

2015

Private Drones: Regulations and Insurance

Daniel North

Follow this and additional works at: <http://lawcommons.luc.edu/lclr>



Part of the [Consumer Protection Law Commons](#)

Recommended Citation

Daniel North *Private Drones: Regulations and Insurance*, 27 Loy. Consumer L. Rev. 334 (2015).
Available at: <http://lawcommons.luc.edu/lclr/vol27/iss2/5>

This Student Article is brought to you for free and open access by LAW eCommons. It has been accepted for inclusion in Loyola Consumer Law Review by an authorized administrator of LAW eCommons. For more information, please contact law-library@luc.edu.

PRIVATE DRONES: REGULATIONS AND INSURANCE

*Daniel North**

I. INTRODUCTION

For years now, the U.S. military has been utilizing Unmanned Aircraft Systems (UASs) and Unmanned Aerial Vehicles (UAVs) – more commonly known as drones.¹ Recently, other departments of the federal and state governments, law enforcement, and even local governments have been exploring various uses for the devices.² Now, an industry focused on the private use of drones for commercial and recreational purposes has emerged and is rapidly expanding.³ The possibilities for businesses utilizing drones are endless, and hobbyists are constantly imagining new ways to enjoy the technology.⁴ However, in order for the private drone industry to take flight, the Federal Aviation Administration (FAA) must establish regulations so that innovators who want to manufacture, insure, and operate these devices know the parameters in which to do so.⁵ On February 15, 2015, after years of planning and delays, the federal agency finally

* J.D. Candidate, May 2016, Loyola Univ. Chicago School of Law.

¹ Marc Warren, *UAS Integration: A Call to Action*, 27 No. 2 AIR & SPACE LAW. 19, 20 (2014); Craig Whitlock, *Close Encounters with Small Drones on Rise*, WASH. POST (June 23, 2014), <http://www.washingtonpost.com/sf/investigative/2014/06/23/close-encounters-with-small-drones-on-rise/>.

² Warren, *supra* note 1, at 20; Whitlock, *supra* note 1.

³ Nicholas R. Turza, *Dr. Dronelove: How We Should All Learn to Stop Worrying and Love Commercial Drones*, 15 N.C. J.L. & TECH. ON. 319, 319-20 (May, 2014); Larry Downes, *America Can't Lead the World in Innovation*, WASH. POST (Oct. 8, 2014), <http://www.washingtonpost.com/blogs/innovations/wp/2014/10/08/america-cant-lead-the-world-in-innovation-if-the-faa-keeps-dragging-its-feet-on-drone-rules/>.

⁴ *E.g.*, Downes, *supra* note 3.

⁵ Turza, *supra* note 3, at 332-36; Downes, *supra* note 3; Warren, *supra* note 1, at 20.

released a proposal for its first broad regulation of the industry.⁶ Although a step in the right direction, it is merely a proposal and it will likely be years before it is implemented.⁷ Meanwhile, a market for private drone insurance will grow contemporaneously with the expanding industry, and liability coverage for its activities may eventually be compulsory.⁸ How the insurance market for private drone use develops will be a driving force for the direction and rate of growth in the industry.⁹

This new technology presents many opportunities and some potential risks for consumers. The popular television show *60 Minutes* has reported on the expanding industry and its associated possibilities and concerns.¹⁰ The show also presented a piece on retail giant Amazon and its plans, still in the early stages, for drone delivery of small packages.¹¹ The FAA has been slow to react with any type of regulatory scheme to direct or govern the growing field.¹² But, rather than stereotypical bureaucratic inaction, the agency's delay is more likely attributable to the unique complexity of this

⁶ E.g., *Press Release – DOT and FAA Propose New Rules for Small Unmanned Aircraft Systems*, FED. AVIATION ADMIN. (Feb. 15, 2015), http://www.faa.gov/news/press_releases/news_story.cfm?newsId=18295.

