roadmap would be coordinated by the FAA's Unmanned Aircraft Program and made available on the FAA's website.[33] The FMRA also required the FAA to establish six test sites where the integration of civil drones into the national airspace could be studied and where appropriate policies and guidelines could be developed.[34]

Of note, the FMRA also commissioned the Secretary of Transportation with issuing guidance on the expedited integration of "public unmanned aircraft systems" into the national airspace. Specifically, the Secretary of Transportation was delegated to issue guidance on the expedited processing of Certificates of Authorization for public agencies and to collaborate with public agencies to assure the "incremental expansion [of public drones] into the national airspace" as the technology matures and the "safety analysis and data" becomes available.[35] The Secretary of Transportation was also required to enter into agreements with appropriate government entities in order "to simplify the process for certificates of waiver or authorization" should they want to operate public drones in the national airspace.[36] In spite of this apparent endorsement of drone usage by civilian and public groups, the FMRA does not explicitly address the potential infringement of constitutional liberties in the operation of a drone.

In spite of the FMRA, the FAA's prerogative to impose a ban on civil drones was disputed in March 2014. Judge Patrick Geraghty of the National Transportation Safety Board ruled that the FAA cannot issue a fine for the flying of a civil drone because the FAA issued no legally binding rule prohibiting the flying of civil drones. The FAA has appealed this decision to the full National Transportation Safety Board, which stays Judge Geraghty's decision until the Board rules.[37]

III. Proposed privacy requirements for test site programs and selected sites

Soon after the enactment of FMRA, several organizations petitioned the FAA under the Administrative Procedure Act to address privacy and civil liberties concerns. On February 24, 2012, the Electronic Privacy Information Center (EPIC) and over 100 other entities petitioned the FAA to commence a rulemaking process in order to address privacy and civil liberties concerns raised by the use of drones.[38] Citing both dangers from civilian and governmental usage of drones, EPIC wrote that "[d]rones are designed to undertake constant, persistent surveillance to a degree that former methods of aerial surveillance were unable to achieve." EPIC noted that companies can use "paparazzi drones"[39] to stalk celebrities, and criminals can use drones for harassment and to threaten public safety[40] EPIC requested that the FAA propose rules in order to safeguard privacy and seek comments on the proposed rules.[41]

In a letter to EPIC dated February 13, 2013, the FAA acknowledged the privacy concerns raised in EPIC's petition and announced its decision to address these issues through "engagement and collaboration with the public."[42] Additionally, the FAA posted a notice in the Federal Register with proposed privacy provisions that would be incorporated into the Other Transactional Agreements (OTAs) that the FAA would enter into with all test site operators.[43] The main elements of the privacy provisions require that test site operators must have publicly available privacy policies that are informed by the Fair Information Practices[44] and that the Site Operator and its team must abide by all applicable federal, state, and local laws regarding protection of an individual's privacy.[45] The provisions also limit the type of data test site operators can share with the FAA.[46] In the same notice in the Federal Register, the FAA requested applications from potential test site operators: 25 applications were submitted from 24 states."[47]

On November 14, 2013, the FAA published a final privacy policy in the Federal Register, incorporating the above principles as well as three others requiring the maintenance of a record of all drones operating onsite, requiring each site operator to have written statements regarding the use and retention of data, and requiring test site operators to conduct annual reviews ensuring compliance with privacy policy and practices and share the outcome of such reviews with the public. The final principles were incorporated under Article 3 of the OTA, and can be viewed in the *Federal Register.*[48]

The FAA states: "The FAA's chief mission is to ensure the safety and efficiency of the entire aviation system."[49] As such, while the FAA acknowledges the civil liberties and privacy concerns raised by the integration of drones at test sites and in a more widespread context in the future, the FAA left the development of privacy policies to individual test site operators. In spite of comments from civil liberties organizations requesting more stringent privacy protections,[50] the privacy requirements in the final OTA require test site operators to establish privacy policies solely informed by the Fair Information Practices, as opposed to incorporating them.[51] In response to the requirements, Sen. Edward Markey (D-MA) said the roadmap evinced a "disregard for the need for strong and comprehensive privacy safeguards."[52] In order to alleviate both privacy and due process concerns, the FAA should have required a central, federal database of drone operators at test sites. It remains to be seen how this will be handled after the test site process has concluded and the nationwide rollout of drones begins.

On December 30, 2013, the FAA announced the selection of the six test sites: the University of Alaska; the state of Nevada; New York's Griffiss International Airport; North Dakota's Department of Commerce; Texas A&M University, Corpus

Christi; and Virginia Polytechnic Institute and State University (Virginia State). The selection process lasted 10 months and the test sites represent a variety of geographic and climatic conditions and research needs.[53]

In August 2012, a North Dakota court upheld the use of the drone to arrest the suspects, denying a request brought by the suspect's attorney to dismiss charges for unwarranted use of an unmanned aircraft.

IV. The FAA's roadmap toward integration

Since the signing of FMRA in February 2012, the FAA has made progress toward streamlining the process by which public agencies can fly drones in the national airspace, civil drone integration, and developing test site programs,[54] which will facilitate integration.[55] In November 2013, the FAA also released a roadmap for the integration of drones into the national airspace as well as the requirements for privacy policies to be adopted by test site operators.[56] In *Integration of Unmanned Aircraft Systems (UAS) in the National Airspace (NAS) Roadmap,* the FAA illustrates three perspectives from which the integration of drones may be viewed: Accommodation, Integration, and Evolution. These three cover the near-term, mid-term, and long-term timeframes and illustrate the stages through which drone integration must occur.[57]

The development of the national airspace through the integration of drones is expected to occur over the course of the next 13-15 years.[58]

V. Domestic drone usage

Although federal agencies, such as Customs and Border Protection (CBP) and the Coast Guard, have been testing and employing drones for several years, local law enforcement only began using drones recently.

In August 2005, EPIC reported that CBP was testing drones along the Mexican border and that the Coast Guard had purchased 45 Bell Helicopter's "Eagle Eye" tilt-rotor UAVs, each costing $5.5 million.[59] Border Patrol and the Coast Guard had tested Predator B drones in late 2003 and July 2004.[60] By means of documents obtained via a Freedom of Information Act (FOIA) request, EPIC reported in February 2013 that the drones operated by the CBP are capable of intercepting electronic communications, as well as recognizing and identifying a person on the ground. It also reported that two-thirds of the American population is subjected to surveillance by CBP drones.[61]

The first known case where U.S. local law enforcement enlisted a drone occurred in 2011. In North Dakota, Nelson County Sheriff Kelly Janke started a search for six missing cows and suspects. Sheriff Janke called in the help of the state highway patrol, a regional SWAT team, a bomb squad, and a Predator B drone. The sensors that the drone was equipped with facilitated the capture and arrest of the suspects—the first known arrest of U.S. citizens with the help of a drone.[62] In August 2012, a North Dakota court upheld the use of the drone to arrest the suspects, denying a request brought by the suspect's attorney to dismiss charges for unwarranted use of an unmanned aircraft.[63]

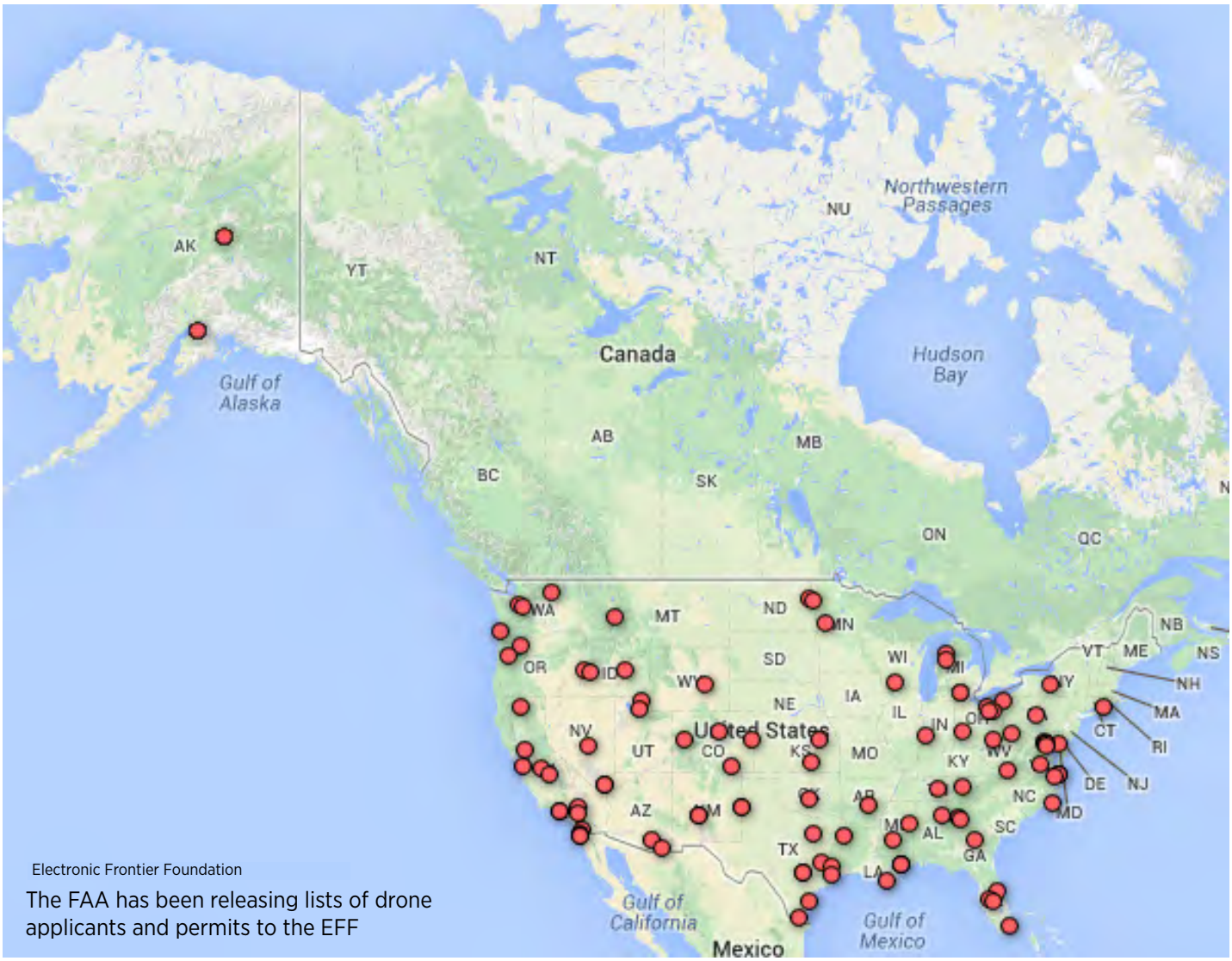
Currently, hundreds of permits granted to domestic drone operators remain active. In February 2013, the FAA announced that it had issued 1,428 permits to domestic drone operators since 2007 and that about 327 permits still remained active, allowing drone operators to continue drone operation.[64] However, due to discrepancies in the numbers that the FAA released to the Government Accountability Office, members of Congress, and the Electronic Frontier Foundation (EFF), there is no definite answer to the question of how many licenses the FAA has issued in total.[65] By contrast, manned aircraft operators are in a public and searchable database.[66]

In order to definitively ascertain the number of permits granted and the number of applicants, the EFF filed two FOIA lawsuits against the FAA in 2012.[67] They sought to obtain lists of applicants and domestic drone operators who obtained Certificates

of Authorization, intended for public entities such as police departments, and those who obtained Special Airworthiness Certificates, intended for civil operators and drone manufacturers. The EFF produced a Map of Domestic Authorizations from the data it obtained.[68]

The list of organizations that are authorized to fly drones in the U.S. include CBP,[70] branches of the military, police departments, and universities, including Georgia Tech and Cornell University. Drone manufacturers have also received authorization to test-fly drones in the U.S. by means of Special Airworthiness Certificates. These include Honeywell, Raytheon, and General Atomics, the manufacturer of the Predator drone.[71] Drones have also been used in an emergency response capacity and in order to produce wildlife and sports photography[72] In spite of the widespread use of drones, there is no uniform set of guidelines or regulations that all drone-operating entities within the U.S. are subjected to.[73]

In August 2012, a North Dakota court upheld the use of the drone to arrest the suspects, denying a request brought by the suspect's attorney to dismiss charges for unwarranted use of an unmanned aircraft.



Electronic Frontier Foundation

The FAA has been releasing lists of drone applicants and permits to the EFF

Drones also present the potential to completely transform the U.S.' physical landscape by providing services to consumers in a more cost-effective and efficient manner than before. In fact, in July 2013, the FAA announced that it certified the first two drones for civilian use.[74] Vivek Wadhwa, a fellow at the Rock Center for Corporate Governance at Stanford Law and a technological entrepreneur, highlighted the benefits and detriments of the "drone age." In a column for *The Washington Post,* Wadhwa discussed the possibility of drones delivering pizza or FedEx packages, and described drones that can be purchased on Amazon for $299 and built by consumers.[75] In the "drone age," these possibilities do not require a stretch of the imagination. These new capabilities provide both opportunities for good and ill. For instance, drones in the hands of emergency response services can monitor traffic and assist in disaster relief, while a drone in the hands of law enforcement may facilitate constant surveillance of every street in every city.[76]

VI. Public opinion and the need for legislation

The possibility of domestic drone usage elicits both expectation and apprehension in the wider public. Drones have garnered moderate public support in the United States[77] despite their lethal capacity as demonstrated in signature drone strikes on terrorist suspects abroad. This is mainly due to the possibilities they raise of expediting services and transforming the way business has been conducted. According to a June 2013 research brief published by Duke University's Institute for Homeland Security Solutions (IHSS), 57 percent of respondents indicated support of any unmanned aircraft systems application in the national airspace.[78] Of those surveyed, however, 44 percent admitted knowing little to nothing about domestic drone application.[79]

Higher percentages indicated support for specific drone applications: two-thirds support drone use in national security-related matters; 63 percent support drone use in fighting crime; 88 percent support search and rescue missions; and 61 percent for commercial applications.[80] Notably, commercial drone usage is likely to lead to significant economic growth. The Association for Unmanned Vehicle Systems International expects 100,000 jobs to be created and the economic impact is likely to total more than $13.7 billion in the first three years following integration and more than $82.1 billion between 2015 and 2025.[81]

Simultaneously, the IHSS survey respondents indicated apprehensiveness over any domestic drone operations: two-thirds expressed concern over potential surveillance in homes or public areas; 65 percent were concerned about safety; and 75 percent were concerned about the government's ability to regulate use.[82] The rapid pace at which drone technology is developing, the lack of clear guidelines protecting privacy and civil liberties, and public concern over these issues indicate an urgent need for action in Congress and state legislatures.

Privacy experts agree. In an article in the Stanford Law Review Online, Professor Ryan Calo of the University of Washington School of Law states that drones "may be just the visceral jolt society needs to drag privacy law into the twenty-first century." American privacy law has developed at a "slow and uneven" pace, whereas technology has developed at a rapid speed. In spite of the development of computers, the Internet, Global-Positioning Systems (GPS), biometrics, gigapixel cameras, face recognition technology, and the widespread use of e-mail and other forms of electronic communication, there has been no attendant development in privacy law. Because drones "threaten to perfect the art of surveillance," they make for a good catalyst to update privacy law.

The need for legislation is clear. With recent revelations that the federal government has been conducting surveillance of the American public on an unprecedented level, the threat that unregulated and immensely capable technologies pose to civil liberties is profound. The law must catch up with technology.

PART I: DOMESTIC DRONES' IMPACT ON PRIVACY AND DUE PROCESS

U.S. Army
General Atomics MQ-1C Gray Eagle

The integration of public and civil drones into the national airspace is likely to herald a series of legal quandaries. Broadly speaking, the areas affected include privacy, due process, property rights, consumer rights, and public safety. In this report, we will be addressing privacy and due process.

I. Privacy

"The development of American privacy law has been slow and uneven; the advancement of information technology has not. The result is a widening chasm between our collective and individual capacity to observe one another and the protections available to consumers and citizens under the law."
Prof. Ryan Calo, *The Drone as Privacy Catalyst* (2011)[89]

Drones are a likely catalyst for revolutionizing American privacy law. As it stands, individual privacy is protected by the Fourth Amendment, a number of federal, state, and local statutes, as well as standards laid out in case law. As Assistant Professor Woodrow Hartzog of Samford University stated, the Fourth Amendment's reasonable expectation of privacy standard may provide inadequate protection in the age of mass surveillance: if the average individual constantly expects to be surveilled, this standard may be rendered meaningless and ineffective. The courts should re-think this standard. Another important distinction that will have to be rethought is the delineation that the law makes between the public and private spheres: the law traditionally does not protect an individual's privacy while out in public spaces. It is apparent that the prospect of near-constant surveillance by drones will impact this rule.[90] Beyond this, federal and state statutes will have to be updated to meet the new challenges to privacy that drones present.

American privacy law has developed at a "slow and uneven" pace, whereas technology has developed at a rapid speed.

A. Fourth Amendment

1. Reasonable expectation of privacy and search and seizure

The government is constrained in its ability to conduct searches and seizures by the Fourth Amendment of the Constitution, which states that, "The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated" except by warrants based on probable cause.[91] For Fourth Amendment purposes, a search occurs when the government trespasses upon the areas that are protected by the Fourth Amendment (including persons, houses, papers, and effects)[92] or otherwise intrudes upon an individual's reasonable expectation of privacy.[93] A reasonable expectation of privacy exists when (1) a person exhibits an actual, subjective expectation of privacy, and (2) society as a whole would deem that individual's expectation of privacy reasonable.[94] A seizure occurs when the government appropriates objects or detains individuals.[95]

The U.S. Supreme Court has indicated that we must assure "preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted."[96] The base line in Fourth Amendment cases is that a warrant is required prior to commencing a search and/or seizure. If the government conducts an "unreasonable" search and seizure, then under the exclusionary rule, the results of the search cannot be used in court proceedings.[97]

In such an age, what will the average individual's reasonable expectation of privacy be?

There are a few exceptions, however. For instance, when public safety or health is at risk, evidence obtained through warrantless searches and seizures have been admitted in court.[98] But even where domestic security is concerned, the U.S. Supreme Court has time and again assured the integrity of the Fourth Amendment.

Steve Rhodes, Code Pink, San Diego Coalition for Peace and Justice

Sign in front of Northrop Grumman, drone manufacturing company

The reasonable expectation of privacy standard has been vital and several decisions have been handed down that indicate what to expect as drones get integrated into the national airspace. The privacy of the home, for instance, is still likely to be protected by the Fourth Amendment.[100] In *Kyllo v. United States,*[101] the Supreme Court considered a case where law enforcement used thermal-imaging devices to map the heat patterns emitting from a home. The Court ruled that the evidence obtained via the thermal-imaging device was inadmissible because the device allowed law enforcement "to explore details of the home that would previously have been unknowable without physical intrusion," and therefore, "the surveillance is a "search" and is presumptively unreasonable without a warrant."[102] Barring certain exceptions, then, if a drone were operated to conduct warrantless surveillance of the inner quarters of a home, the surveillance would violate the Fourth Amendment.

