CIVILIAN COMMERCIAL DRONES ARE COMING; ARE WE READY?

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I. INTRODUCTION

In early December of 2013, Jeff Bezos, the CEO of Amazon.com (Amazon), announced that the company was testing a new delivery system called Prime Air.1 Prime Air would consist of propeller driven drones2 that could deliver packages within thirty minutes of a person ordering an item online through the Amazon website.3 The drones could deliver packages weighing up to five pounds, which would allow for approximately 86 percent of Amazon’s deliveries to be made this way.4 A segment aired on 60 Minutes in which Bezos talked about this technology and it showed a video of one of the drones delivering a package.5 However, it was later revealed that the delivery did not take place in the United States, nor legally could it have according to the Federal Aviation Administration (FAA).6 Spokespeople both from the Amazon and the FAA acknowledged that FAA regulatory restrictions would have prohibited the filming of the delivery in the United States. This is because the FAA has not yet passed regulations allowing for the use of commercial drones in the national airspace.7 Although the FAA’s position that there is a lack of regulation would be questioned, its stance became more apparent after a run-in with a company called Lakemaid Beer (Lakemaid). Lakemaid started delivering its beer by drones to ice fishermen

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2 Drone is a common generic name for all unmanned aircraft. Definitions of different classifications of unmanned aircraft will be discussed infra.


4 Id.

5 Id.


7 Id.
who were in ice shacks on a remote lake.\textsuperscript{8} After an FAA official viewed a video of a test run of Lakemaid’s delivery system, the FAA shut down Lakemaid’s delivery operations.\textsuperscript{9}

These two anecdotal tales, and others like it, show that the regulation of civilian drone technology in the United States is lagging behind the technological advances themselves. Drones are currently being built that could be used for a myriad of different tasks.\textsuperscript{10} Venture capitalists have invested over $40 million in drone technology in the first ten months of 2013 (which is double the investment from the previous year, and expected to grow in the future), and sales of civilian drones are expected to be over $8.2 billion within the next decade.\textsuperscript{11} The 2014 Consumer Electronics Show will feature many commercial drones for “all budgets and uses.”\textsuperscript{12} Since the technology for commercial drones is currently available, but the FAA takes the position that they currently cannot be flown, Congress passed the FAA Modernization and Reform Act of 2012 (FAA Modernization Act).\textsuperscript{13} This act requires the FAA to “provide for the safe integration of civil unmanned systems into the national airspace system as soon as practicable, but not later than September 30, 2015.”\textsuperscript{14} While ensuring the safe operation of commercial drones is a good reason that the regulatory process may take all the time until the deadline set by Congress, this leaves the United States behind other countries in the use of these commercial drones. Australian television stations are currently using drones to film cricket matches.\textsuperscript{15} Australia also has a textbook rental company called Zookal that will be delivering book orders to residents of Sydney as early as 2014. This will cut Zookal’s “delivery times from two to three days down to a matter of minutes, while shaving shipping costs down to a tenth of their normal prices.”\textsuperscript{16} China’s Shungfeng Express is currently testing drones in Chinese cities

\textsuperscript{9} Id.
\textsuperscript{10} The uses of drones will be discussed infra.
\textsuperscript{12} Tyler Wells Lynch, Consumer Drones Set to Invade CES 2014, USA TODAY, (Jan. 6, 2014), available at http://www.usatoday.com/story/tech/2014/01/05/reviewed-ces-drones/4332843/.
\textsuperscript{13} Pub. L. No. 112-95, 126 Stat. 72.
\textsuperscript{14} Id. at Sec. 332 (a)(3).
without being shut down by government authorities. Similarly, the government of the United Arab Emirates is testing a fleet of drones to deliver official documents such as driver’s licenses and identification cards.

This paper addresses issues related to commercial drone technology. It addresses the difference between drones and other types of aircraft. It further addresses some of the proposed uses for these drones. Regulatory issues related to FAA approval of commercial drone use in the national airspace are examined. Further, other issues of potential tort and criminal liability related to the use of civilian drone usage are discussed.

II. WHAT IS A COMMERCIAL DRONE?

A question that must be answered when determining this regulatory scheme is what exactly is a civilian commercial drone. There are many types of aircraft and other objects being flown. Distinctions must be made to determine what types of objects have a need for regulation, and how differing types of aircraft will need different regulations.