⁷ Craig Whitlock, *FAA Rules Might Allow Thousands of Business Drones*, WASH. POST (Feb. 15, 2015), http://www.washingtonpost.com/world/national-security/faa-releases-proposed-rules-for-domestic-drone-use/2015/02/15/6787bdceb51b-11e4-a200-c008a01a6692_story.html; Deborah D. McAdams, *Non-Pilots Can Fly Drones Under Proposed Rules*, TV TECHNOLOGY (Feb. 17, 2015, 4:52 PM), <http://www.tvtechnology.com/news/0086/non-pilots-can-fly-drones-under-proposed-rules--/274560> (quoting attorney Robert Kamensky, of law firm Thompson Coburn LLP, as saying its going to be a couple years before the rulemaking process is complete).

⁸ Timothy Reuter, *Discussion of Business Opportunity with Drones*, DIY DRONES (June 17, 2013, 5:35 PM), <http://diydrone.com/profiles/blogs/discussion-of-business-opportunity-with-drones>; see also *Drone Insurance*, RPAS TRAINING & SOLUTIONS, <http://www.rpastraining.com.au/uoc-casa/drone-insurance> (last visited Jan. 3, 2015) (explaining that liability insurance is required for operating drones in Australia).

⁹ Reuter, *supra* note 8.

¹⁰ *60 Minutes: Drones Over America* (CBS television broadcast Mar. 16, 2014).

¹¹ *60 Minutes: Amazon Unveils Futuristic Plan* (CBS television broadcast Dec. 1, 2013).

¹² Turza, *supra* note 3, at 332-36; Downes, *supra* note 3; Warren, *supra* note 1, at 20.

endeavor.¹³ The FAA is tasked with finding the balance between limiting the obvious risks and avoiding overly burdensome restrictions on a potentially huge market.¹⁴ Its recent proposal is broadly considered a good start.¹⁵

This Note will draw attention to an especially important issue in this industry – insurance – and explore whether private drone users will eventually be required to carry liability insurance coverage. Part II will introduce private drones and their wide range of purposes. It will explore the behemoth industry and its ability to inject billions into the U.S. economy.¹⁶ A brief discussion is also included regarding retail giant Amazon and its battle to gain approval for drone use. This Part will also look at the potential risks involved with private drone use and include facts from incidents that have already occurred.

Part III will discuss the current legal and regulatory environment. The FAA has been slowly addressing the issues related to the industry as they arise, and there is pressure to expedite the agency's adoption of new rules to allow for innovation and growth. The facts and disposition of a recent case involving commercial drone use will be presented. This Part will also discuss some recent indications that the agency is beginning to move more quickly.

Part IV will explore the long-awaited regulations proposal recently released by the FAA. It will discuss the most significant provisions of the rules, the general satisfaction of the industry,¹⁷ and some criticisms.¹⁸ This Part will also briefly explain the expectations for, and potential consequences of the regulations.

Part V will focus on insurance, discuss liability coverage in general, and analogize this issue to compulsory car insurance. It will look at whether insurance plans already cover some users, and

¹³ See Downes, *supra* note 3; see also Warren, *supra* note 1, at 20.

¹⁴ E.g., Downes, *supra* note 3; see also Warren, *supra* note 1, at 20.

¹⁵ *Proposed Drone Rules Strike Careful Balance: Our View*, USA TODAY (Feb. 17, 2015, 8:20 PM), <http://www.usatoday.com/story/opinion/2015/02/17/faa-drones-unmanned-aerial-vehicles-amazon-editorials-debates/23585193/>.

¹⁶ Downes, *supra* note 3.

¹⁷ *Proposed Drone Rules Strike Careful Balance*, *supra* note 15.

¹⁸ Clay Dillow, *With New Rules, the FAA and Drone Industry Make Up*, FORTUNE (Feb. 18, 2015, 11:35 AM), <http://fortune.com/2015/02/18/faa-drone-rules-proposal/>.

potential future users.¹⁹ Some insurance companies concede that their homeowners' policies already cover these activities,²⁰ while other insurers shy away from such exposure.²¹ In addition, a few insurance providers now offer specialized insurance products specifically for drone use.²² This Part will also explore how the devices could be covered and the concerns inherent in this area for all the parties involved and affected.²³