Kyllo is also an important case to consider because the Court recognized that thermal-imaging devices, as with drones today, were not widely-available to the public, and as such the average person could not reasonably foresee its use in investigating a private dwelling.[103] However, not everything at home would be protected by the Fourth Amendment. Under the "plain view" doctrine, objects, statements, or activities that an individual exposes to the public are not currently considered to be protected by the Fourth Amendment.[104]

In the age of mass surveillance, however, the reasonable expectation of privacy standard will have to be reassessed. Courts will have to address whether individuals have any reasonable expectation of privacy, even when at home. Today, it is commonly expected that the government routinely surveils large numbers of people.[105]This capability to conduct surveillance will only strengthen with the increased use and prevalence of drones.[106] In such an age, what will the average individual's reasonable expectation of privacy be? As Professor Woodrow Hartzog stated, "Once you've been put on notice that you can have no expectation of privacy, then it's not reasonable to expect any privacy in any area in particular."[107]

2. Public vs. Private Places

The demarcation between the public and private spheres is crucial when considering an individual's right to privacy. The U.S. Supreme Court has traditionally held that an individual's privacy rights are limited while in public; an individual does not have a reasonable expectation of privacy where they are privy to the public eye.[108] They do, however, have a reasonable expectation of privacy in the intimate areas of their homes, as well as in the immediate areas around their homes.[109] Existing case law presents an instructive vantage point from which to glean future law relating to drone surveillance.

In *United States v. Karo,* for instance, the Drug Enforcement Agency (DEA) tracked a beeper device attached to a can of ether on public streets and in private residences.[110] Because the DEA was not authorized to conduct any surveillance inside

homes, the Court held that a trespass under the Fourth Amendment had occurred: "Indiscriminate monitoring of property that has been withdrawn from public view would present far too serious a threat to privacy interests in the home to escape entirely some sort of Fourth Amendment oversight."[111] As drones become increasingly used by law enforcement agencies, it is likely that there will be legal challenges and a reviewing court will have to determine the location of the individual and whether they had a reasonable expectation of privacy to determine whether an unreasonable search took place. Alternatively, courts may decide to determine whether the surveillance itself is reasonable, regardless of where it took place.

According to a Congressional Research Service report, it can be deduced that surveilling an individual at home without a warrant, using technology not generally available, would constitute a search. If law enforcement were to use a normal camera or camcorder in order to record an individual in plain view of the public, albeit at home, law enforcement officers may be in their right to record data. It would also seem that brief drone surveillance of public areas may be permitted. And yet, courts may choose to distinguish between an unmanned aircraft and a manned aircraft conducting surveillance. Courts may decide that the technology used is a decisive factor in determining whether an unwarranted search has occurred, partly because law enforcement use of rare technological equipment may set apart what is "in plain view" of the public and what is not.[112]

Case law also offers insight on warrantless aerial surveillance as well: anything that cannot be viewed by the public while traveling through the United States' navigable airspace is protected by the law. On the other hand, if an individual passing over a property can view some incriminating evidence with their bare eye, law enforcement does not need to obtain a warrant to submit that evidence in a court of law.[113] In *California v. Ciraolo,* law enforcement conducted manned aerial surveillance of the backyard of a suburban home based on a tip that the suspect was growing marijuana. Police flew an aircraft 1,000 feet above the suspect's backyard and were able to identify the marijuana plants with their bare eyes.[114]

California argued that the respondent had "knowingly exposed" his backyard to aerial observation, because any member of the public flying through the navigable airspace over the respondent's home could see the marijuana plants. The Supreme Court concluded that because "[a]ny member of the public" flying over the backyard could have observed the plants with their naked eye, the "respondent's expectation that his garden was protected from such observation is unreasonable, and is not an expectation that society is prepared to honor."[115] Thus, the warrantless gathering of evidence from areas that are visible to the public was permitted by the Supreme Court.[116] That the evidence was gathered using a manned aircraft is applicable to the usage of drones to collect evidence.

However, drones allow the possibility of extended surveillance to an extent that manned aircraft does not. As the ACLU suggested, drone surveillance presents the possibility of "a single, distributed, wide-area surveillance system" via multiple mutually-coordinating drones deployed over a neighborhood.[117] The U.S. Supreme Court has recognized that mass or extended surveillance may infringe upon the rights protected by the Fourth Amendment. Although the Supreme Court has held that warrantless location tracking on public roads is permissible, as in *United States v. Knotts,* a majority of justices in two concurrences in *United States v. Jones* indicated an awareness that prolonged surveillance of an individual encroaches upon Fourth Amendment rights. In United States v. Jones, the Supreme Court unanimously decided that the attachment of a GPS device to a car and the month-long tracking of the vehicle without a valid warrant constituted an unreasonable search, and that the evidence obtained therewith was inadmissible in court. The two concurrences, however, indicated that in the future, the Court might uphold an individual's reasonable expectation of privacy in the face of lengthy, pervasive, and warrantless location tracking.[119]

Although the majority of the Court ultimately decided *United States v. Jones* based on the trespass on private property that law enforcement perpetrated when placing the tracking device on the suspects' car,[120] Justice Alito and Justice Sotomayor's individual concurrences took issue with the warrantless cataloguing of the suspect's actions for one month. In Justice Sotomayor's words, the information collected about the suspect "reflects a wealth of detail about her familial, political, professional, religious, and sexual associations."[121] Concurrences represent a shadow majority willing to decide the issue on the grounds of the length of the search. As such, these opinions are instructive in considering the potential directions American jurisprudence may take when considering drone surveillance, especially since drones are better adept at cataloguing an individual's associations than most formerly introduced technologies.

B. Privacy Act of 1974 and Fair Information Practices

While privacy laws have mostly been promulgated by the individual states,[122] there are a host of federal privacy laws that bear on various forms of surveillance. The Privacy Act of 1974[123] may most directly impact the kind of visual aerial surveillance conducted by drones.[124] The Privacy Act governs the collection, use, and dissemination of personal information[125] that is maintained in systems of records[126] stored by government agencies.[127] Of note, the Privacy Act prohibits the sharing of information among agencies "without the consent of the individual to whom the record pertains."[128] Public drones can greatly facilitate such information gathering. The statute was enacted in the aftermath of a report published by the Department of Health, Education and Welfare (HEW), which recommended a "Code of Fair Information Practices," applicable for all federal agencies.[129]

Brandon Bryant, U.S. Air Force drone pilot

Example of infrared camera image taken

Five principles emphasized by the Code of Fair Information Practices

1. There must be no personal data record-keeping systems whose very existence is secret.

2. There must be a way for a person to find out what information about the person is in a record and how it is used.

3. There must be a way for a person to prevent information about the person that was obtained for one purpose from being used or made available for other purposes without the person's consent.

4. There must be a way for a person to correct or amend a record of identifiable information about the person.

5. Any organization creating, maintaining, using, or disseminating records of identifiable personal data must assure the reliability of the data for their intended use and must take precautions to prevent misuses of the data.[130]

Privacy laws may provide some protection against violations of individual privacy perpetrated by governmental agencies or civilians, but due to the disparities in state privacy laws, the need for federal legislation is all the more pressing.

These practices were subsequently codified in the Privacy Act of 1974.[131] Because of the sophisticated and complex technological innovations available in 2014, the Privacy Act has been found to be lacking. Organizations such as the Center for Democracy and Technology support reviewing and updating the Privacy Act of 1974 because some elements of the statute "do not reflect the realities of current technologies and information systems."[132] On the other hand, EPIC notes that the Privacy Act remains strong but ought to be vigorously enforced.[133]

In December 2008, the Department of Homeland Security produced a memorandum memorializing and adapting the Fair Information Practices (FIPs). The DHS's Fair Information Practice Principles (FIPPs) were presented "as the foundational principles for privacy policy and implementation at the Department of Homeland Security (DHS)."[134] The original FIPs were expanded and refined to address eight categories: transparency, individual participation, purpose specification, data minimization, use limitation, data quality and integrity, security, accountability and auditing.[135]

Soon after the announcement that the FAA would be accepting applications for test sites for domestic drone integration, EPIC requested that the FAA mandate integration of the FIPs in privacy policies of test site operators.[136] The FAA's notice in the Federal Register (dated 2/14/2013) requested comments on selecting six sites for testing integration of domestic drones.[137] Since each of the operators of the test sites will be entering into agreements with the FAA through Other Transaction Agreements (OTAs), the FAA proposed that all site operators enact privacy policies governing all activities under the OTAs and that the privacy policies be informed by FIPPs. The notice states: "In addition, these policies should be informed by Fair Information Practice Principles."[138]

In comments to the notice (dated 4/23/2013), EPIC requested that the privacy policies fully integrate FIPs and not simply be informed by them.[139] EPIC argued that FIPs "outline the basics" of privacy law in the United States and have aided in the development of privacy law around the world. Moreover, leaving the option to site operators to integrate the FIPs is an insufficient safeguard

against unlawful trespasses on privacy.[140] On April 3, 2013, the FAA held an online public engagement session on drone test site privacy policies.[141] Amie Stepanovich of EPIC iterated the importance of integration of FIPs in the privacy policies. At the time, the FAA listened and recorded comments but did not respond.[142] In comments to the notice, the Center for Democracy and Technology also stated that test site operator privacy policies must be based on FIPs, and tailored the FIPs for drone usage.[143] The final privacy rule included in the OTAs by the FAA merely suggests that the test site privacy policies be informed by the FIPs.[144]

C. State Privacy Laws

In addition to federal statutes impacting individual privacy, states have also enacted stringent laws protecting privacy from governmental or civilian breaches.[145] For instance, in 1984, New York State enacted the Personal Privacy Protection Law (PPPL), which governs how the state collects, uses, and disseminates information collected about civilians. Similar in many ways to the Privacy Act of 1974, the PPPL allows individuals access to personal records maintained by the state; permits the individual to correct or amend information; restricts the state from collection information unless it is "relevant and necessary" to fulfill a purpose the agency must fulfill; requires the agency to inform the individual of why the information is being collected, where it will be held, and how it will be used, and any penalties for failing to provide the information; prohibits unlawful disclosure of personal information, except by the individual's consent; and prohibits agencies from maintaining secret data banks.[146] Since the induction of the global war on terror, agencies such as the New York Police Department routinely maintain such data banks, which are occasionally exposed by the media.[147] With the introduction of drones, building and maintaining data banks will become easier.

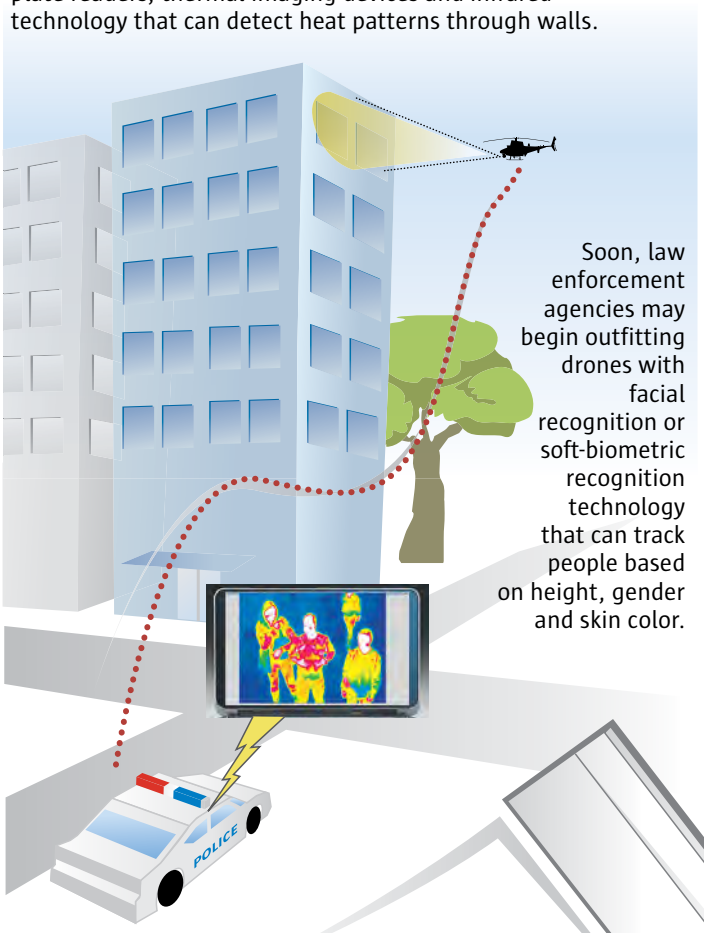
Additionally, although there is no equivalent federal statute, every state has enacted some form of "peeping tom" laws, which prohibit some kinds of invasion of privacy. California's "peeping tom" laws are located at Penal Code 647 (i) PC (peeking while loitering) and Penal Code 647 (j) PC (criminal invasion of privacy law).[148] Penal Code 647 (i) prohibits peeking into the door or window of an inhabited structure while loitering on private property and without lawful business with the occupant or owner. Penal Code 647 (j) prohibits the invasion of an individual's privacy by use of a device (e.g. telescope or binoculars) to invade someone's privacy; through the secret recording or photographing of an individual's body or undergarments for the sake of arousal or sexual gratification; or through the secret recording of a person in a private room in order to view their body or undergarments.[149] Individual privacy will be impacted by the mass introduction of drones, which can be made to hover outside a window and capture images that would not have been otherwise accessible to the public eye.

Privacy laws may provide some protection against violations of individual privacy perpetrated by governmental agencies or civilians, but due to the disparities in state privacy laws, the need for federal legislation is all the more pressing. The variations in the level of protection against governmental surveillance and civilian invasion of privacy necessitate a uniform set of guidelines to which all entities are held. Regarding civilian invasion of privacy, in testimony before Congress, Amie Stepanovich of EPIC suggested a federal "peeping tom" statute, in order to "provide baseline privacy protection for individuals within the home," without unreasonably infringing First Amendment rights.[150] Other leading civil liberties organizations made similar recommendations regarding federal and state statutes to protect privacy. These recommendations are summarized in Part II: The Guidelines.

The FAA estimates there will be 30,000 drones flying in U.S. airspace in less than 20 years. About 52 percent of Americans are not in favor of use of the unmanned craft for domestic surveillance by law enforcement. Some members of Congress also believe there are not enough safeguards to ensure drones are not used to spy domestically. However, the there are also science, business and non-espionage applications for the craft.

Invading privacy

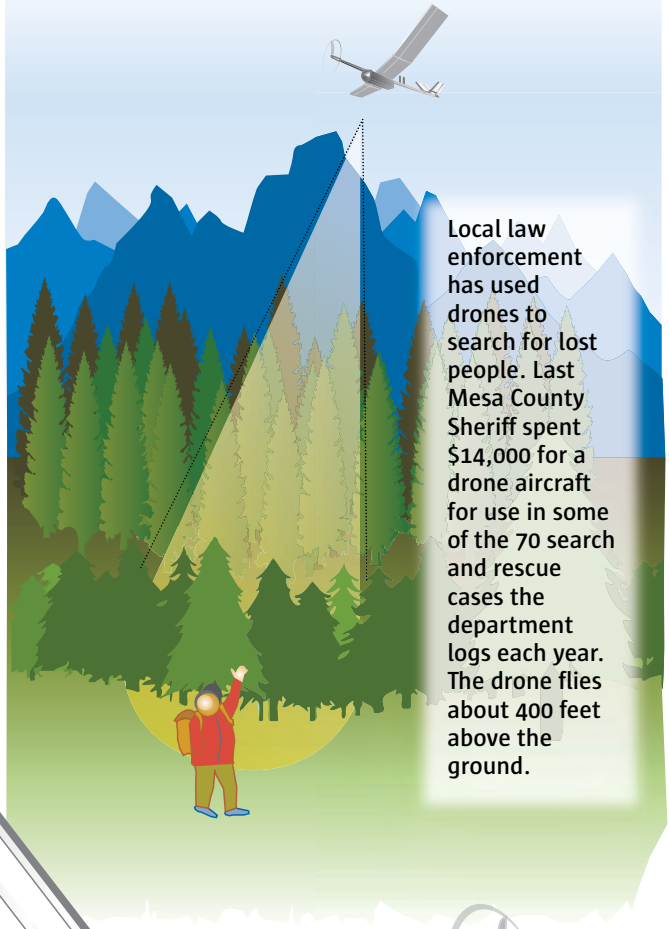
Drones can be equipped with high-powered cameras, license plate readers, thermal imaging devices and infrared technology that can detect heat patterns through walls.



Soon, law enforcement agencies may begin outfitting drones with facial recognition or soft-biometric recognition technology that can track people based on height, gender and skin color.

Crucial search and rescue aid

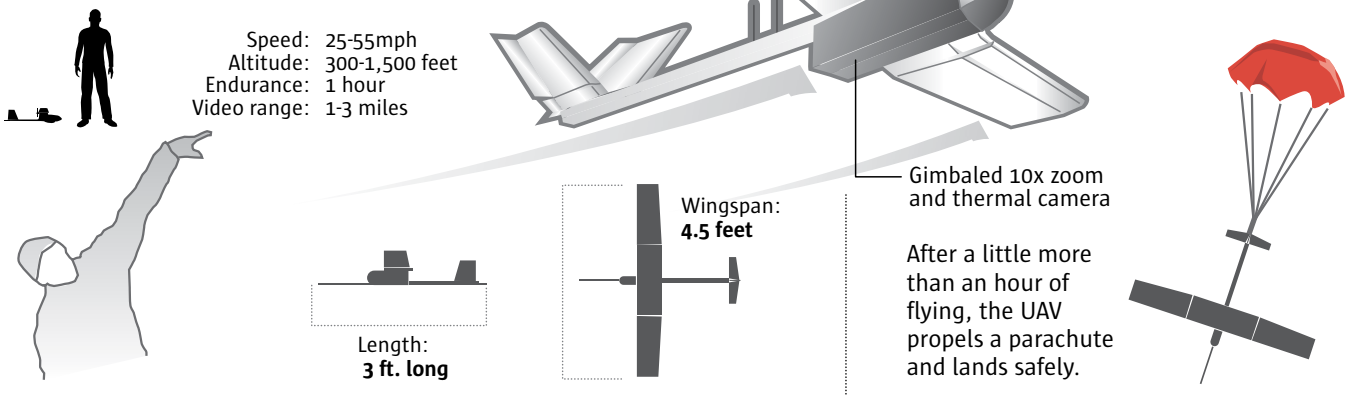
Drones can be used for locating lost people or finding escaped suspects. It also is used in wildfire observation, environmental monitoring and for atmospheric science.



Local law enforcement has used drones to search for lost people. Last Mesa County Sheriff spent $14,000 for a drone aircraft for use in some of the 70 search and rescue cases the department logs each year. The drone flies about 400 feet above the ground.

UAV Raven

The Rave weighs just 9.5 pounds and is launched by a person tossing it like a football. In some applications, ground crews that might need a quick look at what is around the corner carry the lightweight drones.