A. Model Aircraft

When determining the definition of a commercial drone, one would have to distinguish a drone from a model aircraft. Model aircraft are exempt from most of the regulatory scheme that would currently prohibit the use of commercial drones. A model aircraft is a specific type of unmanned aircraft system (UAS). Section 332 of the FAA Modernization Act calls for the regulation of UASs and for the integration of civil UASs into the national airspace system. The FAA Modernization Act defines a UAS as: “an unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the pilot in command to operate safely and efficiently in the national airspace system.”

The FAA defines an unmanned aircraft as an “aircraft that is operated without the possibility of direct human intervention from within or on the

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19 Pub. L. 112-95 § 332.

20 Id. at § 331 (9).
The definition of a UAS is very broad, and can lead to confusion. Purely looking at the definition, anything that be put into the sky that does not have a pilot (including model and hobbyist remote control airplanes) could be regulated as a UAS. Congress, when passing the FAA Modernization Act took this into consideration and specifically prohibited the FAA from “promulg[ating] any rule or regulation regarding a model aircraft” if it meets certain criteria. A model aircraft is defined as “an unmanned aircraft that is (1) capable of sustained flight in the atmosphere; (2) flown within visual line of sight of the person operating the aircraft; and (3) flown for hobby or recreational purposes.”

If the model airplane meets Congress’ five criteria then it is exempted from FAA regulation. The criteria are as follows:

1. the aircraft is flown “strictly for hobby or recreational purposes;”
2. the aircraft is operated in accordance with a community based set of safety guidelines and within the programming of a nationwide community-based organization;
3. the aircraft is limited to not more than 55 pounds unless otherwise certified through a design, construction, inspection, flight test, and operational safety program administered by a community-based organization;
4. the aircraft is operated in a manner that does not interfere with and gives way to any manned aircraft; and
5. when flown within 5 miles of an airport, the operator of the aircraft provides the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation (model aircraft operators flying from a permanent location within 5 miles of an airport should establish a mutually-agreed upon operating procedure with the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport)).

B. The Pirker Decision

It should be noted that an aircraft that meets the size and airspace restrictions, but that is to be used for commercial purposes instead of hobby

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21 Id. at § 331 (8).
22 Id. at § 336(a).
23 Id. at § 336(c).
24 Id. at 336 (a).
or recreational purposes, would not fit the definition of a model aircraft. Once there is a commercial use, the FAA Modernization Act’s exemption for model aircraft would no longer apply. Since there are already many of these types of drones available on the market, the usage, not the type of aircraft, can lead to FAA action. This is highlighted in the case of Huerta v. Pirker. In actions that predated the FAA Modernization Act, Raphael Pirker was hired to supply aerial photographs of the University of Virginia campus. To do so, he used a powered glider aircraft with a camera attached that sent real time video to the ground, which Pirker then recorded. He was compensated by a company called Lewis Communications. He was accused by the FAA of flying the powered glider in a “careless or reckless manner so as to endanger the life liberty or property of another” in violation of the Part 91, Section 91.13(a), Federal Aviation Regulations (FARs). He was ordered to pay a civil penalty of $10,000. The case was the appeal to the National Transportation Safety Board of the order assessing the fine against Pirker. In that case, the Administrative Law Judge (ALJ) held that Pirker’s glider did not meet the definition of an “aircraft” under 49 U.SC. § 40102 (a)(6), which defines an aircraft as “any contrivance invented, used, or designed to navigate or fly in the air.” The ALJ noted that this definition is so broad that there would be a “risible argument that a flight in the air of, e.g., a paper aircraft, or a toy balsa wood glider” could lead to the operator being held in violation of the FAA Part 91, Section 91.13(a). The ALJ noted that the type of aircraft Pirker was flying had been previously considered by the FAA to be a “model aircraft.” The FAA historically has not required model aircraft operators to follow FARs which require Airworthiness and Registration Certification for aircraft. Instead, the FAA has “distinguished model aircraft as a class excluded from the regulatory and statutory definitions.” Under the analysis by the ALJ, the only attempt at regulation of model aircraft was an FAA Advisory Circular entitled “Model Aircraft Operating Standards.” This 1981 Advisory Circular encouraged “voluntary compliance with safety standards for model airplane operators.” The ALJ stated that a request for voluntary compliance with safety guidelines does not subject Pirker to FAR regulation and enforcement.

