PART TWO

Unmanned Aircraft Systems (“UAS”) – aka Drones
Legal Issues: Where Are We Headed?

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I. Introduction

There have been almost daily news stories about the advent of Unmanned Aerial Vehicles (“UAVs”), also referred to as “drones,” and how commercial usage is expected to explode over the next several years. There have been reports of UAVs being used to deliver everything from pizza, to beer, to dry cleaning, to packages. Entrepreneurs have been hailed for coming up with new ways to use UAVs for many purposes. Interestingly, most of these news stories fail to mention that currently, commercial use of UAVs is illegal. While the FAA is busy attempting to come up with a plan to safely integrate UASs into our navigable airspace over the next few years, it is important to focus on what legal issues may arise once UAS usage increases. There will inevitably be many legal issues: accidents involving personal injury and property damage; IP issues implicated by the technology used to control UAVs; individual privacy rights; as well as criminal laws coming into play such as stalking, harassment, and wiretapping.

A. Concerns

Legal concepts will need to be tailored to UASs’ unique capabilities, which allow for much more intrusive invasions (both physically and with respect to privacy issues) than traditional aircraft, and present significant questions as to safety of persons and property. Of particular concern is the use of UASs by government entities. Drones are currently used for or have been proposed for use in domestic surveillance, license plate reading, facial recognition, interception of text messages and cell phone calls, and hacking into Wi-Fi networks. Infrared sensors, high-powered cameras, and facial recognition may also expand UAV capabilities into more controversial realms.

Further, potential and current uses have sparked numerous fears over privacy issues, and have pitted advancing technology against individual rights. Privacy concerns and individual rights will have to be balanced against First Amendment protections of newsgathering. In particular, drone ubiquity raises the concern that the average person on the ground cannot know who is in control of a given UAV, as well as fear about how data will be used and disseminated, and by whom. There are also security concerns about what can be delivered by a drone and whether there is any way to regulate or track such deliveries.
There are also concerns regarding military, human rights, and government transparency issues. In January 2014, federal lawmakers made a move to block President Obama’s plan to shift control of the U.S. drone campaign from the CIA to the Defense Department, inserting a secret provision in a spending bill that would preserve the spy agency’s role in lethal counter-terrorism operations. This was viewed as an unusually direct intervention by lawmakers into the way covert operations are run. The operation of UASs by the CIA and special forces is troubling to many because the public at large—and even lawmakers themselves—have very little information about who is doing what, meaning there is little, if any, accountability. This problem will only be exacerbated as technology continues to develop. Future UAS programs may very well include nuclear-fueled UASs that can stay airborne for months and do not require anyone to operate them.

Criminal laws may also come into play, and have to be tailored, as the court and lawmakers decide how to apply stalking, harassment, and other criminal laws to UASs. Current criminal stalking and harassment laws tend to focus on the presence of a threatening message being communicated to the victim; therefore, a UAS whose primary function is simply to communicate information back to an operator may not be implicated by these laws unless they are amended specifically to include UASs.

UASs may also run afoul of wiretapping laws that make it unlawful to intercept an oral communication by one who has an expectation that the communication is private. UAS recordings or interceptions of private conversations by UASs may very well violate these wiretap statutes.

II. The Legal Framework

With the FAA in the midst of integrating UASs into national air space and UAS technology rapidly advancing, a legal framework must be put in place. It is impossible to predict exactly how courts will treat the unique legal issues presented by UAVs; however, some insight can be gleaned from past cases dealing with emerging technological changes.

A. FAA UAV Suit—Administrator v. Pirker

The Pirker case is the FAA’s first attempt to regulate small UAVs under existing policies. Raphael Pirker used a small, remote controlled model power glider to take aerial photos for advertising purposes at the University of Virginia campus. The FAA cited Pirker for violating a ban on commercial UAS usage, and for operating the UAV “in a careless and reckless manner,” pursuant to 14 C.F.R. § 91.13, and because Pirker did not have a pilot’s license, putting it under the FAA’s authority to enforce flight safety. Further, the FAA argued that it had authority to regulate the UAV because any device intended for flight is an “aircraft,” including this small UAV. The operator was assessed a civil penalty of $10,000 for violation of a 2007 FAA Policy Statement that requires commercial UAVs to obtain a Certificate of Airworthiness and be subject to the Federal Aviation Regulations.