Source: Congressional Research Report for Congress

Severiano Galván, The Denver Post

An editorial illustration displaying the varied uses of a drone[151]

II. Due Process

"I rise today to begin to filibuster John Brennan's nomination for the CIA. I will speak until I can no longer speak. I will speak as long as it takes, until the alarm is sounded from coast to coast that our Constitution is important, that your rights to trial by jury are precious, that no American should be killed by a drone on American soil without first being charged with a crime, without first being found to be guilty by a court."
- Sen. Rand Paul (R-KY), March 6, 2013[152]

"Due process is the oldest and most essential component of the rule of law," wrote Harvard Law Professor Noah Feldman,[153] discussing the Department of Justice's white paper laying out the rationale behind conducting signature strikes.[154] As Justice Frankfurter wrote in his dissent for *Solesbee v. Balkcom,* due process came to represent "that which comports with the deepest notions of what is fair and right and just."[155] As it stands, the global war on terror and national security concerns have compromised due process rights. Drone operators have killed American citizens without informing the targeted of their crime or giving them the opportunity to defend themselves.[156] The integration of drones into the national airspace presents an unprecedented threat to due process: there is no legislation that prohibits the United States government from arming drones domestically.

A. Origins and requirements of the due process clause

Due process is enshrined in the U.S. Constitution. The Fifth Amendment states that no individual shall be "deprived of life, liberty, or property, without due process of law."[157] The Fourteenth Amendment states that no state shall "deprive any person of life, liberty, or property, without due process of law."[158] The U.S. Supreme Court has held that the protections of the Fifth Amendment apply to every "person," citizen or alien.[159] Due process impacts virtually every area of American law.

For some time in our nation's history, due process was primarily understood to be of a procedural nature – i.e. referring to the set of procedures the courts and law enforcement must follow in dealing with the accused. In addition to its procedural aspect, the due process clause has also been used as proxy for other rights. For instance, due to a series of Supreme Court rulings, the Fourteenth Amendment has been understood to "incorporate" the Bill of Rights by virtue of its due process clause, and as such the Bill of Rights was extended from the federal government to state governments.[160] Due process also has implications for substance. In the United States, the concept of substantive due process developed to mean restrictions on governmental intrusions on fundamental rights and liberties. Such intrusions were required to be fair and reasonable, and "in furtherance of a legitimate governmental interest." As such, the requirements of due process affect legislative activities as well as adjudicatory or executive activities. If legislative activities or products present an unreasonable intrusion into individual liberties, a due process argument can be raised.[161]


POA(Phot) Dave Husbands/MOD

A soldier is pictured manning a Desert Hawk unmanned aerial system

B. Domestic drones effect on due process

Drones present the possibility of expediting the due process-free deprivation of life and property. Although drones have only been used abroad in signature strikes targeting American citizens, the question remains, will the government ever order a drone strike against an American citizen in the United States? After the targeted killing of the suspected militant Anwar al-Awlaki, and incidental killings of Samir Khan and al-Awlaki's 16-year old son Abdullah al-Awlaki,[162] a fierce debate took place in the United States: in the context of the global war on terror, does the United States government have the right to strip its citizens of life, liberty, or property without the due process of law? The ACLU and the Center for Constitutional Rights filed a lawsuit[163] alleging that the killings violated the right to due process under the Fifth Amendment, amounted to an unreasonable search and seizure under the Fourth Amendment, and violated the ban on extrajudicial death warrants.[164]

After the al-Awlaki killings, the Obama administration was faced with requests to release the legal interpretations that justify the denial of due process rights in certain circumstances. In its defense, the Obama administration released a white paper defending the lawfulness of conducting drone strikes on Senior Operational Leaders of al-Qaeda or associated forces.[165] The Department of Justice argued that lethal drone strikes targeting Senior Operational Leaders of al-Qaeda or associated forces is lawful when the following three conditions are met:

> **(1)** an informed, high-level official of the U.S. government has determined that the individual poses an imminent threat of violent attack against the United States;
> **(2)** capture is infeasible, and the United States continues to monitor whether capture is feasible;
> **(3)** the operation would be consistent with the applicable law of war principles.[166]

National security lawyers have argued that the argument laid forth in the white paper severely distorts the concept of "imminence." The American Civil Liberties Union's Jameel Jaffer states that the paper "proceeds to redefine the word imminence in a way that deprives the word of its ordinary meaning."[167] This paper also started a debate on the application of this reasoning to the due process-free deprivation of life, liberty, or property of American citizens located in the United States—a debate that underlies the introduction of two bills in Congress seeking to prohibit the government from using drones to kill American citizens in the United States without due process.

Perhaps the most publicly-recognized instance of the discussion on domestic drone strikes was Sen. Rand Paul's (R-KY) filibuster raising the issue of due process and domestic drones.[168] On March 6, 2013, Paul led a 13-hour long filibuster of President Obama's nomination for the director of the CIA, John Brennan.[169] Paul objected to Attorney General Eric Holder's unwillingness to rule out the possibility of the due process-free killing of an American on American soil with the use of a drone.[170] Following Sen. Paul's filibuster, the Attorney General indicated that the President does not have the authority to use a weaponized drone "to kill an American not engaged in combat" on American soil.[171] The ambiguity in due process necessitates legislation that protects due process rights as drones are integrated into the national airspace.

A Gallup poll released in March 2013 indicates that the majority of Americans support Sen. Paul on this issue: only 25 percent of Americans believe the government should launch airstrikes against suspected terrorists living on American soil and only 13 percent believe the government should launch airstrikes against Americans who are suspected terrorists but are living on American soil. It is apparent that, in the absence of an emergency, public opinion indicates little support for due process-free domestic drone strikes.[172]

Because drones in the national airspace raise pressing questions in terms of privacy and due process, several civil liberties organizations and other stakeholders have proposed guidelines on how to address these issues through legislation on the federal or state levels or through policies implemented by the FAA. Part II of this paper summarizes these suggested guidelines, as well as the guidelines proposed by the Muslim Public Affairs Council.

PART II: GUIDELINES FOR DOMESTIC DRONE OPERATION

U.S. Army
Honeywell RQ-16 T-Hawk

Jeffery Scism

Lockheed Martin D-21

In response to the complex issues raised by the integration of drones, public and private sector entities have proposed guidelines to regulate their domestic operation. The positions of several of these representative organizations are summarized here, followed by the suggested guidelines of the Muslim Public Affairs Council.

Privacy rights are upheld by all the organizations surveyed here. There is the broadest agreement over the requirement of search warrants to conduct surveillance of a targeted individual or property when they have not given their consent and have a reasonable expectation of privacy. The broad agreement among advocates, legislators, and the public is a strong indicator of how deeply the public and legislators value privacy and how viscerally we respond to drones as a threat to privacy.

However, two issues are currently at debate: one, will the reasonable expectation of privacy standard continue to be tenable in the drone age? If so, where do people have a reasonable expectation of privacy? If not, what standard would be more appropriate for this era of mass surveillance? Toward that end, as previously stated, perhaps new rules have to be articulated regarding the reasonability of the surveillance itself, as opposed to whether an individual has a reasonable expectation of privacy. The second issue is related to search warrants: to what extent should exceptions exist to the search warrant requirement?

For instance, due to the unique nature of the threat posed by drone surveillance, the EFF explicitly states that law enforcement should be required to acquire a warrant to operate a drone over public and private land. On the other hand, the ACLU states that, while a warrant must be required in private spaces, the Constitution may allow drone use in public spaces when there are specific and articulable grounds to believe that the drone will collect evidence relating to a specific criminal act. Yet, the ACLU also supports legislation that requires a warrant across the board.[174]

In contrast to the EFF, the proposed guidelines issued jointly by the Aerospace States' Association, National Conference of State Legislatures, and National Governors' Association make search warrants the exception rather than the rule. According to the guidelines, states may require search warrants when conducting a specific, targeted search of a person or property, but "[a] ll other observation activities should not require a warrant, to the extent allowed under Supreme Court rulings." In addressing data retention, the proposed guidelines suggest the prohibition of repurposing of government-acquired data unless by a warrant.[175]

Restrictions on drone usage and image retention, public access to information, and prohibition of weaponization of drones are routinely included in suggested guidelines.

MPAC Suggested Guidelines

The Muslim Public Affairs Council endorses the following principles in proposed federal and state drone legislation:

• Law enforcement use of drones: law enforcement's use of drones should be restricted. Drones present an unprecedented threat to privacy, far more potent than manned aerial vehicles, and as such should
be subjected to more stringent requirements.

• In order to limit the capability of drones to chill First Amendment-protected activities, law enforcement should be required to acquire a warrant before operating a drone for surveillance in public and private locations. A warrant should also apply if law enforcement is obtaining information from third-party drones.

• A few reasonable exceptions should be made: law enforcement should be allowed to use a drone during emergencies, but any legislation should provide a clear definition of emergency and law enforcement should be required to submit a sworn statement describing the nature of the emergency before any drone is deployed.

• In all cases, a time limit ought to restrict law enforcement operation of drones.

• Any data collected from a drone that does not result from a search warrant or fall into one of the excepted categories should be inadmissible in court.

• Data collection: Law enforcement should not be allowed to retain or use data that is incidental to the investigation at hand, irrelevant, or unrelated. Any such data
should be destroyed within a week of acquirement.

• Congress and state legislatures should require that all drone operators submit data collection statements to the FAA, stating who will operate the drone, when, and the kind of data they intend to collect before obtaining a permit.

• The amount of personally-identifiable information collected should be limited. Congress and state legislatures should develop data minimization guidelines for law enforcement use of drones. Further, law enforcement should be required to abide by these data minimization guidelines and submit data minimization statements.

• Any personally-identifiable information should be used solely for the purpose stated in a search warrant.

• Any data collected must be secured from unauthorized access from external parties.

mark6mauno
Boeing X-45A Joint Unmanned Combat Air System

• Adoption of Fair Information Practices (FIPs): The FAA should require that any federal, state, or local agency applying for a license to operate a drone must incorporate the FIPs in their privacy policies.

• Weaponization of drones: The weaponization of drones should be prohibited, as should any attempt to use a drone to deliver weapons against any person or property or use a drone as a weapon.

• Due process: No federal, state, or local government may use a drone to deprive any individual located within the United States of life, liberty, or property without due process of law.

• Remedies: Effective legislation ought to include remedies. States and individuals should have the ability to bring a cause of action against an entity that, in operating a drone, deprives them of rights.

• Oversight: Drone deployment by any federal, state, or local governmental agency must be subjected to oversight by the appropriate governing body. Each such agency must record the duration and geographic domain of each drone flight, as well as the purpose of each mission. Each agency must submit a detailed report addressing the above to the appropriate governing body annually.

  • Local law enforcement drone usage should be subjected to oversight by an impartial party that is ideally located outside the law enforcement agency. Oversight by municipal councils is preferable.

• Public Engagement: The public should be informed of the development of policy guidelines by any agency intending to operate drones and the public's suggestions and comments must be adequately addressed.

  • Unless exempted by law, any retained images should be accessible to the public.

  • Before a law enforcement agency acquires a drone, the public should be informed of the capacity in which the drone will be used and how frequently drones will be deployed. The public should also have access to any privacy policies promulgated by the agency. Further, the public should be forewarned if any data will be collected and how the drones will intrude in private life.

• Transparency: In keeping with the principle of transparency, the FAA should make available in a searchable format on their website the names of drone applicants, the holders of Certificates of Authorization, and other licensees. The website should be updated with this information every month.

  • Privacy policies should be publicly available. They should be transparent about data collection capabilities, and the use, collection, and dissemination

PART III: **THE LEGISLATION**

Joseph M. Buliavac, U.S. Navy

Men conduct pre-flight checks on a Boeing Insitu ScanEagle drone before launch

"While privately and publicly operated unmanned aircraft systems can have a legitimate role in areas such as agriculture, scientific research, and public safety, these systems present new challenges to the privacy and due process rights of Californians." - California, Senate Bill 15, Section 1c (2013)[176]

Legislators recognize both the potential for economic growth that drones present as well as their ability to infringe privacy and due process rights. On January 15, 2014, the Senate Committee on Commerce, Science, and Transportation held a hearing to examine the domestic applications of drones and their regulation. During the course of the hearing, several members of Congress indicated concern for unregulated domestic drone usage: Sen. John D. Rockefeller IV (D-WV) inaugurated the hearing by stating that there are several issues that "we need to address before the FAA licenses [drones] for broad use in our national airspace."[177] Sen. Dianne Feinstein (D-CA) recommended stringent yet reasonable privacy guidelines for civilian and public use of drones, and a total prohibition of armed drones on domestic soil.[178] Sen. Cory Booker (D-NJ) stated that drones put him "between [his] Star Trek aspirations and [his] Terminator fears," displaying both the expectations and apprehensions that accompany domestic drone growth.[179]

Drone bills that have been introduced in Congress and state legislatures address these expectations and apprehensions. During the current Congressional session, 14 such bills have been introduced.[180] These bills are intended to regulate the use of drones. For instance, Sen. Ted Cruz's (R-TX) bill would prohibit the use of a drone to kill an American citizen on domestic soil, and accordingly seeks to preserve due process rights.[181]

In state legislatures, over 100 bills were introduced in the legislative year 2013 and many of them have been carried over into 2014.[182] According to the National Conference of State Legislatures, as of February 6, 2014, there are 132 bills pending in 35 states[183] The Freedom from Unwarranted Surveillance Act, enacted first in Florida, imposes a search warrant requirement on law enforcement use of drones.[184] Several of these bills are in keeping with the principles proposed in Part II of this paper, but do they go far enough?

I. Bills In Congress

In the 113th Congress, 14 bills have been introduced intending to regulate the use of drones: 13 bills were introduced in 2013 and one bill was introduced in 2014. Several of these bills are iterations of previously introduced bills. As can be observed in the chart at the end of this section, the overwhelming concerns of the legislators proposing laws for domestic drone usage are privacy rights and preserving due process. It is also interesting to note that regulations for domestic drones receive broad bipartisan support.

A. Privacy

Of the 14 bills introduced this session, seven are aimed to protect privacy rights. Six out of the seven bills address governmental drone usage and include a search warrant requirement prior to employing a drone to collect evidence during the course of an investigation. The most prominent of these six bills is the Drone Aircraft Privacy and Transparency Act, which was introduced by Sen. Edward Markey (D-MA)[186] and later by Rep. Peter Welch (D-VT).[187] The Drone Aircraft Privacy and Transparency Act of 2013 (DAPTA)[188] would amend the FAA Modernization and Reform Act of 2012 by providing guidance and limitations as drones are integrated into the national airspace. Three bills under the title of DAPTA were introduced in 2013.

DAPTA would require the Secretary of Transportation to undertake a study identifying any threats to privacy principles that would be posed by drone integration into the national airspace and report on the findings to Congressional committees. DAPTA would prohibit the Secretary of Transportation from granting authority to operate a drone system unless the applicant submits a data collection statement that provides reasonable assurance that the applicant will adhere to existing privacy principles and applicable privacy law. The data collection statement would include details on who will operate the drone, where it will be operated, and the kind of information they intend to collect.[189] The data collection statement is important because Sec. 4(a)(1) of the bill states that it is unlawful to operate drone in a way contrary to the statement.[190] Further, DAPTA would require law

enforcement agencies to submit data minimization statements prior to operating a drone, stating how data collection would be minimized. DAPTA would also require the FAA to make publicly available in a searchable format any certificates, licenses, or grants of authority via the FAA website.[191]

The DAPTA bill also includes a search warrant requirement for governmental entities. There is an exception to this requirement in the case of exigent circumstances, which may exist when (a) in cases of imminent danger of death or serious injury; or (b) there is credible intelligence indicating a high risk of terrorist attack by a specific individual or organization.[192]

Other notable elements of the DAPTA bills include prohibition on use of evidence in court that was obtained in violation of the statute; prohibition of sharing data obtained from a drone among governmental agencies, except as authorized by law; the requirement that any data incidentally collected that has no bearing on the investigation under question must be destroyed; and multiple means of enforcement (through the Federal Trade Commission, state Attorney Generals, and a private right of action). The DAPTA bill has garnered support from civil liberties organizations. The ACLU's Chris Calabrese stated, "Bills like the Drone Aircraft Privacy and Transparency Act of 2013 assure that Americans' privacy won't go extinct in the 21st century."

Because of its strong safeguards against violations of individual privacy, the Muslim Public Affairs Council (MPAC) supports DAPTA.

The other privacy-related bills are not as comprehensive as DAPTA. Both Sen. Rand Paul (R-KY) and Rep. Austin Scott (R-GA) introduced bills entitled the Preserving Freedom from Unwarranted Surveillance Act of 2013. These bills also include search warrant requirements for the use of a drone in gathering evidence, and provide exceptions for border patrols, exigent circumstances, and where a high risk of terrorist attacks exists.[195] Sen. Paul's bill also prohibits the submission of evidence in court obtained in violation of the statute.[196] These bills mainly address the search warrant requirement; unlike DAPTA, they do not address data-sharing and they impose no data minimization requirements. While MPAC applauds these attempts to fortify privacy rights in the drone age, ultimately these bills are insufficient in addressing the varieties of privacy infractions that may occur.