29 Id.
30 Id.
31 FAA AC 91-57, June 9, 1981.
32 Id. These safety standards will be discussed infra in § II.C. of this paper.
33 Id.
The FAA made the assertion that Pirker’s powered glider was an Unmanned Aircraft System (UAS), which again would require airworthiness certification. The ALJ did an analysis of FAA policy for the existence of a rule giving it regulatory authority concerning UASs. The ALJ examined three different FAA documents in determining that there are no FAA policies that are effective on the regulation of model aircraft UASs. First the ALJ examined two FAA memoranda, the first titled Unmanned Aircraft Systems Operations in the U.S. National Airspace System-Interim Operational Approval Guidance. This was cancelled and re-issued as a second memorandum entitled Unmanned Aircraft Systems Operations in the U.S. National Airspace System. The ALJ noted that both of these documents were intended to be internal guidance to the FAA themselves, and each had the statement that “this policy is not meant as a substitute for any regulatory process….” This, he concluded, did not give the FAA authority to regulate Pirker’s activities, since, as internal guidance, they did not create a regulatory effect on the public.

Next the ALJ examined FAA Notice 07-01 (Notice 07-01) which was published in the Federal Register. This document, entitled Unmanned Aircraft Operations in the National Airspace System, was issued to “clarify[y] the FAA’s current policy concerning the operations of unmanned aircraft in the National Airspace System.” Notice 07-01 states that for a civil UAS to operate in the National Airspace, it would need a special airworthiness certificate. However, as noted by the ALJ in Pirker, this notice specifically excludes model aircraft. The safety standards for such aircraft would be set in AC 91-57. If the model aircraft was used for commercial purposes, then Notice 07-01, states that AC 91-57 does not apply and the operator would still need to obtain a special airworthiness certification. However, as noted by the ALJ in Pirker, the stated action of Notice 07-01 was to serve as “Notice of policy, opportunity for feedback.” The ALJ held:

Notice 07-01 expressly states that its action/purpose is to set forth the current FAA policy for UAS operations, and the requirements are stated, as noted above, under the Section captioned “Policy

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36 Huerta v. Piker, NTSB Docket CP-217 at 5 (original citation omitted).
38 Id.
39 Pirker NTSB Docket CP-217 at 5.
40 Id.
Statement.” As self-defined as a statement of policy, it cannot be considered as establishing a rule or enforceable regulation, since…policy statements are not binding on the general public.

As Notice 07-01 was published in the Federal Register, even, though stated as a. “Notice of Policy,” it could be argued that it could be considered as legislative rulemaking purporting to set out new, mandatory requirements/limitations requiring public compliance.

Notice 07-01 does not, however, meet the criteria for valid legislative rulemaking, as it was not issued as a Notice of Proposed Rulemaking… and if intended to establish, a substantive rule, it did not satisfy the requirements of 5 U.S.C., Section 553(d) [of the Administrative Procedures Act], which, requires publication of notice not less than 30 days before the effective date. As it is shown as being issued on February 6, 2007, and published as a Notice of Policy February 13, 2007, it fails this requirement.41

In his examination of the FAA memoranda and policy statement the ALJ dismissed the complaint against Pirker and vacated the fine levied against him, stating “that at the time of [Pirker’s] model aircraft operation there was no enforceable FAA rule or FAR Regulation applicable to model aircraft or for classifying model aircraft as an UAS.”42

The Pirker decision now leaves many questions open as to the current status of commercial drone operations. The decision seems to disallow FAA enforcement actions against UASs being used for commercial purposes. Although it is not clear if the decision applies solely to drones that are classified as model aircraft (except for the commercial aspect), clearly if the drone operator was following the voluntary guidelines set forth in the Model Aircraft Operating Standards the ALJ decided there was no enforceable regulations to prohibit their use. This however goes against long-held policy by the FAA. The week prior to the Pirker decision, the FAA issued a press release entitled “Busting Myths about the FAA and Unmanned Aircraft.”43 This press release noted the FAA position that “a commercial flight requires a certified aircraft, a licensed pilot and operating approval….There are no shades of gray in FAA regulations. Anyone who wants to fly an aircraft-

41 Id. at 6.
42 Id. at 8.
manned or unmanned-in U.S. airspace needs some level of FAA approval.” The day following the Pirker decision the FAA released a press release stating that it would appeal the decision since “it could impact the safe operation of the national airspace system and the safety of the people and property on the ground.” The likely outcome of the Pirker decision, however, is that if the FAA loses its appeal, the agency will create valid regulations in advance of the September 2015 deadline that would control the commercial use of model aircraft in the national airspace.