Pirker filed a motion to dismiss, choosing to challenge the violation on grounds that there is no existing FAA regulation governing the operation of model aircraft, and that the FAA’s Policy Statements concerning the operation of UAVs are not binding or enforceable. Further, Pirker argued that the power glider was not an “aircraft” as contemplated by § 91.13, and that the FAA had no jurisdiction to regulate model aircraft in airspace below 400 feet (i.e., navigable airspace for manned aircraft).

In a decision issued March 7, 2014, the NTSB judge held that the power glider was not an “aircraft”—rather, it was a small UAV that otherwise qualifies as a model aircraft (i.e., an aircraft under 55 pounds, being operated below 400 feet)—even if it was engaged in commercial operations. Further, it was held that the FAA had no authority, absent regulations properly promulgated (as opposed to Advisory Circulars and Policy Statements), to regulate this UAV (whether it was being used for commercial purposes or otherwise), which otherwise qualified as a model airplane. The administrative law judge also pointed out that the FAA had historically treated model aircraft separately from other types of “aircraft,” so its position with respect to Pirker was not consistent with that historical distinction.

The FAA has appealed the decision, thus staying the decision pending review by the full National Transportation Safety Board (“NTSB”). In the meantime, various groups have expressed concern over the possible implications of this decision. Is this decision going to be viewed as the green light for unregulated commercial usage of small UAVs? Are we going to be in a “Wild Wild West” mode until the FAA puts formal regulations in place for UASs? The Airline Pilots’ Association has expressed concern regarding the impact of commercial UASs on flight safety, as has the general aviation community.
B. “Ownership” of Space Above Property—Fifth Amendment Taking of Property

Under Roman law, whoever owned a piece of land possessed all the space above the land extending upwards into the heavens (a principle known as ad coelum, short for Cujus est solum ejus est usque ad coelum, “whoever owns the soil, it is theirs up to Heaven”). The ad coelum principle was the basis of U.S. common law. However, with the inception of commercial aviation, the Federal Aviation Act centralized aviation within the domain of the federal government.

Airspace conflicts between common law and the states were addressed in United States v. Causby. The plaintiff in Causby sued the United States government under the Fifth Amendment, arguing that military planes flying over his property constituted a taking, as the noise of planes just 83 feet above his land caused frequent deaths (from fright) of the plaintiff’s chickens and ultimately the loss of the plaintiff’s chicken farming business. The Supreme Court thus had to decide who owns the airspace above private property. This required a balancing of the needs of commerce and unobstructed air travel against the private property owner rights. The Supreme Court rejected the common-law ad coelum concept of airspace ownership but reconfirmed that a landowner owns at least as much space above the ground as he can occupy or use and enjoy in connection with the land; above that is public domain.

The Court outlined three factors that must be met for flights over land to constitute a taking: (1) whether the planes flew directly over the plaintiff’s land; (2) altitude and frequency of the flights; (3) and whether the flights directly and immediately interfere with the enjoyment and use of the land. Notably, the Court declined to establish a bright-line altitude below which planes may not fly over private property.

In the wake of Causby, some courts took exactly such a fixed-height approach, ruling that flights within “navigable airspace” do not constitute a taking, while anything below navigable airspace could be “owned” by the landowner and give rise to property tort or takings claims. This approach was largely rejected by later Supreme Court cases, which noted that flights could be so frequent, etc. as to result in liability, regardless of whether they occur in navigable airspace.

Other courts have held that there is a rebuttable presumption of non-taking when overhead flights occur in navigable airspace. This presumption can be rebutted with evidence that the flights interfered with the owner’s use and enjoyment of the surface enough to justify compensation. Still, other courts examine the effect of overhead flights on use and enjoyment of the land without regard to whether the aircraft is in navigable airspace or not.