Rep. Ted Poe (R-TX) introduced a bill entitled the Preserving American Privacy Act of 2013. This bill aims to introduce limitations on public and private domestic drone use. The bill requires any public agency to submit data collection statements to the Attorney General and requiring that data collection generally be minimized. The bill further states that a governmental entity cannot operate a drone or disclose information obtained from a drone unless they acquire a warrant, an order, the permission of those surveilled, or unless they operate the drone along the borders or in an emergency. The bill also prohibits the operation of a private drone to capture images of a person "under circumstances in which the individual had a reasonable expectation of privacy."[198]

Sen. Mark Udall (D-CO) introduced the only privacy-oriented bill that does not include a search warrant requirement. Sen. Udall's Safeguarding Privacy and Fostering Aerospace Innovation Act of 2013 addresses civilian drone usage and would make it unlawful for any individual to conduct surveillance of another individual except if they acquire prior written consent from the surveilled individual, if the surveilled individual is in an emergency situation, or if the targeted person is in a public place.[199] Rep. Poe's and Sen. Udall's bills may potentially implicate the First Amendment, by limiting an individual's right to record, which has traditionally been safeguarded under American jurisprudence.[200] As such, MPAC does not

Rennett Stowe

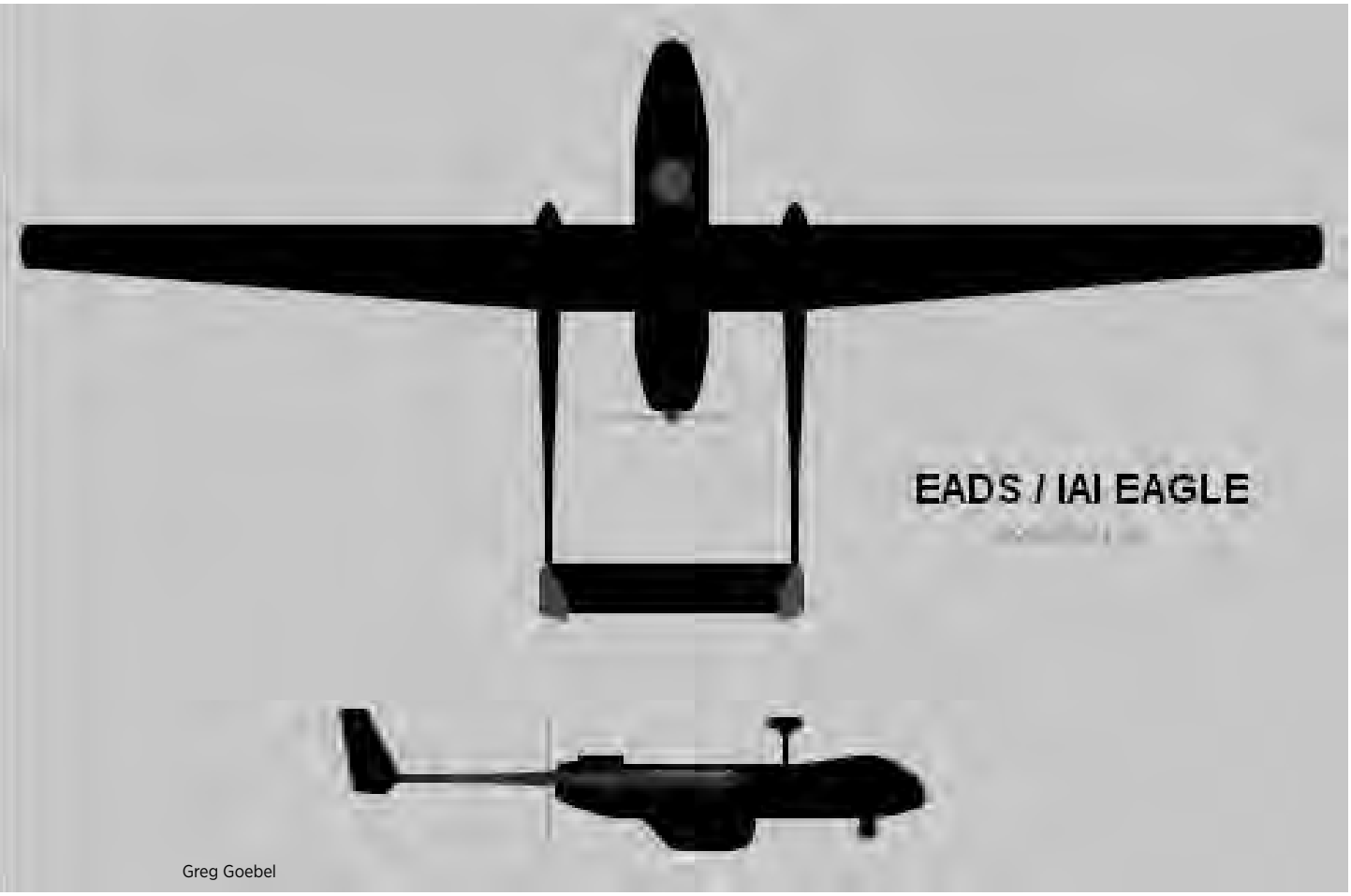
Northrop Grumman RQ-4 Global Hawk

B. Due Process

Due process rights also figure prominently in drone legislation. Five bills relate to the protection of due process rights.[201] Of these five, three bills were introduced this Congressional session that aim to restrict the government from using a drone to kill American citizens in the United States without due process. Sen. Ted Cruz (R-TX) introduced S. 505, "a bill to prohibit the use of drones to kill citizens of the United States within the United States."[202] This was co-sponsored by Sen. Rand Paul (R-KY) and Sen. Mike Lee (R-UT). Both this bill and H.R. 1242 seek to prohibit the use of a drone to kill citizens of the United States in the United States unless the individual "poses an imminent threat of death or serious bodily injury to another individual."[203]

The Life, Liberty, and Justice for All Americans Act of 2013, introduced by Rep. Trey Radel (R-FL) is broader than the two bills discussed above because it is not limited to drones.[204] It prohibits the President from using "lethal military force" against an American citizen located in the United States unless the individual poses an imminent threat of death or serious bodily injury, or if lethal military force would prevent or minimize deaths or serious bodily injuries. Here, the scope extends beyond drones. Although the bills discussed above are important in symbolically upholding due process, they do not represent meaningful alterations to the legal corpus as it stands. The bills allow for national security exceptions on the prohibition of domestic drone strikes. As it stands, however, national security exceptions are already raised in order to justify due process-free deprivations of life, liberty, or property via drone strikes abroad and nothing bars the government from conducting drone strikes on American soil.[205] A total ban on weaponized drones in the national airspace would be far more effective. Because the bills discussed above do not go far enough, MPAC does not support these bills.[206]

Another bill would prohibit the weaponization of drones entirely. Rep. Michael Burgess (R-TX) introduced the No Armed Drones Act of 2013, which would prohibit the Secretary of Transportation from granting any "person" the authority to operate a drone in the national airspace as a weapon or to deliver weapons against a person or property in the United States.[207] The proposed legislation defined "person" according to Sec. 40102 of Title 49 of the United States Code, and thus "includes a governmental authority and a trustee, receiver, assignee, and other similar representative."[208]
A ban on the weaponization of drones also has wide support: at a January 15, 2014 hearing of the Senate Committee on Commerce, Science, and Technology, Sen. Dianne Feinstein articulated a total ban on armed drones on domestic soil as one of the principles to adhere to in drone legislation.[209] MPAC supports a total prohibition on the weaponization of drones.
It is apparent that legislators are concerned with protecting the due process-free deprivation of life, liberty, and property of American citizens as domestic drone usage grows. This is apparent in the proposed legislation as well as in an amendment to the National Defense Authorization Act of 2014 passed by the House of Representatives in June 2013. The amendment states that "the Department of Defense may not use a drone to kill a citizen of the United States," but that protection "shall not apply to an individual who is actively engaged in combat against the United States."[210] While the amendment did not make it to the final version, the preoccupation with ensuring due process is clear.[211]



Greg Goebel

Illustration of an EADS-IAI Eagle 1 drone

Soldiers launch an AeroVironment RQ-11B Raven

C. Conclusions

Of the privacy bills introduced, Sen. Markey's Drone Aircraft Privacy and Transparency Act appears to be the most effective at safeguarding privacy rights because it not only requires law enforcement to obtain a search warrant prior to operating a drone to obtain evidence, it also entails data minimization statements, prohibits information sharing among agencies, and requires incidentally collected data to be destroyed, except as authorized by law. The bill also requires data collection statements from civil drone operators, which would compel companies and other data-mining entities to be more transparent about the kind and amount of data they would collect. The passage of Sen. Markey's bill would put in place minimum safeguards against the use of drones to carry out wholesale, unrestricted surveillance.

While the bills aimed to prohibit the killing of American citizens on American soil may seem effective at first, they do little to change the law as it stands. The government has frequently used the terrorism exception to target American citizens such as Anwar al-Awlaki, and has claimed that they were actively engaged in combat against the United States. And yet, these bills are an important articulation of the apprehension that legislators sense when considering the integration of potentially lethal drones into the national airspace. A complete ban on the weaponization of drones would be far more effective. As such, MPAC supports Rep. Burgess' No Armed Drones Act of 2013.

Proposed Drone Legislation in the 113th Congress

Privacy Related Bills
Due Process Related

Bill No. and Name H.R. 637: Preserving American Privacy Act of 2013
Status February 13, 2013, introduced and referred to committee
Introduced by Rep. Ted Poe (R-TX), cosponsored by Rep. Zoe Lofgren (D-CA)
Summary To provide for a legal framework for the operation of public unmanned aircraft systems, and for other purposes.

Bill No. and Name H.R. 972: Preserving Freedom from Unwarranted Surveillance Act of 2013
Status March 5, 2013, introduced; April 8, 2013, referred to committee on
Introduced by Rep. Austin Scott (R-GA)
Summary To protect individual privacy against unwarranted governmental intrusion through the use of the unmanned aerial vehicles commonly called drones, and for other purposes.

Bill No. and Name S. 505: A bill to prohibit the use of drones to kill citizens of the United States within the United States
Status March 7, 2013, introduced; March 11, 2013, reported by committee
Introduced by Sen. Ted Cruz (R-TX), cosponsored by Sen. Rand Paul (R-KY) and Sen. Mike Lee (R-UT)
Summary Prohibits the federal government from using a drone (unmanned aircraft) to kill a U.S. citizen located in the United States. Makes such prohibition inapplicable to an individual who poses an immediate threat of death or serious bodily injury to another. States that nothing in this Act shall be construed to allow the killing of a U.S. citizen located in the United States without due process of law.

Bill No. and Name H.R. 1083: NADA Act of 2013
Status March 12, 2013, introduced; March 13, 2013, referred to committee
Introduced by Rep. Michael Burgess (R-TX)
Summary To amend the FAA Modernization and Reform Act of 2012 to establish prohibitions to prevent the use of an unmanned aircraft system as a weapon while operating in the national airspace system, and for other purposes.

Bill No. and Name H.R. 1242: To prohibit the use of drones to kill citizens of the United States within the United States
Status March 18, 2013, introduced; April 15, 2013, referred to committees
Introduced by Rep. Reid Ribble (R-WI), 31 cosponsors
Summary Prohibits the federal government from using a drone (unmanned aircraft) to kill a U.S. citizen located in the United States. Makes such prohibition inapplicable to an individual who poses an immediate threat of death or serious bodily injury to another. States that nothing in this Act shall be construed to allow the killing of a U.S. citizen located in the United States without due process of law.

Bill No. and Name	H.R. 1269: Life, Liberty, and Justice for All Americans Act of 2013
Status	March 19, 2013, introduced; April 15, 2013, referred to committee
Introduced by	Rep. Trey Radel (R-FL)
Summary	To prohibit the use of lethal military force against citizens of the United States located within the United States.

Bill No. and Name	H.R. 1262: Drone Aircraft Privacy and Transparency Act of 2013
Status	March 19, 2013, introduced and referred to committee
Introduced by	Rep. Edward Markey (D-MA) and co-sponsored by Rep. Peter Welch (D-VT)
Summary	To amend the FAA Modernization and Reform Act of 2012 to provide guidance and limitations regarding the integration of unmanned aircraft systems into United States airspace, and for other purposes.

Bill No. and Name	S. 1016: Preserving Freedom from Unwarranted Surveillance Act of 2013
Status	May 22, 2013, introduced and referred to committee
Introduced by	Sen. Rand Paul (R-KY)
Summary	A bill to protect individual privacy against unwarranted governmental intrusion through the use of the unmanned aerial vehicles commonly called drones, and for other purposes.

Bill No. and Name	H.R. 2183: Drones Accountability Act
Status	May 23, 2013, introduced and referred to committees
Introduced by	Rep. Barbara Lee (D-CA)
Summary	To direct the Director of the CIA to cease lethal drone operations, and for other purposes.

Bill No. and Name	S. 1057: Safeguarding Privacy and Fostering Aerospace Innovation Act of 2013
Status	May 23, 2013, introduced and referred to committee
Introduced by	Sen. Mark Udall (D-CO)
Summary	A bill to prohibit the use of unmanned aircraft systems by private persons to conduct surveillance of other private persons, and for other purposes.

Bill No. and Name	H.R. 2438: Designating Requirements on Notification of Executive Ordered Strikes Act of 2013
Status	June 19, 2013, introduced and referred to committees
Introduced by	Rep. Darrell E. Issa (R-CA)
Summary	To require an adequate process in preplanned lethal operations that deliberately target citizens of the United States or citizens of strategic treaty allies of the United States, to limit the use of cluster munitions generally, including when likely to unintentionally harm such citizens, and for other purposes.

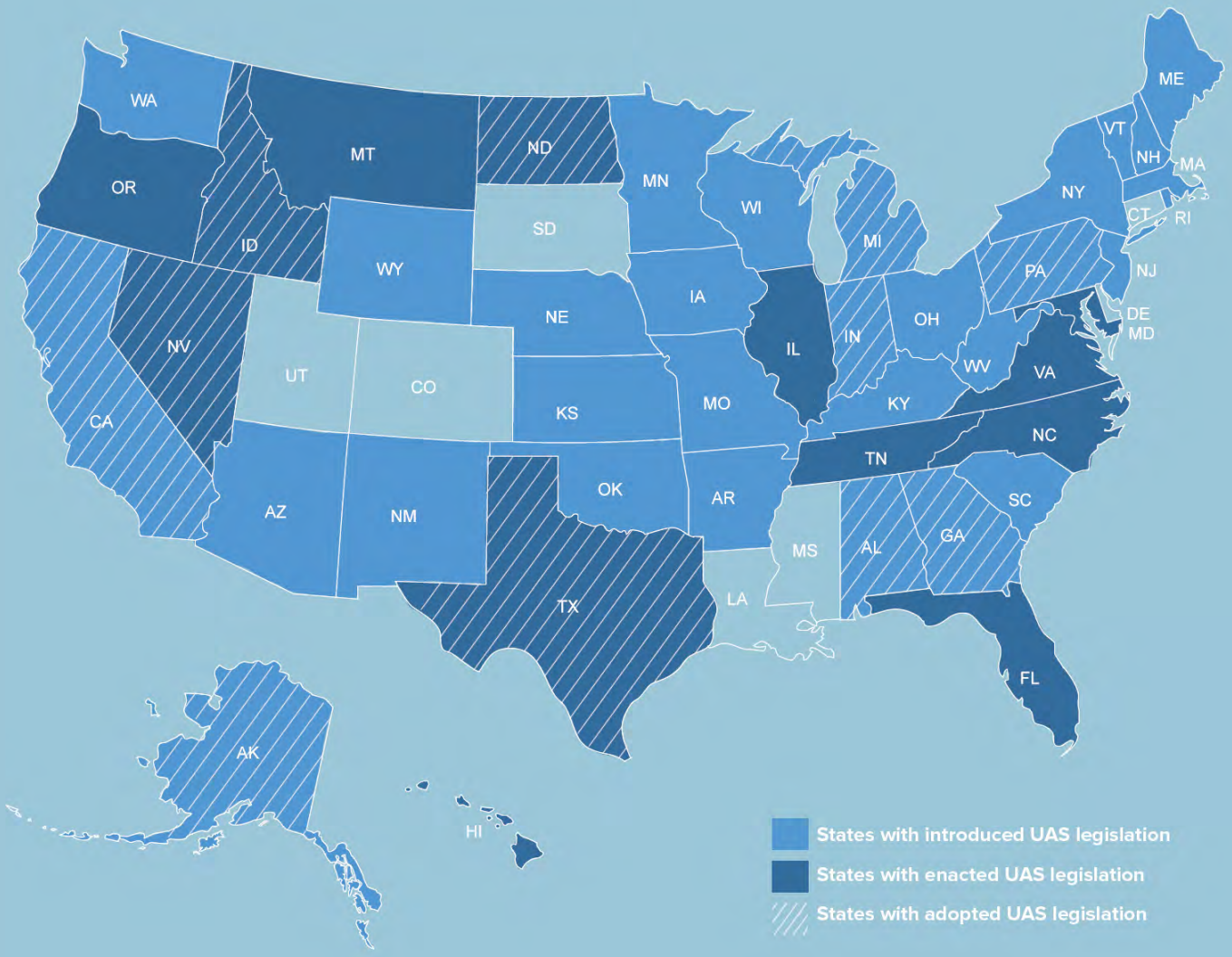
Bill No. and Name	H.R. 2868: Drone Aircraft Privacy and Transparency Act of 2013
Status	July 30, 2013, introduced and referred to committees
Introduced by	Rep. Peter Welch (D-VT)
Summary	To amend the FAA Modernization and Reform Act of 2012 to provide guidance and limitations regarding the integration of unmanned aircraft systems into United States airspace, and for other purposes.

Bill No. and Name	S. 1639: Drone Aircraft Privacy and Transparency Act of 2013
Status	November 4, 2013, introduced and referred to committee
Introduced by	Sen. Edward Markey (D-MA)
Summary	To amend the FAA Modernization and Reform Act of 2012 to provide guidance and limitations regarding the integration of unmanned aircraft systems into United States airspace, and for other purposes.

Bill No. and Name	H.R. 4036: To prohibit the Central Intelligence Agency from using an unmanned aerial vehicle to carry out a weapons strike or other deliberately lethal action and to transfer the authority to conduct such strikes or lethal action to the Department of Defense
Status	February 11, 2014, introduced and referred to committees
Introduced by	Rep. Michael Burgess (R-TX)
Summary	Prohibits any officer or employee of, or contractor or detailee to, the Central Intelligence Agency (CIA) from using an unmanned aerial vehicle to carry out a weapons strike or other lethal action. Requires the President to transfer all authority to use such a vehicle to conduct such strikes or lethal action to the Department of Defense (DOD).

II. Bills In State Legislatures

Drone Legislation Introduced, Enacted, or Adopted in 2013



In 2013, state legislators introduced a record number of bills aiming to regulate domestic drone usage. Preoccupations with privacy and due process are also echoed in state legislatures. The National Conference of State Legislatures reported that 43 states introduced 130 bills and resolutions addressing drones. By the end of 2013, 13 states had enacted 16 new laws addressing domestic drone usage and 11 states had adopted 16 resolutions.[212] Many of the bills have been carried over to 2014: as of June 6, 2014, 35 states have considered legislation related to drones. While most of the bills have been carried over from 2013, Hawaii, Kentucky, Missouri, and Indiana have introduced new measures this year. As of June 2014, six bills have been enacted in five states in 2014: Indiana, Iowa, Tennessee, Utah, and Wisconsin. This brings the total number of enacted drone legislation to 22 laws in 17 states and 16 resolutions in 11 states.[213]

Drone bills in the states address a number of issues: some bills seek to encourage the growth of the drone industry within the state, while others address privacy or due process, and yet others impose a moratorium on drones until further study has been conducted. This report mainly addresses legislation enacted in 2013.

A. Promotion of drone industry

States have been competing to become the Silicon Valley of the domestic drone market, and this is evident in a number of bills that have been passed encouraging the growth of the domestic drone industry.[214] The Nevada state legislature passed Senate Concurrent Resolution 7, which stated that Nevada is the optimal site for drone testing and development. Both houses of the legislature endorsed the "promotion of efforts to support the establishment of Nevada as the "Silicon Valley" of unmanned aircraft systems education, testing, research and manufacture," and affirming that Nevada must compete to become one of the FAA's six test sites.[215]

Furthermore, Nevada's legislature also passed AB 507, which appropriated $4 million to the interim Finance Committee for allocation to the Governor's Office of Economic Development for the Unmanned Aerial Vehicle (UAV) program only if the state is selected as a FAA test site. The state of Nevada was subsequently selected as a FAA test site. Similarly, the North Dakota legislature passed SB 2018, which appropriated $1 million to pursue designation as a test site, and a further $4 million if North Dakota gets chosen. North Dakota's Department of Commerce was also selected as a FAA test site.[216]

Seven additional states adopted resolutions recognizing the advantages of having a thriving drone industry within their states: Alabama (HR 381), Alaska (HCR 6), California (AJR 6, SCR 16), Georgia (HR 80, HR 81, SR 172), Idaho (SCR 103), Michigan (HR 280, HR 87), and North Dakota (HCR 3012).[217]

Hawaii and Maryland passed legislation that is accommodating of the growing drone industry. The Hawaii state legislature passed SB 1221, which appropriates $100,000 for two staff positions contracted through the University of Hawaii. These two positions would be responsible for creating three degree and training programs on advanced aviation, one of which would be a professional unmanned aircraft systems pilot program.[218] The Maryland state legislature passed legislation that would appropriate $500,000 for its drone test site.[219]

B. Moratoriums on drone use by State or local agencies

While some legislation promotes domestic drone growth, two states have introduced limited moratoriums on the flying of drones in state territories, at least until a thorough study has been conducted on the implications of domestic drones on privacy. Moratoriums grant states time to study the implications of introducing drones into State and local agencies, thus allowing them to put adequate safeguards in place. Virginia enacted the first drone bills with the passage of HB 2012 and SB 1331. These laws imposed a two-year moratorium on drone operation by state agencies that have "jurisdiction over criminal law enforcement or regulatory violations" or local law enforcement. The moratorium would last until July 1, 2015. [220]

There are exceptions, which allow law enforcement officers to deploy drones during Amber Alerts and Blue Alerts, and which allow use by the National Guard, higher education institutions, and search and rescue operations. The laws would also require the Virginia Department of Criminal Justice Services and other departments to conduct research on ideal modes of drone operation by law enforcement and to present findings to the legislature.[221]

The legislation developed from collaboration between Delegate Todd C. Gilbert (R-Shenandoah), noted for his conservative stances on several issues, and the ACLU of Virginia.[222] The ACLU of Virginia applauded the passage of the legislation, stating that "Virginia legislators are wise to anticipate the potential negative impact on civil liberties and privacy rights unfettered access to drone technology could have and to take the additional time needed to develop sensible and reasonable policies that balance the benefit of such technology with the privacy rights of Virginians."[223] Because there is an urgent need to first study and understand the implications of domestic drone usage, MPAC supports limited moratoriums on domestic drone use. After a thorough study has been conducted, individual states can decide to introduce drones as they see fit.
Similarly, North Carolina passed SB 402, which places a moratorium on drone usage by state or local personnel until July 1, 2015, unless the entity obtains the permission of the Chief Information Officer of the Department of Transportation (CIO). Additionally, if the CIO determines that there is a need for a drone system for State or local agencies, planning may be undertaken for the development and implementation of a drone program in North Carolina.[224]

C. Privacy

Like members of Congress, state legislators are particularly concerned about privacy rights. In 2013, seven laws were enacted and two resolutions were adopted that address privacy rights. Additionally, the ACLU kept track of bills introduced in 43 states and the vast majority of the bills monitored required a probable cause warrant before using a drone in an investigation.[225] Such a uniform requirement will protect the public from unwarranted surveillance by local law enforcement. While civil liberties organizations advocated probable cause warrants for the use of drones in gathering evidence and information, it was not a given that legislators would comply. The prevalence of the probable cause-based search warrant requirement indicates the priority privacy has in the drone age.