C. AC 91-57

It should be further noted that the FAA has stated that “while AC 91-57 was developed for model aircraft, some operations have used the AC as the basis for commercial flight operations.” The FAA holds that an operator will not be voluntarily regulated by AC 91-57 even if the operator meets the requirements, but is using the aircraft for business purposes. The operating standards are as follows:

a. Select an operating site that is of sufficient distance from populated areas. The selected site should be away from noise sensitive areas such as parks, schools, hospitals, churches, etc.
b. Do not operate model aircraft in the presence of spectators until the aircraft is successfully flight tested and proven airworthy.
c. Do not fly model aircraft higher than 400 feet above the surface. When flying aircraft within 3 miles of an airport, notify the airport operator, or when an air traffic facility is located at the airport, notify the control tower, or flight service station.
d. Give right of way to, and avoid flying in the proximity of, full-scale aircraft. Use observers to help if possible.
e. Do not hesitate to ask for assistance from any airport traffic control tower or flight service station concerning compliance with these standards.

These operating standards seem to deal with the safety of using model aircraft within the vicinity of other aircraft and populated areas. After the

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44 Id.
46 FAA AC 91-57, supra note 31.
47 Id.
48 Id.
Pirker decision, an operator meeting these requirements arguably could use a drone for commercial purposes. While the FAA will surely make regulations to curtail this, should the Pirker decision be upheld on appeal, they may be the basis for special FAA regulations, even if the drones are to be used for commercial purposes. The FAA has already stated that that it expects to, when it proposes its rules for small UASs (those that weigh under about 55 pounds), will “likely include provisions for commercial operations.”49

III. USES AND POTENTIAL USES FOR DRONES

It is predicted that there will be many uses for drones. There is special consideration (which likely will lead to less regulatory requirements) being made for the regulation of “Small Unmanned Aircraft” in the FAA Modernization Act.50 A Small Unmanned Aircraft is defined “as an unmanned aircraft weighing less than 55 pounds.”51 This will probably lead to most of the drones that are using the national airspace being limited to that size. The FAA estimates that there will be “as many as 7,500 small commercial UAS…in use by 2018,”52 although that number may change upon the release of the proposed rules on small UASs. Right now, commercial unmanned aircraft are “only authorized on a case-by-case basis.”53 So far only one operation has been licensed by the FAA.54 It is the ScanEagle made by Insitu, and its operations are limited to use in the Arctic.55 It is to be used by a major energy company off the Alaska coast…to survey ice flows and whale migration in Arctic oil exploration areas.”56 In the future, however, as drones become cheaper and easier to use, in conjunction with the FAA establishing rules for their use, they will be used for many purposes. There are many anticipated commercial uses when this happens. Drones will be used in journalism. Currently journalists are waiting for rules on the safe operation of small drones to shoot aerial pictures and video footage.57 The aerial pictures and footage will be able to be produced

49 FAA Press Release, Busting Myths about the FAA and Unmanned Aircraft, supra note 43.
50 Pub. L. 112-95 §332(b)(1).
51 Id. at §331(6).
52 FAA Press Release, Busting Myths about the FAA and Unmanned Aircraft, supra note 43.
53 Id.
54 Id.
55 Id.
much cheaper and will be able to get into spaces that could not be reached by traditional aircraft.58

In addition to package delivery discussed earlier, food delivery companies will likely use drones as well.59 Some of the other predicted uses of drones will be for search and rescue,60 farming,61 herding sheep and cattle,62 privacy and safety at public events,63 fighting forest fires,64 monitoring endangered animals,65 mapping,66 delivering aid,67 archeology,68 delivering messages and mail,69 as guides around unfamiliar areas,70 art,71 theft prevention,72 real estate sales,73 highway monitoring,74 wildlife research,75 atmospheric research,76 hunting and anti-hunting activities,77 disaster relief,78 and environmental compliance.79 In addition, there will be many more uses that will be thought of as civilian commercial drone usage becomes more commonplace. With this many uses, there will be competition for use of the national airspace, hence the need for FAA regulation. Although Pirker questions the validity of FAA regulation, the safe usage of the national airspace is the rationale that the current FAA position that no commercial drones can be flown until rules for their use are adopted.