As UAS usage increases, causes of action for interference with one’s use and enjoyment of land may very well come into play.

C. Fourth Amendment “Search and Seizure” Concerns

The use of UASs by public entities presents a danger of unwarranted and undetected UAS searches, in violation of the Fourth Amendment. Will a warrant be required for governmental use of a UAS? The U.S. Supreme Court has previously addressed law enforcement observation and surveillance efforts, and those cases may very well be looked to as a guide for future UAS cases.

Katz v. United States is an important case that has been applied to emerging technologies over the years. Katz held that a conversation inadvertently tapped by law enforcement surveillance in a phone booth without a warrant that captured incriminating evidence was not admissible in court because what a person knowingly exposes to the public, even in his own home or office is not a subject of Fourth Amendment protection. What a person seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected. Katz established a two-prong test to determine when Fourth Amendment protection is appropriate: first, a person must have exhibited an actual (subjective) expectation of privacy; and second, the expectation must be one that society is prepared to recognize as “reasonable.”

Katz’s first prong (the subjective expectation of privacy) has been severely weakened by subsequent decisions. It was essentially struck down by Smith v. Maryland, in which the Court held that a pen register that recorded the phone calls of a criminal did not qualify as a warrantless wiretap because he had no expectation of privacy, since the calls could be accessed by the phone company. Smith replaced the first Katz prong with an assumption that we are always being watched. Furthermore, in Oliver v. United States, the Court upheld the open field doctrine, stating that that which can be seen in plain sight is not protected by the Fourth Amendment. In this day and age, aerial observation by aircraft of other means is not unreasonable, nor unexpected.
More specifically focused on air surveillance, the Supreme Court has held that naked-eye observation or photography from a helicopter to conduct surveillance is permissible without a warrant. The Supreme Court held that, because the helicopter was operating within established flight safety guidelines, the defendant’s curtilage was not protected from aerial view.

Further, the Supreme Court has also held that police can legally view private property from an aircraft without a warrant where police observations take place within public navigable airspace and in a physically nonintrusive manner. In Ciraolo, the defendant had built a privacy fence around his property. Police received an anonymous tip that someone was growing marijuana in a backyard and used an airplane to fly over the yard at 1,000 feet. Police observed the defendant’s marijuana plants, which led to a warrant and arrest. The Court held that, in an age where private and commercial flight is routine, it is unreasonable to expect constitutional protection of what can be observed with the naked-eye from an altitude of 1,000 feet.

Another case that could have an impact on UAS jurisprudence is Dow Chemical Co. v. United States, in which the plaintiff challenged the legality of using aerial photography as incriminating evidence. The Supreme Court held that the use of photographic equipment was acceptable as long as the equipment was readily available to the public and the enhanced photographic capabilities did not excessively intrude on privacy rights. If this standard is applied to UASs, it really cannot be said that UASs are “readily available to the public” as they certainly have capabilities far more advanced than photography equipment.

Another case focusing on the question of whether certain equipment is available for general use is Kyllo v. United States. In Kyllo, police used thermal imaging to measure the temperature of walls and roof of a home where they suspected marijuana growing, and they were found to be unusually warm. A search warrant issued based upon that information. The search revealed marijuana growing. The Court held that use of a thermal imaging device to detect heat emanating from inside the home required a warrant, reasoning that where the government uses a device that is not in general public use to explore details of a home that would previously have been unknowable without physical intrusion, the surveillance is a “search” and is presumptively unreasonable.

GPS tracking cases may also offer some guidance. One case that will no doubt be important is United States v. Jones, wherein the Supreme Court considered a GPS tracker installed by a police task force on a car. The tracker registered the vehicle’s location every 10 seconds. The GOA data was used to place a suspect at a house where drug sales allegedly occurred. The Court held that a month of GPS tracking required a warrant. Long-term tracking was not viewed as reasonable; rather, it was unduly invasive. Further, there was a danger of gathering not only relevant, but also irrelevant and private data. As is true of month-long GPS tracking, UASs that make even more invasive long-term monitoring possible carry the danger of gathering not only relevant, but also irrelevant and private data. Indeed, the courts may very well reason that individuals have a reasonable expectation that we will not be secretly, long-term monitored from above, based upon legitimate privacy concerns.