Florida passed SB 92, the Freedom from Unwarranted Surveillance Act, and several states followed suit, introducing their own versions of the Freedom from Unwarranted Surveillance Act. Florida's law prohibits law enforcement from using a drone to acquire evidence or other information. There are three exceptions: law enforcement may use a drone to counter a terrorist attack if the U.S. Department of Homeland Security determines such a risk exists; law enforcement may use a drone if they first acquire a search warrant; and law enforcement may also use a drone if the law enforcement agency has reasonable suspicion that swift action is needed to prevent deaths or serious damage to property, to prevent the escape of a suspect or destruction of evidence; or to aid in the search of a missing person. Florida's law also prohibits submitting information in court that was obtained in violation of the act.[226] Tennessee's Freedom from Unwarranted Surveillance Act is similar to Florida's act.[227]

The search warrant requirement is similar in Montana,[228] Oregon,[229] and Illinois. Illinois passed the Freedom from Drone Surveillance Act, signed by its governor in August 2013. Illinois' SB 1587 is notable because it also establishes information retention and reporting requirements for law enforcement agencies.[230] In terms of privacy, Oregon has perhaps the best safeguards for individual privacy, prohibiting evidence from being admitted in court if it does not comply with the statute and governing law enforcement operation of drones and law enforcement acquisition of data from third party drones. Oregon's law also imposes time limits on law enforcement use of drones and requires registration of all drones used by public bodies.[231] Due to their stringent safeguards on law enforcement use of drones and protection of privacy rights, MPAC supports Oregon's drone law.

While Alaska has not passed a law requiring a search warrant, Alaska's HCR 6 creates a joint task force to undertake a study of the drone industry, including its implications on privacy rights.[232] Both Texas and Idaho place limitations on the civil use of a drone. Texas' law makes it a misdemeanor if any individual captures "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." There are exceptions, however, including if the image was captured for scholarly or research purposes on behalf of an institution of higher learning. Additionally, while Texas' law nominally requires a probable cause warrant, the law provides so many ways law enforcement can use drones that the law is not protective against unwarranted surveillance.[233]

Idaho's law prohibits the use of a drone to conduct unwarranted surveillance or observation by any person, entity, or state agency of any individual or their dwellings or the immediate area around their home, unless they have written permission. The law also prohibits unwarranted surveillance of any agricultural industry unless they have written consent, or unless the surveillance pertains to marijuana eradication efforts.[234] The laws passed in Texas and Idaho may infringe the First Amendment by attempting to prohibit or outlaw activities that have traditionally been protected under American jurisprudence. As ACLU legislative counsel Christopher Calabrese stated, "several federal courts have relied on free speech analysis in holding that taking photographs of things that are plainly visible from public spaces is a constitutional right protected by the First Amendment."[235] For this reason, MPAC does not support these laws.

D. Due process and a ban on armed drones

Oregon's HB 2710 prohibits public bodies from operating drones capable of being weaponized. The text states: "A public body may not operate a drone that is capable of firing a bullet or other projectile, directing a laser or otherwise being used as a weapon."[236] According to the ACLU, bills introduced in 2013 in Georgia, Illinois, Massachusetts, Montana, New Hampshire, Oklahoma, and North Dakota all sought to prohibit the weaponization of drones.[237]

E. Conclusions

The legislation enacted in state legislatures around the country indicates enthusiasm for the growing drone industry, as well as apprehensions. These apprehensions have resulted in moratoriums, which would be effective in granting states time to study the implications of drone usage on privacy, civil liberties, public safety, and on due process.[238] A preoccupation with privacy has also featured prominently in drone legislation, with the result that of the 16 laws passed, seven enacted bills address privacy rights.

Of the bills enacted, Oregon's bill is perhaps most comprehensive in protecting privacy, through its restriction on law enforcement use of drones and imposition of time limits. MPAC also supports Oregon's bill because it prohibits public bodies from operating drones capable of being weaponized.

In terms of privacy, Oregon has perhaps the best safeguards for individual privacy, prohibiting evidence from being admitted in court if it does not comply with the statute and governing law enforcement operation of drones and law enforcement acquisition of data from third party drones.

Enacted or Adopted Drone Legislation in 2013

Source: National Conference of State Legislatures[239]

State	Alabama
Bill Number	HR 381
Introduction	Rep. Phil Williams (R)
Status	May 2, 2013, McCutcheon motion to adopt
Brief Description	Seeks FAA UAS test site selection.

State	Alaska
Bill Number	HCR 6
Introduction	Rep. Shelley Hughes (R)
Status	June 24, 2013, permanently filed 6/14 Legis. Resolve 17
Brief Description	Resolution adopted creating drone task force.

State	California
Bill Number	AJR 6
Introduction	Assemb. Steve Fox (D)
Status	August 15, 2013, chaptered by Secretary of State, Res.
Brief Description	Chapter 78, Statutes of 2013 Seeks FAA UAS test site selection.

State	California
Bill Number	SCR 16: California Aerospace Month
Introduction	Sen. Steve Knight (R)
Status	April 8, 2013, chaptered by Secretary of State. Res.
Brief Description	Chapter 13, Statutes of 2013 Recognizes contributions of the aerospace industry to California. March 2013 proclaimed as California Aerospace Month.

State	Florida
Bill Number	SB 92/HB 119: Freedom from Unwarranted Surveillance Act
Introduction	Sen. Joe Negron (R)
Status	April 22, 2013, approved by Governor, 04/26/13 Chapter No. 2013-33
Brief Description	Search warrant required prior to law enforcement use of drone. Exceptions for countering high risk of terrorist attacks. Allows for remedies. Evidence obtained in violation of the act not to be submitted in court.

State	Georgia
Bill Number	SR 172
Introduction	Sen. Buddy Carter (R)
Status	February 6, 2013, Senate read and adopted
Brief Description	Recognizes contributions of the aerospace industry to Georgia.

State	Georgia
Bill Number	HR 81
Introduction	Rep. Pat Gardner (D)
Status	January 29, 2013, House read and adopted
Brief Description	Recognizes contributions of the aerospace industry to Georgia.

State	Georgia
Bill Number	HR 80
Introduction	Rep. Pat Gardner (D)
Status	February 5, 2013, House adopted and February 14, transmitted to Senate
Brief Description	Invites Donald Mitchell, Co-Chair of Georgia Aerospace Policy Working Group, and Chance McColl, Co-Chair of Georgia Aerospace Policy Working Group, to be recognized by the House of Representatives.

State	Hawaii
Bill Number	SB 1221
Introduction	Sen. Gilbert Kahele (D) and Sen. Suzanne Chun Oakland (D)
Status	July 9, 2013, signed into law
Brief Description	Appropriates $350,000 to establish aeronautical programs at the University of Hawaii at Hilo and Hawaii community college.

State	Idaho
Bill Number	SB 1134
Introduction	Sen. Chuck Winder (R), Sen. Elliot Werk (D)
Status	April 11, 2013, signed by Governor
Brief Description	Search warrant required prior to law enforcement use of drone. Exceptions for emergencies, search and rescue missions, or controlled substance investigations. Allows for remedies.

State	Idaho
Bill Number	SCR 103
Introduction	Transportation committee
Status	April 4, 2013, reported delivered to the Secretary of State on 04/12/13
Brief Description	Seeks FAA UAS test site selection.

State	Illinois
Bill Number	SB 1587: Freedom from Drone Surveillance Act
Introduction	Sen. Daniel Biss (D)
Status	August 27, 2013, approved by Governor
Brief Description	• Law enforcement prohibited from using drones. • Exceptions for: countering high risk of terrorist attacks; search warrants; if law enforcement has reasonable suspicion that swift action is needed to prevent imminent death or injury or the imminent escape of evidence or a suspect; missing person searches; or solely for crime scene or traffic crash scene photography. • Allows for remedies. • Evidence obtained in violation of the act not to be submitted in court. • Establishes certain information retention and reporting requirements concerning drone ownership and use.

State	Illinois
Bill Number	HB 1652 Rep.
Introduction	Adam Brown (R) and Sen. Daniel Bliss (D)
Status	August 16, 2013, signed by Governor
Brief Description	Prohibits drone operators from interfering with lawful taking of wildlife or aquatic life.

State	Indiana
Bill Number	SR 27
Introduction	Sen. Jim Tomes (R) and Sen. Brent Waltz (R)
Status	February 25, 2013, adopted, voice vote
Brief Description	Urges the legislative council to establish the interim study committee on the use of aircraft to study the use of unmanned aerial vehicles

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State	Maryland
Bill Number	HB 100
Introduction	Del. Nicholaus R. Kipke (R)
Status	April 5, 2013, enacted
Brief Description	Appropriates $100,000 to a potential FAA UAS test site in case Maryland gets selected.

State	Michigan
Bill Number	HR 280 Rep.
Introduction	Wayne Schmidt (R)
Status	December 12 2013, House adopted
Brief Description	Seeks FAA UAS test site selection.

State	Michigan
Bill Number	HR 87
Introduction	Rep. Dian Slavens (D)
Status	April 10, 2013, House adopted
Brief Description	A resolution to declare April 15, 2013, as Robotics Day in the state of Michigan.

State	Montana
Bill Number	SB 196
Introduction	Sen. Matthew Rosendale (R)
Status	May 1, 2013, signed by Governor, chapter number assigned
Brief Description	• Prohibits admission of information obtained from a drone in court unless the information was obtained pursuant to a search warrant or in accordance with judicially recognized exceptions to search warrants. • Information obtained from a drone can also not be used to establish probable cause unless the information was obtained pursuant to a search warrant or in accordance with judicially recognized exceptions to search warrants.

State	Nevada
Bill Number	AB 507
Introduction	Assembly Ways and Means
Status	June 10, 2013, approved by Governor
Brief Description	Appropriates $4,000,000.00 to the interim Finance Committee for allocation to the Governor's Office of Economic Development for the Unmanned Aerial Vehicle (UAV) program only if the state is selected as a FAA test site.

State	Nevada
Bill Number	SCR 7
Introduction	Sen. Moises Denis (D)
Status	May 8, 2013, enrolled and delivered to Sec. of State
Brief Description	Seeks FAA UAS test site selection.

State	North Carolina
Bill Number	SB 402
Introduction	Sen. Peter Brunstetter (R), Sen. Harry Brown (R), Sen. Neal Hunt (R)
Status	July 26, 2013, signed by Governor
Brief Description	• Places a moratorium on drone usage by state or local personnel until July 1, 2015, unless the entity obtains the permission of the Chief Information Officer of the Department of Transportation (CIO). • The CIO may also determine whether a UAS program would be beneficial for the State.

State	North Dakota
Bill Number	SB 2018
Introduction	Appropriations Committee
Status	May 24, 2013, signed by Governor
Brief Description	Appropriates $1,000,000.00 to pursue designation as a test site, and a further $4,000,000.00 if North Dakota gets selected.

State	North Dakota
Bill Number	HCR 3012
Introduction	Rep. Marie Strinden (D)
Status	Mar. 22, 2013, filed with Sec. of State
Brief Description	Urges United States Air Force to select the Grand Forks Air Force Base as the active duty main operating base for the new KC-46A refueling tanker mission.

State	Oregon
Bill Number	HB 2710 A
Introduction	Rep. John E. Huffman (R)
Status	July 29, 2013, signed by Governor
Brief Description	• Search warrants required for law enforcement to gather evidence or other information. • Exceptions if there is imminent danger to life or liberty of an individual; if law enforcement has the consent of the individual; to recreate a crime scene; for training purposes; if a state of emergency exists. • Evidence obtained in violation of the act not to be submitted in court. • Restrictions on data collection by public bodies. • Prohibition of the weaponization of drones by public bodies. • Allows for remedies. • Establishes certain information retention and reporting requirements concerning drone ownership and use.

State	Pennsylvania
Bill Number	HR 172
Introduction	Rep Stephen Barrar (R)
Status	March 21, 2013, adopted by House
Brief Description	Beseeches the United States Department of Defense to reconsider the order of precedence for the newly created Distinguished Warfare Medal for cyberwarfare of drone operation.

State	Tennessee
Bill Number	SB 796: Freedom from Unwarranted Surveillance Act
Introduction	Sen. Mae Beavers (R)
Status	May 20, 2013, signed by Governor
Brief Description	Prohibits drone use by law enforcement to gather evidence except in cases of terror attack, under valid warrant, or to protect immediate danger to life.

State	Texas
Bill Number	HB 912
Introduction	Rep. Lance Gooden (R)
Status	June 14, 2013, signed by Governor
Brief Description	• Prohibits all drones from capturing an image except for academic research purposes, in testing environments, for military missions, for mapping purposes, for electric or natural gas utility, with consent, for accident documentation, for missing persons, for emergency situations, or pursuant to a valid warrant. • However, "it is a defense to prosecution under this section that the person destroyed the image: (1) as soon as the person had knowledge that the image was captured in violation of this section; and (2) without disclosing, displaying, or distributing the image to a third party."

State	Texas
Bill Number	HCR 217
Introduction	Rep. Lance Gooden (R) and Sen. Craig Estes (R)
Status	June 14, 2013, signed by Governor
Brief Description	Alters reporting requirements from HB 912.

State	Texas
Bill Number	HR 3035
Introduction	Rep. Lance Gooden (R)
Status	May 26, 2013, passed House
Brief Description	Addresses legislative procedure needed to enact HB 912.

State	Texas
Bill Number	SR 1084
Introduction	Sen. Criag Estes (R)
Status	May 26, 2013, passed Senate
Brief Description	Addresses legislative procedure needed to enact HB 912.

State	Virginia
Bill Number	HB 2012 (incorporates HB 1616 and is identical to SB 1331)
Introduction	Delegate Benjamin L. Cline (R)
Status	April 3, 2013 signed by Governor
Brief Description	Places a moratorium on the use of unmanned aircraft systems by state and local law enforcement and regulatory entities until July 1, 2015, except in defined emergency situations or in training exercises related to such situations.

State	Virginia
Bill Number	SB 1331 (identical to HB 2012)
Introduction	Sen. A. Donald McEachin (D)
Status	April 3, 2013 signed by Governor
Brief Description	Same as HB 2012.

State	Virginia
Bill Number	HB 1616 (incorporated into HB 2012)
Introduction	Delegate C. Todd Gilbert (R)
Status	February 1, 2013, bill incorporated by Courts of Justice
Brief Description	(HB2012-Cline) by voice vote in House Same as HB 2012.

CONCLUSION

Staff Sgt. Terra C. Gatti, Virginia Guard Public Affairs

Virginia unmanned aerial system platoon resets after deployment

"The big policy question is whether we want to live in a free society as envisioned by our Founding Fathers or an Orwellian surveillance society…I'm glad to see that my colleagues agree with me in our preference for a Commonwealth that values privacy and personal freedom over Big Brother."

- Delegate C. Todd Gilbert, Virginia House of Delegates (R-Shenandoah), after the Virginia General Assembly approved a two-year moratorium on drones

Through the passage of the FAA Modernization and Reform Act of 2012, Congress mandated the expedited integration of drones into the national airspace. The FAA has been forging ahead to meet the September 2015 deadline, publishing a roadmap for drone integration in November 2013 and selecting six sites to test the integration of drones into the national airspace at the end of December 2013.[241] While the roadmap addresses safety concerns, several issues remain unresolved, including the preservation of privacy and due process rights.

Current privacy law will prove inadequate in preventing abuses that may occur as a result of the mass introduction of drones. While the Fourth Amendment theoretically protects against unreasonable searches and seizures, certain standards in case law will have to be reassessed. For instance, can an individual have a reasonable expectation of privacy in the age of mass surveillance? As has been suggested by policy analysts, it may be more effective to determine whether the surveillance itself is reasonable, regardless of where it took place.

Additionally, the demarcation between public and private areas will have to be reconsidered. Although case law indicates that law enforcement agencies do not need a warrant to view anything that can be viewed by the average passenger flying in the national airspace, courts may choose to distinguish between manned aircraft and unmanned aircraft, which can be made to conduct near-constant surveillance of public places, implicating privacy rights. Lastly, federal and state privacy statutes will also have to be updated to meet this new challenge.

Due process will also have to be ensured as drones are integrated into the national airspace. Due process rights have eroded considerably since the start of the global war on terror in 2001. National security concerns may facilitate the deployment of armed drones to deprive Americans of life, liberty, or property. Perhaps the most direct way to ensure that no individual will be subjected to due process-free killings on American soil by means of a drone is to impose a total ban on the weaponization of drones.

In addressing these concerns, the Muslim Public Affairs Council makes the following recommendations:

- Law enforcement use of drones should be restricted.
- Data collection should be strictly monitored.
- The FAA should require, not merely recommend, that test sites incorporate the Fair Information Practices into their privacy policies.
- The weaponization of drones should be banned.
- The right to due process should be preserved.
- Entities should be able to bring a cause of action against those who violate their privacy or due process rights, and there should be adequate remedies enshrined in legislation.
- Drone deployment by federal agents must be subjected to Congressional oversight and local public drone use should be subjected to local city council oversight.
- The public should be engaged in the development of policy guidelines by any agency intending to operate drones.
- In keeping with the principle of transparency, the FAA should make available to the public the names of drone applicants, the holders of Certificates of Authorization, other licensees, and privacy policies of drone-operating agencies.