Another question that will have to be answered is where would states be able to regulate drone usage? Depending on the breadth of future FAA regulations of the national airspace, questions that are outside of safety will likely be subject to state regulation. “In 2013, 43 states introduced 130 bills

58 Id.
60 Id.
61 Id.
62 Id.
63 Id.
64 Id.
65 Id.
66 Id.
67 Id.
68 Id.
69 Id.
70 Id.
71 Id.
72 Id.
74 Id.
75 Id.
76 Id.
77 Id.
78 Id.
79 Id.
and resolutions addressing UAS issues. At the end of the year, 13 states had enacted 16 new laws and 11 states had adopted 16 resolutions.\(^\text{80}\) Most of this legislation involves government actions such as police evidence gathering; however, regulation of private operators of UASs is starting to occur. As an example, Illinois recently passed a statute that would make it illegal to use drones to interfere with hunters and fishermen.\(^\text{81}\) As the uses for drones expand, there will be a myriad of issues that states would like to address.

**IV. AREAS OF REGULATION AND OTHER LEGAL ISSUES**

The regulation of small drones by the FAA will focus on issues of safety, as FAA administrator Michael Huerta testified before a Senate hearing on drone usage in January 15, 2014.\(^\text{82}\) The FAA certainly will regulate the national airspace. Currently, in order to get a Certificate of Authorization or Waiver (COA) to allow an operator to fly a UAS in the national airspace the operator would have to show that the flight operations are safe. This would require showing “that injuries to persons or property along the flight path is ‘extremely improbable.’”\(^\text{83}\) Most of the regulations that deal with the flying of commercial civilian aircraft require the aircraft to follow right-of-way rules which would be impossible for a UAS to follow because of specific see and avoid rules able to be integrated into UAS technology.\(^\text{84}\) Instead, a complicated process is laid out where an operator can request a COA on a case-by-case basis. To receive the COA, the FAA would require that the operator will comply with certain principles including:

- The COA authorizes an operator to use defined airspace and includes special provisions unique to each operation. For instance, a COA may include a requirement to operate only under Visual Flight Rules (“VFR”) and during daylight hours. Most are issued for a specified time (up to one year, in some cases);

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\(^{81}\) Id.

\(^{82}\) Barr, *supra* note57.


\(^{84}\) Id. at 610.
Most, if not all, COAs require coordination with an appropriate air traffic control facility and require the [UAS] to have a transponder able to operate in standard air traffic control mode with automatic altitude reporting; and

To make sure the [UAS] will not interfere with other aircraft, a ground observer or an accompanying “chase” aircraft must maintain visual contact with the [UAS].

Even though many UASs are designed with built in censors and cameras which can detect objects on the ground, these do little to help with in detecting objects that are in the flight path of the UAS. Since most drones are operated by a pilot on the ground, but may be outside of the line of sight of the operator, the FAA will likely required that drones have a way of landing safely in the event that electronic communications with the drone has ended. It is likely that the FAA will require a variety of different technologies to replace the traditional see and avoid systems that would be used in traditional aircraft. These see and avoid systems help aircraft to avoid midair collisions with other aircraft and objects such as buildings. The types of the technology will likely depend on the size and type of UAS, where it will be flying and what the purpose of the UAS is. Current technologies that will be used in this determination would include GPS navigation, automatic dependent surveillance, traffic alert and collision avoidance, Mode S secondary surveillance radar,... an identify friend/foe transponder [and] special types of RADAR or other sensors are utilized to mitigate the risk of mid-air collision. In addition, new types of technology that will help to replace the see and avoid systems may be developed, which may be considered to enhance safety by the FAA. In the future, the FAA will likely establish standard regulations as to what would make the UASs safe, and the system of case-by-case approval of COAs will be replaced. However, in addition there are other areas in which the law will affect the use of civilian drones, whether they are be used for commercial purposes or not.