1. **Key Concepts to Consider in Future UAS Cases:**
   - How invasive and intrusive is it?
   - Does it violate some expectation of privacy reasonable in this day and age?
   - Is it extensive/long-term, thus having danger of capturing relevant and irrelevant personal information?
   - Does it invade areas previously inaccessible, so as to violate our privacy expectations?
   - Does it involve use of technology not generally available to the public?

**D. Torts**

1. **Trespass and Nuisance**

Trespass and nuisance are possible UAS usage causes of action. A trespass is any physical intrusion upon property owned by another. When considering these issues in the context of intrusions into airspace, the courts have used factors set forth in Causby for takings actions: A plaintiff must prove that the interference occurred within the immediate reaches of the land or airspace that the owner can possess, that the intrusion interfered with actual use of the land, and that it detracts from the plaintiff’s use of the property.
Nuisance is based on a property owner’s right to use and enjoy the land (not possessory rights to the property). A nuisance plaintiff must show that the object in airspace interfered with the use and enjoyment of land and that the interference was substantial and unreasonable.

The FAA’s definition of navigable air space may very well dictate what causes of action are implicated by UAS usage. A UAS’s ability to fly low means it is more likely to invade the immediate reaches of the surface property and thus satisfy the Causby requirements for takings or trespass claims.

2. Intrusion upon Seclusion

Intrusion upon seclusion may very well be the most likely privacy claim regarding UASs. The long-term flight capabilities of UAVs mean that they can stay in the air for a long time, making them potentially more invasive. UASs also implicate privacy concerns if used data collections and dissemination; thermal imaging; facial and license plate recognition; computer hacking; and cell phone tapping.

There is an objective person standard for this tort—that is, the question is whether a person of ordinary sensibilities would be offended by the alleged invasion. Furthermore, the intrusion must be highly offensive (i.e., outrageously unreasonable conduct). A single intrusion is usually not sufficient. The invasion of privacy must also be intentional—the defendant must desire that the intrusion would occur or know with substantial certainty that such an invasion would result from his or her actions. Accordingly, accidental intrusion is not actionable. Finally, in some states, the intrusion must cause mental suffering, shame, or humiliation. As an example, in surveillance cases, the location of the surveillance is determinative: in one’s home is an intrusion; on one’s property but in public view is less likely to be an intrusion; and in a public place, the likelihood of success is much less.

3. Restatement (Second) of the Law of Torts

Other possible privacy torts include public disclosure of private facts, publicity that puts the target in a false light, or appropriation of one’s likeness.17

IV. Conclusion

Widespread use of UASs will be a reality in the very near future. The safety framework for such usage will be dictated by FAA rules and regulations. However, legal frameworks will also need to be adapted to this new technology, and constitutional and individual rights will need to be balanced with technological advancements.
ENDNOTES


3 328 U.S. 256 (1946).

4 With regard to the plaintiff’s land in particular, the Court found that the military flights diminished the value of the land, as it could not longer be used for its primary purpose—chicken farming. See also Restatement (Second) of Torts Section 159(2) (A property owner owns only as much air space above his property as he can practicably use).

5 See, e.g., Braniff Airways v. Nebraska State Board of Equalization & Assessment (regarding the destruction of usefulness of property); Griggs v. Allegheny County (regarding flights making land “undesirable and unbearable” for residential use).


7 442 U.S. 735 (1979).


9 Florida v. Riley, 488 U.S. 455 (1989) (naked-eye observation from 400 feet through a greenhouse was not an unreasonable search); Dow Chemical v. United States, 476 U.S. 227 (1986) (aerial photograph of industrial complex from 1200 to 12,000 feet not a prohibited search).


12 Id. at 213.


15 Id. at 40.


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