II. PRIVATE DRONES: USES, ECONOMIC SIGNIFICANCE, AND RISKS

A. *Who is Buying Them, and How are They Using Them?*

The term "private drone" in this article is meant to differentiate from the large, lethal, multi-million dollar aircraft used by the military.²⁴ Rather, it refers to small devices that any consumer can purchase inexpensively today.²⁵ The most sought after drones for private use are labeled "small drones," meaning they weigh less than fifty-five pounds,²⁶ and their capabilities range from flying fifty feet away from the user to taking off from a runway and flying for miles.²⁷ Some are operated from a remote control; many are more sophisticated and use GPS and smartphone technology; others are

¹⁹ Andrew Amato, *Does Your Homeowner's Insurance Cover Your Drone?*, DRONELIFE.COM (June 17, 2014), <http://dronelife.com/2014/06/17/homeowners-insurance-cover-drone/>.

²⁰ *Id.*

²¹ Laurie Bedord, *Should You Insure a Drone*, AGRICULTURE.COM (Jan. 14, 2014, 9:48 AM), http://www.agriculture.com/news/business/should-you-insure-a-drone_5-ar41121.

²² See Amato, *supra* note 19; see also *UAS UAV Drone Insurance*, TRANSPORT RISK MANAGEMENT, <http://www.transportrisk.com/uavrcfilm.html> (last visited Dec. 30, 2014).

²³ Vikki Stone, *Rise of the Drones*, RISK & INSURANCE (Mar. 3, 2014), <http://www.riskandinsurance.com/rise-drones/>.

²⁴ See *The Rise of the Drones: Experts Discuss Legal Implications of UAVs in Civilian Airspace*, A.B.A., (Oct. 22, 2013, 12:38 PM), http://www.americanbar.org/news/abanews/aba-news-archives/2013/10/the_rise_of_the_dron.html; see also Downes, *supra* note 3.

²⁵ See Downes, *supra* note 3.

²⁶ Michael Berry & Nabiha Syed, *The FAA's Slow Move to Regulate Domestic Drones*, WASH. POST, Sept. 24, 2014, <http://www.washingtonpost.com/news/volokh-conspiracy/wp/2014/09/24/the-faas-slow-move-to-regulate-domestic-drones/>.

²⁷ *60 Minutes: Drones Over America*, *supra* note 10.

even capable of operating independently without any human involvement.²⁸ The FAA and the emerging industry divide the group of private users between those with a commercial purpose and hobbyists.²⁹

Drones have already displayed uses in agriculture, law enforcement, delivery services, photography, and mapping.³⁰ Drones equipped with cameras have captured rarely seen views of New York City, impressive surfing footage that has generated online acclaim,³¹ and breathtaking shots of Niagara Falls.³² A group in London even used “algorithmically-driven drones choreographed to music for an indoor display.”³³

Industry leaders emphasize that there are many uses beyond the world of art and entertainment.³⁴ Michael Toscano, President and CEO of Unmanned Vehicle Systems International, described the more practical purposes as falling within the “four D’s” – dirty, dangerous, difficult, and dull.³⁵ Drones have been used to monitor marine wildlife, look for “hot spots” on farms, and help monitor forest fires.³⁶ They were also utilized to measure radiation after a nuclear disaster when it was unsafe for humans to enter the area, and to survey the aftermath of a typhoon that devastated the Philippines.³⁷ Furthermore, real estate and construction companies have shown an interest in the possibility of using drones to explore tracts of land or building sites.³⁸

²⁸ *Id.*

²⁹ See *Busting Myths About the FAA and Unmanned Aircraft*, FED. AVIATION ADMIN. (Feb. 26, 2014), <http://www.faa.gov/news/updates/?newsId=76240>.

³⁰ Downes, *supra* note 3.

³¹ Ben Woods, *How to Use Personal Drones Legally*, NEXT WEB (July 4, 2014, 6:01 PM), <http://thenextweb.com/gadgets/2014/07/04/use-personal-drones-legally-beginners-guide/>.

³² *60 Minutes: Drones Over America*, *supra* note 10.

³³ Woods, *supra* note 31.

³⁴ *60 Minutes: Drones Over America*, *supra* note 10.

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.*

³⁸ See Stone, *supra* note 23; *UAS UAV Drone Insurance*, *supra* note 22; see also *Let Them Fly: CEA Applauds FAA’s Ruling on Drones*, CONSUMER ELECTRONICS ASS’N (Sept. 25, 2014), <http://www.ce.org/News/News-Releases/Press-Releases/2014/Let-Them-Fly-CEA-Applauds-FAA’s-Ruling-on-Drones.aspx?feed=Policy-Press-Releases>.