Legislation must be enacted that effectively safeguards constitutional liberties. Several of the elements listed above have already been included in enacted legislation in state legislatures, but a uniform set of standards must also be enshrined in federal legislation that all entities are bound to abide by. As such, the Muslim Public Affairs supports the Drone Aircraft Privacy and Transparency Act of 2013, introduced by Sen. Edward Markey, and the No Armed Drones Act of 2013, introduced by Rep. Michael Burgess.

Additionally, while MPAC applauds state legislatures that have enacted legislation regulating domestic drone usage, MPAC particularly supports Oregon's enacted bill HB 2710 because of the protections it offers against warrantless surveillance and its prohibition on the use of weaponized drones by public bodies. By the end of 2014, we hope to see effective legislative regulations on domestic drone usage enacted at both the federal and state levels.

End Notes

1. *The Future of Unmanned Aviation in the U.S. Economy: Safety and Privacy Considerations: Hearing of the S. Comm. On Commerce, Sci., & Transp.*, 113th Cong. (2013), (Independent testimony of Dianne Feinstein, Sen. From Cal.), *available at* http://www.commerce.senate.gov/public/index.cfm?p=Hearings&ContentRecord_id=a4f35af1-be81-454f-9fa5-5bae600d-d474&ContentType_id=14f995b9-dfa5-407a-9d35-56cc7152a7ed&Group_id=b06c39af-e033-4cba-9221-de-668ca1978a&MonthDisplay=1&YearDisplay=2014 [hereinafter *Feinstein testimony*] (video at 20 minutes). During the course of her independent testimony, Sen. Feinstein indicated four areas that must be addressed with respect to regulations for domestic drone usage: stringent privacy safeguards for civilian or corporate drone usage; robust privacy safeguards for governmental drone usage; public safety, particularly by mandating sense and avoid capabilities in domestic drones; and prohibition of armed drones on domestic soil, whether for public or private use. Sen. Feinstein also reported her involvement in legislation developing such regulations.

2. FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 331(8), 126 Stat. at 72 (codified as amended in scattered sections of 49 U.S.C.).

3. *Id.* at § 332(a)(3), 126 Stat. at 73.

4. *Id.* at § 332(a)(1), 126 Stat. at 73.

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13. *Feinstein testimony, supra* note 1.

14. *See infra* Part III, a; Chart 1; Drone Aircraft Privacy and Transparency Act of 2013, S. 1639, 113th Cong. (1st session, 2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113s1639is/pdf/BILLS-113s1639is.pdf; H.R. 1083, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113hr1083ih/pdf/BILLS-113hr1083ih.pdf.

15. *See infra* Part III, b; Chart 2. *See also 2013 Unmanned Aircraft Legislation*, Nat'l Conference of State Legislatures, http://www.ncsl.org/research/civil-and-criminal-justice/unmanned-aerial-vehicles.aspx (last visited Mar. 7, 2014). The American Civil Liberties Union reports that legislation was introduced in 43 states and enacted in 9 states. Allie Bohm, *Status of Domestic Drone Legislation in the States*, Am. Civil Liberties Union, Feb. 15, 2013, https://www.aclu.org/blog/technology-and-liberty/status-domestic-drone-legislation-states (last updated Jan. 22, 2014); H.B. 2710, 77th Legis. Assemb., Reg. Sess. (Or. 2013), *available at* https://olis.leg.state.or.us/liz/2013R1/Measures/Text/HB2710/Enrolled.

16. FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 331(8), 126 Stat. at 72 (codified as amended in scattered sections of 49 U.S.C.). The statute defines Unmanned Aircraft as: "The term 'unmanned aircraft' means an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft." Proposed legislation frequently uses this language in defining drones. The *Recommended Guidelines for the Use of Unmanned Aircraft* issued

by the International Association of the Chiefs of Police puts forward a different definition of unmanned aircraft: "An aircraft that is intended to navigate in the air without an on-board pilot. Also called Remote Piloted Aircraft and "drones."" Aviation Comm., Int'l Assoc. of Chiefs of Police, Recommended Guideline for the Use of Unmanned Aircraft 2 (2012), http://www.theiacp.org/portals/0/pdfs/iacp_uaguidelines.pdf [hereinafter IACP UAS Guidelines]. It is important to note that both the FAA Modernization and Reform Act of 2012 and the IACP distinguishes between Unmanned Aircraft and model aircraft. The FMRA specifically states that the Federal Aviation Administration may not promulgate rules or regulations for model aircraft. Pub. L. No. 112-95, § 336(a), 126 Stat. at 77, IACP UAS Guidelines, at 2.

17. Pub. L. No. 112-95, § 336(a)(1), 126 Stat. at 77. The Federal Aviation Administration defines UASs as: "A UAS is the unmanned aircraft (UA) and all of the associated support equipment, control station, data links, telemetry, communications and navigation equipment, etc., necessary to operate the unmanned aircraft. The UA is the flying portion of the system, flown by a pilot via a ground control system, or autonomously through use of an on-board computer, communication links and any additional equipment that is necessary for the UA to operate safely. The FAA issues an experimental airworthiness certificate for the entire system, not just the flying portion of the system." *Unmanned Aircraft Questions & Answers*, Fed. Aviation Admin., July 26, 2013, http://www.faa.gov/about/initiatives/uas/uas_faq/index.cfm?print=go.

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30. *See* 49 U.S.C. § 40102(a)(16).
31. "DEADLINE: The plan required under paragraph (1) shall provide for the safe integration of civil unmanned aircraft systems into the national airspace system as soon as practicable, but not later than September 30, 2015." Pub. L. No. 112-95, § 332(a)(3), 126 Stat. at 73.
32. *Id.*, at § 332(a)(2)(A), 126 Stat. at 73.
33. *Id.*, at § 332(a)(5). The FMRA also requires the 5-year roadmap to be included in the FAA's Next GenerationAir Transportation System, "a series of inter-linked programs, systems, and policies that implement advanced technologies and capabilities to dramatically change the way the current aviation system is operated." *See* Fed. Aviation Admin., Destination 2025 (2011), https://www.faa.gov/about/plans_reports/media/Destination2025.pdf; *see also* FAA UAS Roadmap, *supra* note 6.
34. Pub. L. No. 112-95, § 332(c)(1), 126 Stat. at 73; *Unmanned Aircraft Questions & Answers, supra* note 17.
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67. Complaint for Injunctive Relief for Violation of the Freedom of Information Act, 5 U.S.C. § 552, Electronic Frontier Foundation v. Department of Transportation, No. 12-0164, (filed in N.D.Cal., Jan. 10, 2012), *available at* https://www.eff.org/node/68152; Complaint for Injunctive Relief for Violation of the Freedom of Information Act, 5 U.S.C. § 552, Electronic Frontier Foundation v. Department of Transportation, No. 12-5581, (filed Oct. 30, 2012), *available at* https://www.eff.org/node/72155; Press Release, Elec. Frontier Found., EFF Demands Answers About Predator Drone Flights in the U.S. (Oct. 31,

2012), *available at* https://www.eff.org/press/releases/eff-demands-answers-about-predator-drone-flights-us.

68. *EFF Map of Domestic Drone Flights*, Elec. Frontier Found., https://www.google.com/fusiontables/embedviz?viz=MAP&q=select+col2+from+1WuTyH62PmUF97oxo6IreT1BL_aw9HJN5pocwmwg&h=-false&lat=44.08758502824518&lng=-85.5615234375&z=4&t=1&l=col2&y=1&tmplt=2 (last visited Mar. 6, 2014); Lynch, *supra* note 27; *FAA Releases Lists of Drone Certificates—Many Questions Left Unanswered,* Elec. Frontier Found., Apr. 19, 2012, https://www.eff.org/deeplinks/2012/04/faa-releases-its-list-drone-certificates-leaves-many-questions-unanswered; Fed. Aviation Admin., FAA List of Certificates of Authorizations (COAs), https://www.eff.org/document/faa-list-certificates-authorizations-coas (last visited Mar. 6, 2012) [hereinafter FAA COAs] (list obtained by Electronic Frontier Foundation); Fed. Aviation Admin., FAA List of Special Airworthiness Certificates - Experimental Category (SACs), https://www.eff.org/document/faa-list-special-airworthiness-certificates-experimental-categorysacs (last visited Mar. 6, 2012) [hereinafter FAA SACs] (list obtained by Electronic Frontier Foundation); Fed. Aviation Admin., 2011-2012 FAA List of Drone License Applicants, https://www.eff.org/document/2012-faa-list-drone-applicants (last visited Mar. 6, 2012) (list obtained by Electronic Frontier Foundation).

69. *EFF Map of Domestic Drone Flights, supra* note 68.

70. U.S. Customs and Border Prot., Unmanned Aircraft Systems (Fact Sheets), *available at* http://www.cbp.gov/xp/cgov/border_security/am/operations/oam_vessels/aircraft/uas/ (last visited Mar. 6, 2014).

71. FAA COAs, *supra* note 68; Brian Bennett & Joel Rubin, *Drones are taking to the skies in the U.S.,* L.A. Times, Feb. 15, 2013, http://www.latimes.com/news/nationworld/nation/la-na-domestic-drones-20130216,0,3374671.story.

72. Ryan Calo, Op-Ed, *Bad laws would hurt good drones,* CNN, Mar. 5, 2013, http://www.cnn.com/2013/03/05/opinion/calo-drones/index.html.

73. By means of the second FOIA lawsuit, which sought disclosure of drone applicants and authorizations from the commencement of the first lawsuit to the present, the EFF discovered that 20 additional entities had applied for licenses in the meantime. The list included the State Department, Ohio Department of Transportation, Canyon County Sheriff's Office in Idaho, and the National Institute of Standards and Technology. Given that the number of authorizations exceeds the number of applicants, it seems that several applicants have applied for multiple authorizations. Complaint for Injunctive Relief for Violation of the Freedom of Information Act, 5 U.S.C. § 552, Electronic Frontier Foundation v. Department of Transportation, No. 12-5581, (filed Oct. 30, 2012), *available at* https://www.eff.org/node/72155; Lynch, *supra* note 27; Lynch, *supra* note 65.

74. Joan Lowy, *FAA Certifies First 2 Types Of Drones For Civilian Use*, Huffington Post, July 26, 2013, http://www.huffingtonpost.com/2013/07/27/faa-drones-civilian-use_n_3662269.html. Also see Amazon's announcement that they will be utilizing UAVs to deliver packages via Amazon Prime within 30 minutes. *AmazonPrimeAir,* Amazon, http://www.amazon.com/b?node=8037720011 (last visited Mar. 6, 2014).

75. *Parrot AR.Drone 2.0 Quadricopter Controlled by iPod touch, iPhone, iPad, and Android Devices -Orange/Blue*, Amazon, http://www.amazon.com/Parrot-AR-Drone-Quadricopter-Controlled-Android/dp/B007HZLLOK/ref=sr_1_1?ie=UTF8&qid=1358121396&sr=8-1&keywords=ar+drone+2.0 (last visited Mar. 6, 2014); Vivek Wadhwa, Op-Ed, *The Drone Debate We Need to Have*, Wash. Post, Feb. 5, 2013, http://articles.washingtonpost.com/2013-02-05/national/36939026_1_smaller-drones-privacy-and-robotics-unmanned-aircraft-systems.

76. *Id.*

77. Domestic drone use also has significant opposition, however. In the Colorado town of Deer Trail (population: 500), however, an individual proposed an ordinance to allow residents to shoot down drones. The ordinance will be going up for a vote in 2014, but in the meantime, residents have already begun applying for the novelty licenses to shoot down drones, with over 1,000 applications submitted (and $19,000 collected in license fees). Patrik Jonsson, *Drone hunters: Why are Americans lining up to shoot down drones? (+video)*, Christian Sci. Monitor, Sep. 7, 2013, http://www.csmonitor.com/USA/2013/0907/Drone-hunters-Why-are-Americans-lining-up-to-shoot-down-drones-video; *FAA warns Colorado town that shooting down drones could lead to prosecution,* Russia Today, July 20, 2013, http://rt.com/usa/faa-warns-against-shooting-drones-345/; Jason Bittel, *Want a Drone-Hunting License in Colorado? Get In Line.*, Slate, Sept. 6, 2013, http://www.slate.com/blogs/future_tense/2013/09/06/deer_trail_co_sees_applications_for_nonexistent_drone_hunting_license.html; Ana Cabrera, *Colorado Town's Vote on Drone Ordinance Postponed,* CNN, Dec. 10, 2013, http://www.cnn.com/2013/12/10/us/colorado-town-drone-ordinance/.

78. Joe Eyerman et al., Inst. For Homeland Sec. Solutions, Unmanned Aircraft and the Human Element: Public Perceptions and First Responder Concerns 2-3 (2013), *available at* http://sites.duke.edu/ihss/files/2013/06/UAS-Research-Brief.pdf. A *Reason-Rupe* poll undertaken December 4-8, 2013 illustrates that 45 percent of a nationally-representative sample thinks Amazon's drone delivery program makes them think more positively of the future. Among youth 18 to 24 years old, 68 percent responded affirmatively. Socially liberal Americans, Tea Partiers, and men are more positive about

Amazon's drone delivery program. Emily Ekins, *Poll: Young Americans Most Optimistic about Amazon's Planned Package Delivery Drones, Older Americans Remain Wary*, Reason-Rupe Poll, Dec. 13, 2013, http://reason.com/poll/2013/12/13/poll-young-americans-most-optimistic-abo.

79. Eyerman, *supra* note 78, at 2-3; *see also* Monmouth Univ. Polling Inst., U.S. Supports Some Domestic Drone Use, But Public Registers Concern About Own Privacy 1 (2012), *available at* http://www.monmouth.edu/assets/0/32212254770/32212254991/32212254992/32212254994/32212254995/30064771087/42e90ec6a27c40968b911ec51eca6000.pdf.

80. Only 43 percent of the respondents indicated support for drone use in everyday matters. Eyerman, *supra* note 78, at 2-3.

81. Jenkins & Vasigh, *supra* note 7, at 2; Clay Dillow, *Why Americans love drones*, CNN Money, June 26, 2013, http://tech.fortune.cnn.com/2013/06/26/americans-love-drones/.

82. *Id.*

83. Ryan Calo, *The Drone As Privacy Catalyst,* 64 STAN. L. REV. ONLINE 29 (2011), *available at* http://www.stanfordlawreview.org/sites/default/files/online/articles/64-SLRO-29_1.pdf.

84. *Id.,* at 30. In testimony before the Senate Committee on the Judiciary, Prof. Calo did not dispute the Constitutional issues raised by the domestic usage of drones, but suggested that these issues should not overshadow their "potential to be a transformative technology." Prof. Calo said that drones can save lives, if used appropriately by police and firefighters. Prof. Calo elaborated in an op-ed on CNN.com that drones could be used to take photography to a new level, asking: "What are drones but flying smartphones, one app away from indispensable?" Prof. Calo concludes by stating that we can ideally "take the opportunity to finally drag privacy law into the twenty-first century by reexamining our outmoded doctrines" and urge the FAA to require that applicants submit a plan to minimize their impact on privacy. *The Future of Drones in America: Law Enforcement and Privacy Considerations: Hearing before the S. Comm. On the Judiciary*, 113th Cong. 10 (2013) (statement of Ryan Calo, Assistant Professor, Univ. of Wash. Sch. Of Law), *available at* http://www.judiciary.senate.gov/pdf/3-20-13CaloTestimony.pdf; Calo, *supra* note 72. Ben Geilom, government relations manager for the Association for Unmanned Vehicle Systems International, presents a different stance, stating that the systems payload used on unmanned aircraft "have been used by law enforcement and others on manned aircraft for decades" and as such pose no new challenges. Greg McNeal, *A Primer on Domestic Drones: Legal, Policy, and Privacy Implications*, Forbes, Apr. 10, 2012, http://www.forbes.com/sites/gregorymcneal/2012/04/10/a-primer-on-domestic-drones-and-privacy-implications/.

85. Glenn Greenwald & Ewen MacAskill, *NSA Prism program taps in to user data of Apple, Google and others*, The Guardian, June 6, 2013, http://www.theguardian.com/world/2013/jun/06/us-tech-giants-nsa-data; Secondary Order of the Foreign Intelligence Surveillance Court, In Re Application of the Federal Bureau of Investigation for an Order Requiring the Production of Tangible Things from Verizon Business Networks, Inc. on Behalf of MCI Communication Services, Inc. D/B/A Verizon Business Services, BR-13-80, (July 19, 2013), *available at* http://www.theguardian.com/world/interactive/2013/jun/06/verizon-telephone-data-court-order; Glenn Greenwald, *NSA collecting phone records of millions of Verizon customers daily*, The Guardian, June 5, 2013, http://www.theguardian.com/world/2013/jun/06/nsa-phone-records-verizon-court-order.

86. To see a general discussion of drones and property rights, *see* Alissa M. Dolan, Cong. Research Serv., Integration of Drones into Domestic Airspace: Selected Legal Issues 6-12 (2013), *available at* http://www.fas.org/sgp/crs/natsec/R42940.pdf.

87. The commercial drone market is predicted to grow in the near future. According to findings by *Business Insider*, 12 percent of an estimated $98 billion in cumulative global spending will be for commercial purposes. Marcelo Ballve, *COMMERCIAL DRONES: Assessing the Potential for a New Drone-Powered Economy,* Bus. Insider, Feb. 27, 2014, http://www.businessinsider.com/the-market-for-commercial-drones-2014-2. This may involve "camera drones being used for all sorts of purposes from real estate advertising to crop dusting to environmental monitoring and police work…" *The Dawning of Domestic Drones*, N.Y. Times, Dec. 25, 2012, http://www.nytimes.com/2012/12/26/opinion/the-dawning-of-domestic-drones.html. Businesses spanning diverse sectors such as online, real estate and agriculture have already begun experimenting with drones, operating within the F.A.A guidelines. Amazon has begun experimenting with potential deliveries based on drone technology. Realtors (in and around New York City) have already begun making promotional videos in order to sell high-end homes. Also, farmers using drones to spray crops and monitor soil patterns. Jerry Brito, *Domestic Drones are Coming your Way*, Reason, Mar. 11, 2013, http://reason.com/archives/2013/03/11/domestic-drones-are-coming-your-way. The main concern with commercial drones is that they may infringe on privacy rights. As Fox Rothschild LLP partner Scott Vernick states, "If drones are commercialized and used by law enforcement, we will see suits asserting that people's privacy rights have been infringed upon. … We could also see litigation over how companies handle the information." Erin Coe, *Commercial Drones Herald Product Liability, Privacy Suits*, Law 360, Jan. 16, 2014, http://www.law360.com/articles/500825/commercial-drones-herald-product-liability-privacy-suits. Even so, commercial drone operation is taking off around the globe. For instance, in Japan, the Yamaha Motor Company's RMAX helicopter drones have been spraying

crops for 20 years. Joan Lowy, *US lags as commercial drones take off around the globe*, S.F. Gate, Mar. 16, 2014, http://www.sfgate.com/news/politics/article/US-lags-as-commercial-drones-take-off-around-globe-5321851.php.