A. Trespass

Trespass is an issue that may lead to both civil and legal liability. It makes sense that a person would have the right to prevent a low-flying UAS

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86 Id. at 610.
87 Id.
from entering his or her property. This would likely be an issue that is addressed on a state-by-state (or local) basis in determining exactly what constitutes a trespass. There may be issues of the height in which a UAS must fly in order to avoid a state’s trespassing statute. Also, there may be both state and local restrictions to which areas a UAS may legally operate. As the technology improves, these restrictions will have to be updated on a continual basis.

B. Right to Privacy

There also can be a violation of the right to privacy without a physical trespass occurring. Questions abound about the use of UASs by law enforcement, and these may shape tort and criminal law in the area of an individual’s right to privacy. One area that courts will certainly have to address in the future is when the Fourth Amendment would require the government to get a warrant to use a UAS as part of their surveillance methods. To answer this question in terms of privacy rights, courts would have to address several issues. Courts would look at “whether a technology [used for surveillance] is in general public use, whether the observations are made from navigable airspace and the nature of the imaging (or other information-gathering) system.” Analysis of Fourth Amendment requirements will likely aid in shaping both civil and criminal invasion of privacy actions committed by non-government bodies as well. The seminal case concerning the Fourth Amendment and a citizen’s right to privacy is Katz v. United States. In Katz, the government wiretapped a public phone to gather evidence against a criminal suspect. This required no trespass since the phone was in a public location. The Court in Katz famously declared that the “Fourth Amendment protects people, not places.” The Court concluded that the Fourth Amendment would be violated, even without a physical trespass onto another’s property, if the person had a reasonable expectation of privacy. Although the Fourth Amendment does not apply to non-government actors, “judicial interpretation of the reasonableness of privacy expectations in the constitutional context validates new kinds of privacy interests and serves as a guide to judges.”

89 Id. at 486.
91 Id. at 348.
92 Id. at 351.
93 Id.
help shape privacy tort law, since both are dependent on the “reasonableness a [person’s] desire for privacy.” Since UAS technology is new, tort liability for operators will inevitably be developed, and this may borrow from established Fourth Amendment principles, as well as from other areas of the law, with the right to privacy being a major focus. Cases will likely involve the invasion of privacy based upon intrusion upon seclusion. Most UASs will be equipped with cameras as part of the out of sight of the operator safety protocols. “A person who is unwillingly photographed in his or her own home by a UAS hovering just outside an otherwise inaccessible window would have strong grounds for a valid cause of action.” This would even include public figures that have less of an expectation of privacy, but can expect privacy in their own homes and yards. Since it is expected that one of the fields that will use commercial UASs in abundance is journalism, it is easy to see how there could be an overreach by paparazzi which will result in many lawsuits. Other operators of UASs will also have issues dealing with intrusion upon seclusion, even at times inadvertently if cameras are to be operating on UAS flights at all times. In addition, there will also be claims for invasion of privacy due to the publication of private facts. As cameras and microphones will be in more places it is easy to foresee how facts that would likely be published that at an ordinary person would find objectionable. Also, similarly, operators may use UASs (commercial or hobby drones) to stalk and harass others. This may lead to both civil and criminal liability. Also, leading to both civilian and criminal liability would be the use of UASs for business privacy and business espionage.

C. Issues with Long-Term Surveillance

Any flight restrictions involving privacy will have to be updated on a continual basis to keep up with evolving technology. There is special concern of issues that may arise concerning long-term surveillance of a person using UAS technology. Currently, drones can fly for up to two days at a time. However as technology advances, it is predicted that a drone may be able to be flown for an indefinite period of time. The length of time that one is observed may also have an effect on a court’s interpretation of what

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95 Id.
96 Villsenor, supra note 88, at 501.
97 Id.
98 Id. at 503.
99 Id. at 504-05.
100 Id. at 505.
101 Id. at 506-07.
constitutes a reasonable expectation of privacy. The case of *United States v. Jones*\(^{103}\) the Supreme Court addressed the issue of long-term surveillance by a government official. In Jones, a nightclub owner was suspected of trafficking narcotics. The government attached a GPS tracking device to the suspects’ car and tracked the movements of the vehicle for the next 28 days.\(^{104}\) In determining whether this long-term tracking was admissible evidence in the trial, the majority opinion eschewed the reasonable expectation of privacy test established in *Katz*. Instead, the Court in *Jones*, applied the test used in *Olmstead v. United States*.\(^{105}\) In *Olmstead*, the Court required that there be a physical trespass for a search to be unconstitutional. In *Jones*, the majority opinion held that “the Government physically occupied private property for the purpose of obtaining information. We have no doubt that such a physical intrusion would have been considered a “search” within the meaning of the Fourth Amendment when it was adopted.”\(^{106}\) Since the warrant for the search was not valid, the majority opinion did not address the *Katz* test. The Court specifically held that it was not making trespass the exclusive test, but that “[s]ituations involving merely the transmission of electronic signals without trespass would remain subject to *Katz* analysis.”\(^{107}\) In a concurring opinion, however, Justice Sotomayor (joined by Justice Scalia), noted that she believed that the *Katz* test should apply. Justice Sotomayor observed that what constitutes a reasonable expectation of privacy changes with technology.\(^{108}\) Justice Sotomayor stated that she believed that the length of time of the monitoring would have an effect on ones expectation of privacy noting:

[R]elatively short-term monitoring of a person’s movements on public streets accords with expectations of privacy that our society has recognized as reasonable…. But the use of longer term GPS monitoring in investigations of most offenses impinges on expectations of privacy. For such offenses, society’s expectation has been that law enforcement agents and others would not—and indeed, in the main, simply could not secretly monitor and catalogue every single movement of an individual’s car for a very long period. In this case, for four weeks, law enforcement agents tracked every movement that respondent made in the vehicle he was driving. We need not identify with precision the point at which

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\(^{104}\) *Id.* at 948.

\(^{105}\) *Olmstead v. United States* 277 U.S. 438 (1928).

\(^{106}\) *Jones v. United States*, 132 S. Ct. 945, 949 (original citations omitted).

\(^{107}\) *Id.* at 953 (emphasis supplied).

\(^{108}\) *Id.* at 962. (Sotomayor, J., concurring).
the tracking of this vehicle became a search, for the line was surely crossed before the 4-week mark.\textsuperscript{109}

While the majority opinion stated that this type of long-term surveillance “introduces yet another novelty into [its] jurisprudence,”\textsuperscript{110} it did not have to address this issue, but may have to do so in the future in a case that does not involve an actual trespass. While this line of cases deals with Fourth Amendment cases which only address government actors, the reasoning behind it will likely apply to privacy tort cases as well. As the technology allows for drones to fly for a longer period of time, and perhaps indefinitely, what constitutes intrusion upon seclusion may also change with the time period one is observed. A drone which takes a picture or few pictures of a person in a public place may be treated differently than a drone which continually takes pictures of a person over a series of days or weeks. This line of reasoning also may lead to cases of stalking and harassment tort and criminal cases as well. All states have statutes that address stalking and harassment and many are broad enough to include using a drone to stalk or to harass.\textsuperscript{111} The length of the surveillance of a person would seem to be a factor in whether a person was stalked or harassed.

\textbf{D. First Amendment}

Another question that would need to be answered is where do the First Amendment rights of people operating drones lie? Certainly there are First Amendment protections that apply to people gathering news and for other activities that will be effected by the inclusion of drones in the airspace. Much has been written about journalists who are waiting for regulations to be put in place to use drones for news gathering activities.\textsuperscript{112} There are obvious advantages to using low cost and easily maneuverable drone for activates currently done with traditional aircraft. Because of this, journalism will likely be a field which uses a large number of drones when allowed to do so. Others will claim First Amendment rights in their commercial endeavors as well. There will likely be many cases brought forth that will identify how the First Amendment rights will interplay with federal and state legislation.

\textsuperscript{109} Id. at 964 (Sotomayor, J., concurring) (original citations omitted).
\textsuperscript{110} Id. at 954.
\textsuperscript{111} Villsenor, supra note 88, at 505.
IV. CONCLUSION

The *Pirker* decision leaves uncertainty, at least in the short run, as to the legality of operating a UAS for commercial purposes. It is unlikely that this uncertainty will last a long time, as the FAA is appealing the decision, and if they lose the appeal, they are almost certain to quickly make regulations to keep commercial drones out of the national airspace until proper safety regulations are in place. However, the *Pirker* decision, and the fact that the FAA expects thousands of commercial drones to be operating once there are regulations, shows the need for intelligent regulation to ensure the safety for people and property as well. In addition to safely operating both commercial and non-commercial UASs, operators will also have to worry about tort and criminal liability for endeavors associated with the operation of the drone.