*B. Potential for a Multi-Billion Dollar Industry*³⁹

Experts suggest drone technology and the resulting industry have the potential to create a range of businesses and many new jobs.⁴⁰ The Consumer Electronics Association forecasted sales of 250,000 units in 2014, producing revenues of \$84 million.⁴¹ By 2018, it estimates sales of almost one million units and revenues of nearly \$300 million.⁴² The FAA estimates that private drones could constitute a \$90 billion industry within a decade.⁴³ Recent reports suggest Amazon may already be selling as many as 10,000 units per month.⁴⁴ The nation's largest defense contractors are not ignoring the growing industry either, as Boeing and Lockheed Martin have both shown activity in drone development.⁴⁵

With the FAA dragging its heels on implementing regulations for private drone use, the U.S. is at risk of falling behind European countries that are already exploring agricultural and delivery uses for the devices.⁴⁶ Many countries in Europe and Asia are passing the U.S. by,⁴⁷ and will continue to do so while the newly proposed regulations meander their way through the rulemaking process. The lag is already causing innovators and manufacturers in the U.S. to

³⁹ Downes, *supra* note 3.

⁴⁰ *Let Them Fly*, *supra* note 38.

⁴¹ *Id.*

⁴² *Id.*

⁴³ Downes, *supra* note 3; *see also* Joint Planning and Dev. Office, *Unmanned Aircraft Systems (UAS) Comprehensive Plan*, FED. AVIATION ADMIN., 5 (Sept. 2013),

http://www.faa.gov/about/office_org/headquarters_offices/agi/reports/media/UAS_Comprehensive_Plan.pdf (citing a report from the Teal Group that estimated \$89.1 billion of cumulative revenue in the industry over the next decade).

⁴⁴ *FAA, Industry Launch Drone Safety Campaign*, N. Y. TIMES (Dec. 22, 2014, 2:07 PM), <http://www.nytimes.com/aponline/2014/12/22/us/politics/ap-us-drones-safety-campaign.html>.

⁴⁵ *60 Minutes: Drones Over America*, *supra* note 10.

⁴⁶ Turza, *supra* note 3, at 342-53; Downes, *supra* note 3.

⁴⁷ Jason Koebler, *Drones Could be Coming to American Skies Sooner Than You Think*, POLITICO MAG. (Jan. 28, 2014), <http://www.politico.com/magazine/story/2014/01/drones-faa-lawsuit-coming-to-american-skies-102754.html#.VKjK2lrgCbA>; *see also* Victoria Bryan, *Drone Delivery: DHL "parcelcopter" Flies to German Isle*, REUTERS (Sept. 24, 2014, 3:55 PM), <http://www.reuters.com/article/2014/09/24/us-deutsche-post-drones-idUSKCN0HJ1ED20140924> (explaining that German delivery company DHL has already begun delivering packages to customers on the island of Juist).

look abroad when seeking markets for their technology.⁴⁸ The delays on the part of the FAA have also caused many state and local governments to begin promulgating drone legislation independently.⁴⁹ This patchwork of rules and regulations varying from state to state and town to town will further complicate implementation once the federal agency has established its structure.⁵⁰

C. Amazon: The Future... Passing the U.S. By

Jeff Bezos, Amazon's CEO, has grand plans for unpiloted drones delivering packages to customers' doorsteps within thirty minutes of their orders being placed.⁵¹ The devices he showcased on *60 Minutes*, which have been in research and development for some time now, are called "octocopters" – small, eight-blade, helicopter-style drones.⁵² Bezos said the technology was likely still a few years from implementation, and the hardest part would be satisfying the FAA.⁵³

In December of 2014, Paul Misener, Vice President of Global Public Policy for Amazon, told the FAA in a letter that the company's testing of drones for delivery purposes had outgrown its indoor feasibility.⁵⁴ He explained that it had begun testing drones overseas and warned that, if the process of regulatory promulgation and drone integration were not hastened, Amazon would have to

⁴⁸ Koebler, *supra* note 47; *see also* Bryan, *supra* note 47.