88. Drone usage poses both direct and indirect threats to public safety. Drone accidents may be intentional or accidental, and they may be caused by environmental factors. Though commercial and military aircraft have been involved in accidents, the risk of those caused by UAVs is much greater. *See* Jay Stanley & Catherine Crump, Protecting Privacy from Aerial Surveillance: Recommendations for Government Use of Drone Aircraft 9-10 (2011), *available at* https://www.aclu.org/files/assets/protectingprivacyfromaerialsurveillance.pdf. Compared to general aviation, the accident rate for UAVs is 7 times higher. *Id.* The accident rate for UAVs is 353% higher than that of commercial aviation. *Id.* A number of accidents caused by drones have occurred on U.S. soil. For instance, in November 2013, a U.S. drone crashed into a U.S. Navy ship off the coast of California and injured two people. Joe Sutton, *2 Injured When Drone Malfunctions, Crashes into Navy Ship*, CNN, Nov. 17, 2013, http://www.cnn.com/2013/11/17/us/drone-malfunction-duplicate-2/. This occurred just two days before a multi-million dollar unmanned MQ-9 Reaper drone malfunctioned and plunged into Lake Ontario. *See* Gil Aegerter, *Drone Worth Millions Crashes into Lake Ontario, Military Says,* NBC News, Nov. 12, 2013, http://investigations.nbcnews.com/_news/2013/11/12/21426738-drone-worth-millions-crashes-into-lake-ontario-military-says?lite. Other drone crashes were reported in Manhattan, the U.S.-Mexico border, a Virginia-based motorsports park, and in the backyard of a Texas home. *See* Jim Hoffer, *EXCLUSIVE: Small Drone Crash Lands in Manhattan*, Oct. 3, 2013, http://abclocal.go.com/wabc/story?id=9270668. Requests have been made by both activists and journalists to provide full disclosure on drone crashes in the United States, but the government has yet to provide the requested information. *See Pentagon Unable to Provide Information on Drone Crashes*, Russia Today, Jan. 7, 2014, http://rt.com/usa/defense-dept-drone-crash-data-289/. For this reason, the Federal Aviation Administration is emphasizing the development of sense and avoid capabilities in drone aircraft. *See* FAA UAS Roadmap, *supra* note 6, at 19. Drones may also pose significant risks if placed in the hands of criminals and terrorists. In July 2012, University of Texas professor and aerospace engineering expert Todd Humphreys spoke before the Department of Homeland Security and described the relative ease of hacking and hijacking a drone using readily available GPS technology. *See* Todd Sperry, *Drones Vulnerable to Being Hacked, Congress Told*, CNN, July 19, 2012, http://security.blogs.cnn.com/2012/07/19/aerial-drones-vulnerable-to-being-hacked-congress-told/. According to Humphreys, drone hijacking can be uncomplicated when the drone relies on decoded navigation data. *Id.* Once the drone is hacked into, the hijacker can redirect the drone's original route to a different path or location and can make the drone a weapon for attack, creating the potential for bodily harm and property damage. *Id.*

89. Calo, *supra* note 83, at 30.

90. As Assistant Law Prof. Woodrow Hartzog of Samford University stated, "I don't think that when push comes to shove that we're going to concede, as a society, that any time we're in public we're fair game to be surveyed or photographed, particularly over long distances. Say you're being targeted in public….what if I have a drone and it's dedicated to you, and I only monitor you, in public, for over the period of a year. Have I violated any expectation of privacy?… Well, at that point, it's harassment. Right now, the law, as configured, does not really protect against that….So the drones are going to force us to answer some difficult questions about [what] "public" means and when we should be protected, even when in public." D. Parvaz, *Q&A: Privacy implications for aerial drones,* Al Jazeera, Oct. 14, 2013, http://www.aljazeera.com/in-depth/features/2013/10/qa-privacy-implications-aeriel-drones-201310131113549745 5.html.

91. U.S. Const. amend. IV; *see generally*, Richard M. Thompson II, Cong. Research Serv., Drones in Domestic Surveillance Operations: Fourth Amendment Implications and Legislative Responses, *available at* http://www.fas.org/sgp/crs/natsec/R42701.pdf.

92. United States v. Jones, 132 S. Ct. 949, 950 (2012).

93. Katz v. United States, 389 U.S. 347, 361 (1967).

94. *Reasonable Expectation of Privacy*, Surveillance Self-Defense, Eec. Frontier Found., https://ssd.eff.org/your-computer/govt/privacy (last visited Mar. 6, 2014); this rule derives from Justice Harlan's concurrence in Katz v. United States: "My understanding of the rule that has emerged from prior decisions is that 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."" Katz v. United States, 389 U.S. 347, 361 (1967). "Once this much is acknowledged, and once it is recognized that the Fourth Amendment protects people - and not simply "areas" - against unreasonable searches and seizures, it becomes clear that the reach of that Amendment cannot turn upon the presence or absence of a physical intrusion into any given enclosure." *Id.* at 353, 358-359

95. *The Fourth Amendment,* Surveillance Self-Defense, Elec. Frontier Found., https://ssd.eff.org/your-computer/govt/fourth-amendment (last visited Mar. 6, 2014).

96. Kyllo v. United States, 533 U.S. 27, 34 (2001).

97. *Reasonable Expectation of Privacy, supra* note 94.

98. *See* Michigan Dep't of State Police v. Sitz, 496 U.S. 444 (1990).

99. 407 U.S. 297 (1972).
100. The home has long been considered the core of the Fourth Amendment, so much so that police officers cannot enter the home of a suspect without a warrant if the suspect is alleged to have committed a crime in public. There are different levels of protection for curtilages, or the immediate vicinity of the home, and for open fields, beyond the home and its immediate vicinity. Thompson, *supra* note 91, at 6.
101. 533 U.S. 27 (2001).
102. *Id.*, at 40; Thompson, *supra* note 91, at 6.
103. 533 U.S. at 34. "We think that obtaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical "intrusion into a constitutionally protected area," Silverman, 365 U.S., at 512, 81 S.Ct. 679, constitutes a search—at least where (as here) the technology in question is not in general public use."
104. *Id.; see* Horton v. California, 496 U.S. 128 (1990). "As we have already suggested, by hypothesis the seizure of an object in plain view does not involve an intrusion on privacy. If the interest in privacy has been invaded, the violation must have occurred before the object came into plain view and there is no need for an inadvertence limitation on seizures to condemn it. The prohibition against general searches and general warrants serves primarily as a protection against unjustified intrusions on privacy. But reliance on privacy concerns that support that prohibition is misplaced when the inquiry concerns the scope of an exception that merely authorizes an officer with a lawful right of access to an item to seize it without a warrant." *See also* Coolidge v. New Hampshire, 403 U.S. 443.
105. Greenwald & MacAskill, *supra* note 85; Greenwald, *supra* note 85.
106. Greenwald & MacAskill, *supra* note 85; Greenwald, *supra* note 85; Barton Gellman & Ashkan Soltani, *NSA collects millions of e-mail address books globally,* Wash. Post, Oct. 14, 2013, http://www.washingtonpost.com/world/national-security/nsa-collects-millions-of-e-mail-address-books-globally/2013/10/14/8e58b5be-34f9-11e3-80c6-7e6dd8d22d8f_story.html; Ashkan Soltani & Matt DeLong, *NSA signal-surveillance success stories,* Wash. Post, Dec. 10, 2013, http://apps.washingtonpost.com/g/page/world/nsa-signal-surveillance-success-stories/647/#document/p3/a135602; Trevor Timm, *In Historic Ruling, Federal Judge Declares NSA Mass Phone Surveillance is Likely Unconstitutional,* Elec. Frontier Found., Dec. 16, 2013, https://www.eff.org/deeplinks/2013/12/historic-ruling-federal-judge-declares-nsa-mass-phone-surveillance-likely.
107. Parvaz, *supra* note 90. Justice Scalia recognized the circular nature of the reasonable expectation of privacy test in his opinion for *Kyllo v. United States*: "The *Katz* test–whether the individual has an expectation of privacy that society is prepared to recognize as reasonable–has often been criticized as circular, and hence subjective and unpredictable.". Kyllo v. United States, 533 U.S. 27 (2001); *see generally* Richard A. Posner, *The Uncertain Protection of Privacy by the Supreme Court, 1979 Sup. Ct. Rev. 173* (1979).
108. The law recognizes that privacy violations may occur in public spaces. *See* Video Voyeurism Prevention Act of 2004, 118 U.S.C. § 1801 (2006).
109. *See* Florida v. Jardines, 133 S. Ct. 1409, 1414 (2012). "We therefore regard the area "immediately surrounding and associated with the home"—what our cases call the curtilage—as "part of the home itself for Fourth Amendment purposes." *Oliver, supra*, at 180, 104 S.Ct. 1735."
110. 468 U.S. 705 (1984).
111. *Id.*, at 716.
112. Thompson, *supra* note 91, at 13-17; *see also* Kyllo v. United States. "We think that obtaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical "intrusion into a constitutionally protected area," Silverman, 365 U.S., at 512, constitutes a search–at least where (as here) the technology in question is not in general public use." 533 U.S. 27, 35 (2001).
113. *Domestic Unmanned Aerial Vehicles (UAVs) and Drones: Privacy Issues*, Elec. Privacy Info. Ctr., http://epic.org/privacy/drones/#privacy (last visited Mar. 6, 2014); Thompson, *supra* note 91, at 7-8.
114. California v. Ciraolo, 476 U.S. 207 (1986).
115. California, 476 U.S. at 213-214.
116. *See also* Florida v. Riley, 488 U.S. 4445 (1989); Dow Chemical v. United States, 476 U.S. 227 (1986).
117. Jay Stanley, *Drones: The Nightmare Scenario*, Am. Civil Liberties Union, May 2, 2012, https://www.aclu.org/blog/technology-and-liberty-national-security/drones-nightmare-scenario.
118. 460 U.S. 276 (1983).
119. 132 S. Ct. 949 (2012).
120. *Id.* at 954.
121. *Id.* at 955.
122. Regarding invasion of privacy by non-governmental actors, Professor Ilya Somin states that several states have laws

that "restrict photography of unwilling subjects," such as California's anti-paparazzi law, located at section 1708.8 of the *California Civil Code.* Cal. Civ. Code § 1708.8 (2011). Ilya Somin, *Private Drones and Private Property Rights*, Volokh Conspiracy, Feb. 19, 2012, http://www.volokh.com/2012/02/19/private-drones-and-private-property-rights/. Additionally, there are a host of technical countermeasures that can be taken. Kenneth Anderson, professor at American University Washington College of Law, states that the intrusion of drones into private life may elicit drone "shoot-downs," as occurred against an animal rights' group attempting to monitor a group of hunters on a pigeon shoot, or there may be "jamming devices," which would interfere with signaling. Kenneth Anderson, *Drones, Privacy, and Air Rights*, Volokh Conspiracy, Feb. 19, 2012, http://www.volokh.com/2012/02/19/drones-privacy-and-air-rights/.

123. The Privacy Act of 1974, 5 U.S.C. § 552a (1974); *Open Government: The Privacy Act,* Ctr. For Democracy and Tech., https://www.cdt.org/issue/privacy-act (last visited Mar. 6, 2014).

124. For a list of the major federal privacy laws, *see Existing Federal Privacy Laws*, Ctr. For Democracy and Tech., https://www.cdt.org/privacy/guide/protect/laws.php (last visited Mar. 6, 2014).

125. For the purposes of this report, the terms "personal information" and "personally identifiable information" are interchangeable and refer to: "any information about an individual maintained by an agency, including (1) any information that can be used to distinguish or trace an individual's identity, such as name, Social Security number, date and place of birth, mother's maiden name, or biometric records; and (2) any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information." Erika McCallister et al., Nat'l Inst. Of Standards and Tech., Guide to Protecting the Confidentiality of Personally Identifiable Information (PII) 2-1 (2010), *available at* http://csrc.nist.gov/publications/nistpubs/800-122/sp800-122.pdf; U.S. Gov't Accountability Office, Alternatives Exist for Enhancing Protection of Personally Identifiable Information 1 (2008), http://www.gao.gov/new.items/d08536.pdf.

126. "[T]he term "system of records" means a group of any records under the control of any agency from which information is retrieved by the name of the individual or by some identifying number, symbol, or other identifying particular assigned to the individual…" Privacy Act of 1974 §(a)(5); *Privacy Act of 1974*, U.S. Dep't of Justice, Dec. 2012, http://www.justice.gov/opcl/privacyact1974.htm (last visited Mar. 6, 2014).

127. *Id*.

128. *Existing Federal Privacy Laws: Privacy Act of 1974*, Ctr. For Democracy and Tech., https://www.cdt.org/privacy/guide/protect/laws.php#pa (last visited Mar. 6, 2014).

129. U.S. Dep't. of Health, Educ. and Welfare, *supra* note 44.

130. *The Code of Fair Information Practices, supra* note 44; *see generally* Robert Gellman, Fair Information Practices: A Basic History (2013), http://bobgellman.com/rg-docs/rg-FIPShistory.pdf.

131. 5 U.S.C. § 552a.

132. *Existing Federal Privacy Laws: Privacy Act of 1974, supra* note 121.

133. Letter from Marc Rotenberg, Exec. Dir, Elec. Privacy Imfo. Ctr., and associated individuals, to General Keith B. Alexander, Dir., Nat'l Sec. Agency (June 17, 2013), *available at* http://epic.org/NSApetition/.

134. Memorandum from Hugo Teufel III, Chief Privacy Officer, The Fair Information Practice Principles: Framework for Privacy Policy at the Department of Homeland Security (Dec. 29, 2008, at 1, *available at* http://www.dhs.gov/xlibrary/assets/privacy/privacy_policyguide_2008-01.pdf.

135. *Id.,* at 3-4.

136. Elec. Privacy Info. Ctr., *supra* note 66, at 7-8.

137. Unmanned Aircraft System Test Site Program, 78 Fed. Reg. 12,259 (Feb. 22, 2013) (to be codified at 14 C.F.R. pt. 91), *available at* http://www.gpo.gov/fdsys/pkg/FR-2013-02-22/pdf/2013-03897.pdf.

138. *Id.*

139. Elec. Privacy Info. Ctr., *supra* note 66, at 7-8.

140. *Id.*

141. Fed. Aviation Admin., *supra* note 50, at 15.

142. *Online Session on UAS Test Site Privacy Policy*, Fed. Aviation Admin., http://www.faa.gov/about/initiatives/uas/ (last visited Mar. 6, 2014).

143. Ctr. For Democracy and Tech., Comments to the Federal Aviation Administration on Unmanned Aircraft System Test Site Program, Docket No. FAA–2013–0061 (2013), *available at* https://www.cdt.org/files/file/CDTComments_FAA-UAS.pdf.

144. Unmanned Aircraft System Test Site Program, 78 Fed. Reg. 68,360 (Nov. 14, 2013) (to be codified at 14 C.F.R. pt. 91), *available at* http://www.gpo.gov/fdsys/pkg/FR-2013-11-14/pdf/2013-27216.pdf.

145. *See* Privacy Journal, Compilation of State and Federal Privacy Laws (2013). This year, many states have passed privacy legislation: "Over two dozen privacy laws have passed this year in more than 10 states, in places as different as Oklahoma and California." Somini Sengupta, *No U.S. Action, So States Move on Privacy Law*, N.Y. Times, Oct. 30, 2013, http://www.

nytimes.com/2013/10/31/technology/no-us-action-so-states-move-on-privacy-law.html?_r=0.

146. Personal Privacy Protection Law, N.Y. Pub. Off. Art. 6A (1984); *What You Should Know: NYS Personal Privacy Protection Law,* http://www.dos.ny.gov/coog/shldno1.html (last visited Mar. 6, 2014).

147. *See EPIC v. CIA: Domestic Surveillance,* Elec. Privacy Info. Ctr., http://epic.org/foia/cia/domesticsurveillance.html (last visited Mar. 6, 2014); *NYPD secretly labels mosques as terror groups and spies on them*, The Guardian, Aug. 28, 2013, http://www.theguardian.com/world/2013/aug/28/nypd-surveillance-mosques-terror-spying; *Highlights of AP's Pulitzer Prize-Winning Probe Into NYPD Intelligence Operations, supra note 13; see generally NYPD Muslim Surveillance*, Am. Civil Liberties Union, https://www.aclu.org/blog/tag/nypd-muslim-surveillance (last visited Mar. 6, 2014).

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151. Colleen O'Connor, *Privacy Worries May Stall Commercial Use of Drone Aircraft,* Denver Post, Feb. 3, 2013, http://www.denverpost.com/ci_22508119/privacy-worries-may-stall-commercial-use-drone-aircraft (see accompanying editorial illustration by Severiano Galván on uses of unmanned aerial vehicles).

152. *Unofficial Transcript: Hour 1 - Sen. Rand Paul Filibuster of Brennan Nomination*, Official Website of Sen. Rand Paul, Mar. 6, 2013, http://www.paul.senate.gov/?p=press_release&id=727.

153. Noah Feldman, *Obama's Drone Attack on Your Due Process*, Bloomberg, Feb. 8, 2013,http://www.bloomberg.com/news/2013-02-08/obama-s-drone-attack-on-your-due-process.html.

154. U.S. Dep't of Justice, Lawfulness of a Lethal Operation Directed against a U.S. Citizen who is a Senior Operational Leader of Al-Qa'ida or an Associated Force 1 (2013), http://msnbcmedia.msn.com/i/msnbc/sections/news/020413_DOJ_White_Paper.pdf

155. Solesbee v. Balkcom, 339 U.S. 9, 16 (1950) (Justice Frankfurter dissenting).

156. There have also been false reports that U.S. Customs and Border Protection deployed a drone in February 2013 in order to find Christopher Dorner, the LAPD's suspected "killer cop." Liz Klimas, *Are Drones Being Used to Hunt Accused Calif. Cop-Killer — the 'First Human Target' on U.S. Soil?*, The Blaze, Feb. 11, 2013, http://www.theblaze.com/stories/2013/02/11/are-drones-being-used-to-hunt-accused-cop-killer-the-first-human-target-on-u-s-soil/; Cord Jefferson, *No, Christopher Dorner Is Not the First Target for Drones on U.S. Soil,* Gawker, Feb. 11, 2013, http://gawker.com/5983505/no-christopher-dorner-is-not-the-first-target-for-drones-on-us-soil; Lorenzo Franceschi-Bicchierai, *The LAPD Is Not Using Drones to Hunt Fugitive Christopher Dorner,* Mashable, Feb. 11, 2013, http://mashable.com/2013/02/11/lapd-drones-dorner/.

157. U.S. Const. amend. V.

158. U.S. Const. amend. XIV, § 1. Prior to the drafting of the American Constitution, the constitutions of the separate American colonies also generally decreed that individuals should not be deprived of life, liberty, or property "but by the judgment of his peers, or the law of the land," i.e. due process. Murray's Lessee v. Hoboken Land & Improvement Co., 59 U.S. 272, 276 (1856).

159. Zadvydas v. Davis, 533 U.S. 678, 693 (2001). "But once an alien enters the country, the legal circumstance changes, for the Due Process clause applies to all 'persons' within the United States, including aliens, whether their presence here is lawful, unlawful, temporary or permanent."

160. Peter Strauss, *Due Process,* Cornell Univ. Sch. Of Law: Legal Inst., http://www.law.cornell.edu/wex/due_process (last visited Mar. 6, 2014); Cong. Research Serv., "Due Process," Cornell Univ. Sch. Of Law: Legal Inst., http://www.law.cornell.edu/anncon/html/amdt5bfrag1_user.html (last visited Mar. 6, 2014).

161. *Substantive Due Process,* Cornell Univ. Sch. Of Law: Legal Inst., http://www.law.cornell.edu/wex/substantive_due_process (last visited Mar. 6, 2014).

162. CNN Library, *Anwar al-Awlaki: Fast Facts,* CNN, Aug. 23, 2013, http://www.cnn.com/2013/08/23/world/meast/anwar-al-awlaki-fast-facts/.

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164. *Al-Aulaqi v. Panetta: Lawsuit Challenging Targeted Killings*, Am. Civil Liberties Union, https://www.aclu.org/nation-

al-security/al-aulaqi-v-panetta (last visited Mar. 6, 2014); *see also* Deborah Pearlstein, Am. Constitutional Soc'y for Law and Policy, Enhancing Due Process in Targeted Killing (2013), *available at* http://www.acslaw.org/sites/default/files/Pearlstein_-_Due_Process_in_Targeted_Killing.pdf; Vicki Divoll, Op-Ed., *Drone Strikes: What's the Law?*, L.A. Times, http://articles.latimes.com/2013/feb/17/opinion/la-oe-divoll-drones-hamdi-20130217; Jonathan Masters, *Backgrounder: Targeted Killings,* Council on Foreign Relations, May 23, 2013, http://www.cfr.org/counterterrorism/targeted-killings/p9627#p3; William Funk, *Deadly Drones, Due Process, and the Fourth Amendment*, Lewis & Clark Law School Legal Studies Research Paper No. 14/2013, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2278716.

165. U.S. Dep't of Justice, *supra* note 154, at 1.

166. *Id.*

167. Jameel Jaffer, *The Justice Department's White Paper on Targeted Killing*, Am. Civil Liberties Union, Feb. 4, 2013, https://www.aclu.org/blog/national-security/justice-departments-white-paper-targeted-killing; Glenn Greenwald, *Chilling legal memo from Obama DOJ justifies assassination of US citizens,* The Guardian, Feb 5, 2013, http://www.theguardian.com/commentisfree/2013/feb/05/obama-kill-list-doj-memo; Kevin Jon Heller, *The DoJ White Paper's Confused Approach to Imminence (and Capture)*, Opinio Juris, Feb. 5, 2013, http://opiniojuris.org/2013/02/05/the-doj-white-papers-confused-approach-to-imminence-and-capture/.

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176. S.B. 15, 2013 Leg., 1st Session, (Cal. 2013), *available at* http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB15

177. *The Future of Unmanned Aviation in the U.S. Economy: Safety and Privacy Considerations: Hearing of the S. Comm. On Commerce, Sci., & Transp.*, 113th Cong. (2013) (statement of John D. Rokefeller IV, Sen. from WV and Chairman of the S. Comm. On Commerce, Sci., and Transp.), *available at* http://www.commerce.senate.gov/public/index.cfm?p=Hearings&ContentRecord_id=a4f35af1-be81-454f-9fa5-5bae600dd474&ContentType_id=14f995b9-dfa5-407a-9d35-56cc7152a7ed&Group_id=b06c39af-e033-4cba-9221-de668ca1978a&MonthDisplay=1&YearDisplay=2014.

178. *Feinstein testimony, supra* note 1.

179. *Senate Commerce Committee Considers Rules for Domestic Drones,* Elec. Privacy Info. Ctr., Jan. 17, 2014, http://epic.org/2014/01/senate-commerce-committee-cons.html; *The Future of Unmanned Aviation in the U.S. Economy: Safety and*

Privacy Considerations: Hearing of the S. Comm. On Commerce, Sci., & Transp., 113th Cong. (2013), *available at* http://www.commerce.senate.gov/public/index.cfm?p=Hearings&ContentRecord_id=a4f35af1-be81-454f-9fa5-5bae600dd474&Statement_id=759f6a79-1a06-4172-b78d-d1b697992ca5&ContentType_id=14f995b9-dfa5-407a-9d35-56cc7152a7ed&Group_id=b06c39af-e033-4cba-9221-de668ca1978a&MonthDisplay=1&YearDisplay=2014.

180. Over 20 Congressional bills incidentally mention drones, unmanned aircraft, or aerial surveillance. For instance, H.R. 830, the SAVE Act of 2013, addresses testing and integrating unmanned aircraft in securing the borders.

181. S. 505, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113s505pcs/pdf/BILLS-113s505pcs.pdf.

182. With respect to state legislatures, I will be addressing the legislation introduced and passed in 2013 mainly.

183. Rich Williams, *2014 Unmanned Aircraft Systems (UAS) Legislation*, Nat'l Conference on State Legislatures, Feb. 6, 2014, http://www.ncsl.org/research/civil-and-criminal-justice/2014-state-unmanned-aircraft-systems-uas-legislation.aspx.

184. S.B. 92, 2013 Leg., Reg. Sess. (Fl. 2013), *available at* http://flsenate.gov/Session/Bill/2013/0092/BillText/er/HTML.

185. H.R. 1262, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113hr1262ih/pdf/BILLS-113hr1262ih.pdf; S. 1639, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113s1639is/pdf/BILLS-113s1639is.pdf; H. R. 2868, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113hr2868ih/pdf/BILLS-113hr2868ih.pdf.

186. The Drone Aircraft Privacy and Transparency Act had also been introduced in 2012. H.R. 6676, 112th Cong. (2012), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-112hr6676ih/pdf/BILLS-112hr6676ih.pdf.

187. H.R. 2868.

188. S. 1639; H. R. 2868.

189. *Id*.

190. *Id.* § 4(a)(1).

191. *Id.*

192. *Id.* § 3.

193. *Id.* § 2-4.

194. *Senator Markey Introduced Drone Privacy Bill,* Privacy SOS, Nov. 4, 2013, *available at* https://privacysos.org/node/1227; *New Senate bill would add privacy, transparency requirements to domestic drone use*, Russia Today, Nov. 5, 2013, http://rt.com/usa/drone-bill-privacy-senate-219/.

195. H.R. 972, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113hr972ih/pdf/BILLS-113hr972ih.pdf; S. 1016, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113s1016is/pdf/BILLS-113s1016is.pdf.

196. S. 1016; Press Release, Official Website of Sen. Rand Paul (May 22, 2013), *available at* http://www.paul.senate.gov/?p=press_release&id=820; Rand Paul, Op-ed, *Don't Let Drones Invade Our Privacy*, CNN, June 15, 2012, http://www.cnn.com/2012/06/14/opinion/rand-paul-drones/.

197. H.R. 637, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113hr637ih/pdf/BILLS-113hr637ih.pdf.

198. *Id*., at § 3119f. "It shall be unlawful to intentionally operate a private unmanned aircraft system to capture, in a manner that is highly offensive to a reasonable person, any type of visual image, sound recording, or other physical impression of a individual engaging in a personal or familial activity under circumstances in which the individual had a reasonable expectation of privacy, through the use of a visual or auditory enhancing device, regardless of whether there is a physical trespass, if this image, sound recording, or other physical impression could not have been achieved without a trespass unless the visual or auditory enhancing device was used."

199. S. 1057, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113s1057is/pdf/BILLS-113s1057is.pdf.

200. Of consequence to privacy rights, in 2012, the House of Representatives approved an amendment to the National Defense Authorization Act of 2013 that would exclude evidence gathered from a drone from being submitted in court unless it is pursuant to a court order. *Domestic Unmanned Aerial Vehicles (UAVs) and Drones: Privacy Issues, supra* note 113; Pete Kasperowicz, *House approves 20 en bloc amendments to defense reauthorization, including satellite language,* The Hill, May 17, 2012, http://thehill.com/blogs/floor-action/house/228147-ndaa-update-1-house-approves-20-en-bloc-amendments-including-satellite-language.

201. While most of the bills focus on the domestic arena, the last two drone-related Congressional bills address international drone strikes. Rep. Barbara Lee (D-CA) introduced H.R. 2183, which targets the international use of drones, specifically the conducting of drone strikes. Rep. Lee's bill calls for a moratorium on drone strikes until effective safeguards are in place addressing civilian safety in foreign countries. Like H.R. 4036, the bill also seeks to prohibit drone strikes on the part of the Central Intelligence Agency. H.R 2183, 113th Cong. (2013); H.R. 4036, 113th Cong. (2013).

202. S. 505, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113s505pcs/pdf/BILLS-113s505pcs.pdf.

203. *Id.*; H.R. 1242, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113hr1242ih/pdf/BILLS-113hr1242ih.pdf; Nick Wing, *Ted Cruz, Rand Paul Introduce Bill To Prevent Some Drone Killings Of U.S. Citizens On American Soil,* Huffington Post, Mar. 8, 2013, http://www.huffingtonpost.com/2013/03/08/ted-cruz-rand-paul-drones_n_2838662.html.

204. H.R. 1269, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113hr1269ih/pdf/BILLS-113hr1269ih.pdf.
205. Dep't of Justice, *supra* note 154, at 2. "Were the target of a lethal operation a U.S. citizen who may have rights under the Due Process Clause or the Fourth Amendment, that individual's citizenship would not immunize him. Under the traditional due process balancing analysis of *Mathews v. Elridge*, we recognize that there is no private interest more weighty than a person's interest in his life. But that interest must be balanced against the United States' interest in forestalling the threat of violence and death to other Americans that arises from an individual who is a senior operational leader of al-Q'aida [*sic*] or an associated force of al-Q'aida and who is engaged in plotting against the United States." *Id.*
206. Yet another bill aims to ensure an "adequate process" for certain pre-planned lethal operations, which are mainly carried out abroad. Introduced by Rep. Darrell Issa (R-CA), the Designating Requirements on Notifications of Executive-Ordered Strikes Act of 2013 would require that the President personally sign a written determination before any federal agency or the armed forces can target American citizens or citizens of strategic treaty allies of the United States in a pre-planned lethal action. H.R. 2438, 113th Cong. (2013), *available at* http://beta.congress.gov/113/bills/hr2438/BILLS-113hr2438ih.pdf. The President would have to confirm that the targeted individual was an enemy combatant and would have to authorize the lethal targeting of the individual "based on an articulated need for the use of such lethal force." *Id*., at § 103. The President would then have to report on the lethal operation to the relevant Congressional committees. While MPAC agrees that an adequate process is necessary prior to the conduction of pre-planned lethal strikes, it is inadequate for the President alone to decide on and oversee drone strikes and would like to see the President refer to a drone court. Pam Benson, *Drone Court Considered,* CNN, Feb. 9, 2013, http://security.blogs.cnn.com/2013/02/09/legislators-consider-new-court-to-oversee-drone-strike-decisions/.
207. H.R. 1083, 113th Cong. (2013), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-113hr1083ih/pdf/BILLS-113hr1083ih.pdf.
208. 49 U.S.C. § 40102(a)(37).
209. *Feinstein testimony, supra* note 1.
210. Proposed amendment to H.R. 1960, 113th Cong. (2013), *available at* http://amendments-rules.house.gov/amendments/BROUN_042611130948174817.pdf; Jason Koebler, *Drone Strikes on American Citizens Banned in New Defense Bill Amendment*, U.S. News & World Report, June 17, 2013, http://www.usnews.com/news/articles/2013/06/17/drone-strikes-on-american-citizens-banned-in-new-defense-bill-amendment.
211. Staff of H. Comm. On Armed Servs., 113th Cong., National Defense Authorization Act For Fiscal Year 2014: Legislative Text And Joint Explanatory Statement To Accompany H.R. 3304, Public Law 113-66 688 (Comm. Print 2013), *available at* http://www.gpo.gov/fdsys/pkg/CPRT-113HPRT86280/pdf/CPRT-113HPRT86280.pdf.
212. *2013 Unmanned Aircraft Legislation, supra* note 15. The American Civil Liberties Union reports that legislation was introduced in 43 states and enacted in 9 states. Bohm, *supra* note 15.
213. Williams, *supra* note 183. *See also* Michal Lotfi, *South Carolina House passes legislation 100-0 to ban drones*, Ben Swann, Jan. 24, 2014, http://benswann.com/south-carolina-house-passes-legislation-100-0-to-ban-drones/; Zenon Evans, *Drone-Limiting Bill Overwhelmingly Approved by California Assembly,* Reason.com, Jan. 31, 2014, http://reason.com/blog/2014/01/31/drone-limiting-bill-overwhelmingly-appro.
214. Peterson, *supra* note 47. "Wyoming, North Carolina, Utah, Ohio, Minnesota, Oklahoma and North Dakota all had booths at the Association for Unmanned Vehicle Systems International's (AUVSI) drone conference in Washington last week…" *Id.*
215. S. Con. Res. 7, 77th Leg., Reg. Sess., (Nev. 2013), *available at* http://www.leg.state.nv.us/Session/77th2013/Bills/SCR/SCR7.pdf.
216. Bart Jansen, *FAA names 6 sites for testing drones*, USA Today, Dec. 30, 2013, http://www.usatoday.com/story/news/nation/2013/12/30/drone-test-sites/4248771.
217. *2013 Unmanned Aircraft Legislation, supra* note 15.
218. S.B. 1221, 27th Leg., Reg. Sess. (Haw. 2013), *available at* http://www.capitol.hawaii.gov/session2013/bills/SB1221_CD1_.pdf.
219. H.B. 100, 2013 Leg., Reg. Sess., (Md. 2013), *available at* http://mgaleg.maryland.gov/2013RS/bills/hb/hb0100E.pdf.
220. H.B. 2012, 2013 Leg., Reg. Sess. (Va. 2013), *available at* http://lis.virginia.gov/cgi-bin/legp604.exe?131+ful+CHAP0755; S.B. 1331, 2013 Leg., Reg. Sess., (Va. 2013), *available at* http://lis.virginia.gov/cgi-bin/legp604.exe?131+ful+CHAP0796.
221. *Id*.
222. Laura Vozzella, *Drone fears unite Virginia ACLU and conservative delegate*, Wash. Post, July 12, 2012, http://www.washingtonpost.com/blogs/virginia-politics/post/drone-fears-unite-virginia-aclu-and-conservative-delegate/2012/07/12/gJQApTm7fW_blog.html.

223. Press Release, Am. Civil Liberties Union, Virginia House of Delegates and Senate Approve Two Year Moratorium on Drones (Feb. 6, 2013), *available at* https://www.aclu.org/criminal-law-reform/virginia-house-delegates-and-senate-approve-two-year-moratorium-drones.
224. S.B. 402, 2013 Leg., Reg. Sess. (N.C. 2013), *available at* http://www.ncga.state.nc.us/Sessions/2013/Bills/Senate/PDF/S402v7.pdf. Individual cities have also taken steps to restrict drone usage within city boundaries. The first city to pass anti-drone legislation was Charlottesville, Virginia. Iowa City, Iowa, and St. Bonifacius, Minnesota are two other examples. W.J. Hennigan, *City in Virginia passes anti-drone resolution*, L.A. Times, Feb. 6, 2013, http://articles.latimes.com/2013/feb/06/business/la-fi-mo-drone-regulation-20130205; Jason Koebler, *City in Virginia Becomes First to Pass Anti-Drone Legislation*, US News & World Report, Feb. 5, 2013, http://www.usnews.com/news/articles/2013/02/05/city-in-virginia-becomes-first-to-pass-anti-drone-legislation-; Shawn Musgrave*, Joining a Handful of Other Cities, Lincoln, Nebraska Bans Police Drones,* Vice: Motherboard, Jan. 16, 2014, http://motherboard.vice.com/blog/joining-other-cities-lincoln-nebraska-preemptively-bans-police-drones; Eli Epstein, *Cities and states move to restrict, ban drones,* MSN News, Aug. 19, 2013, http://news.msn.com/us/cities-and-states-move-to-restrict-ban-drones.
225. Allie Bohm, *Drone Legislation: What's Being Proposed in the States?*, Am. Civil Liberties Union, Mar. 6, 2013, https://www.aclu.org/blog/technology-and-liberty-national-security/drone-legislation-whats-being-proposed-states; Bohm, *supra* note 15.
226. S.B. 92, 2013 Leg., Reg. Sess. (Fl. 2013), *available at* http://flsenate.gov/Session/Bill/2013/0092/BillText/er/HTML.
227. S.B. 796, 108th Gen. Assemb., Reg. Sess. (Tenn. 2013), *available at* http://www.capitol.tn.gov/Bills/108/Bill/SB0796.pdf.
228. S.B. 0196, 63rd Leg., Reg. Sess. (Mont. 2013), *available at* http://leg.mt.gov/bills/2013/billpdf/SB0196.pdf.
229. H.B. 2710, 77th Legis. Assemb., Reg. Sess. (Or. 2013), *available at* https://olis.leg.state.or.us/liz/2013R1/Measures/Text/HB2710/Enrolled.
230. S.B. 1587, 98th Gen. Assemb., Reg. Sess. (Ill. 2013), *available at* http://www.ilga.gov/legislation/publicacts/fulltext.asp?name=098-0569&GA.
231. H.B. 2710, *supra* note 229.
232. H. Con. Res. 6., 28th Leg., Reg. Sess. (Alaska 2013), *available at* http://www.legis.state.ak.us/basis/get_bill_text.asp?hsid=HCR006C&session=28.
233. H.B. 912, 83rd Leg., Reg. Sess. (Tex. 2013), *available at* http://www.legis.state.tx.us/tlodocs/83R/billtext/html/HB00912F.htm; reporting requirements for law enforcement were altered via House Concurrent Resolution 217. H. Con. Res. 217, 83rd Leg., Reg. Sess. (Tex. 2013), *available at* http://www.legis.state.tx.us/tlodocs/83R/billtext/html/HC00217I.htm.
234. S.B. 1134, 62nd Leg., Reg. Sess. (Idaho 2013), *available at* http://www.legislature.idaho.gov/legislation/2013/S1134.pdf.
235. *The Future of Unmanned Aviation in the U.S. Economy: Safety and Privacy Considerations: Hearing Before the S. Comm. On Commerce, Science, and Transp.*, 113th Cong. (2014) (statement of Christopher Calabrese, legislative counsel, Am. Civil Liberties Union), *available at* https://www.aclu.org/sites/default/files/assets/domestic_drones_statement_senate_commerce_committee.pdf.
236. H.B. 2710, 77th Legis. Assemb., Reg. Sess. (Or. 2013), *available at* https://olis.leg.state.or.us/liz/2013R1/Measures/Text/HB2710/Enrolled.
237. Bohm, *supra* note 225.
238. Unlike states without moratoriums, Virginia and North Carolina prohibit state or local law enforcement agencies from flying drones until 2015. H.B. 2012, 2013 Leg., Reg. Sess. (Va. 2013), *available at* http://lis.virginia.gov/cgi-bin/legp604.exe?131+ful+CHAP0755; S.B. 1331, 2013 Leg., Reg. Sess., (Va. 2013), *available at* http://lis.virginia.gov/cgi-bin/legp604.exe?131+ful+CHAP0796; S.B. 402, 2013 Leg., Reg. Sess. (N.C. 2013), *available at* http://www.ncga.state.nc.us/Sessions/2013/Bills/Senate/PDF/S402v7.pdf.
239. *See* Williams, *supra* note 183.
240. Am. Civil Liberties Union, *supra* note 223.
241. FAA UAS Roadmap, *supra* note 6; *FAA Selects Six Sites for Unmanned Aircraft Research*, *supra* note 6.

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