⁴⁹ *See* Joseph M. Hanna, *The Drones are Coming! Is New York Ready?*, 86-SEP N.Y. ST. B.J. 10, 12 (Sept. 2014) (exploring the development of drone legislation in New York state, and making comparisons with other states' developments); *see also* Hon. Brian Stern, *Coming Home to Roost – Domestic Use of Unmanned Aerial Vehicles*, 62-DEC R.I. B.J. 5, 32 (Nov./Dec., 2013) (discussing the development of drone legislation in Rhode Island).

⁵⁰ *See* Hanna, *supra* note 49; *see also* Stern, *supra* note 49.

⁵¹ *60 Minutes: Amazon Unveils Futuristic Plan*, *supra* note 11.

⁵² *Id.*

⁵³ *Id.*

⁵⁴ Bart Jansen, *FAA Lets 4 Companies Fly Commercial Drones*, USA TODAY (Dec. 10, 2014, 2:23 PM), <http://www.usatoday.com/story/money/business/2014/12/10/faa-drones-trimble-vdos-clayco-woolpert-amazon/20187761/>.

consider taking abroad what remained of its research in the U.S.⁵⁵ The letter expressed concern that the FAA was hampering technological innovation in the U.S. and urged the agency to approve its applications for outdoor testing in Washington state.⁵⁶ The agency said it has since appointed an inspector to work directly with the company to address the applications,⁵⁷ but to date, it has not announced any changes in their status.

D. Potential Risks

On May 29, 2014, airline pilots attempting to land at two different major U.S. airports reported seeing unmanned aerial vehicles in their airspace.⁵⁸ These incidents account for only two out of fifteen similar complaints in the last two years.⁵⁹ In fact, since November 2009, there have even been twenty-three reported accidents involving operators who actually had FAA approval.⁶⁰ In 2014 alone, a drone crashed onto the thirtieth floor balcony of a building in St. Louis, Missouri, another crashed into the stands of a motorsports park and injured three spectators, and a Brooklyn man was fined \$2,200 after his drone struck two Manhattan skyscrapers and almost hit a pedestrian.⁶¹ In September, a pilot reported encountering a drone at an altitude of 2,300 feet and said the two aircraft only avoided a collision by fifty feet.⁶²

Perhaps the recent story most damaging to the image and progress of the industry came on January 26, 2015, when a man operating his drone for recreational purposes crashed it into a tree on the White House lawn.⁶³ Aside from showing a blatant lapse in judgment, the activity was also likely illegal because FAA guidance

⁵⁵ Spencer Soper & Alan Levin, *Amazon Tells FAA it May Move*, BLOOMBERG (Dec. 8, 2014, 8:00 PM), <http://www.bloomberg.com/news/2014-12-09/amazon-tells-faa-it-may-move-drone-testing-outside-u-s-.html>.

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ Whitlock, *supra* note 1.

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

⁶³ Michael Schmidt & Michael Shear, *A Drone, Too Small for Radar to Detect, Rattles the White House*, N. Y. TIMES (Jan. 26, 2015), <http://www.nytimes.com/2015/01/27/us/white-house-drone.html>.

forbids private drone operation in Washington DC, and certainly over the President's property.⁶⁴ According to one expert, though, this is exactly the type of activity and incident that possibly could have been thwarted if thorough FAA regulations were in place.⁶⁵

III. CURRENT LEGAL AND REGULATORY ENVIRONMENT

A. *The FAA Says It Is In Charge, But the Rules are Unclear*

According to guidance from the FAA, it is responsible for the safety of all U.S. airspace from the ground up, including below 400 feet.⁶⁶ In 2007, the agency released guidance explaining that drones could not be operated for commercial purposes under the same loose guidelines that apply to hobbyists.⁶⁷ Commercial operations, it explained, require a certified aircraft, a licensed pilot, and authorization provided on a case-by-case basis.⁶⁸ This guidance falls far short of a regulation, though, and the FAA has yet to go through the official rulemaking process necessary for it to reach that level.⁶⁹ The proposed regulations released recently, should they be adopted, would significantly alter the guidelines set out in that memo.⁷⁰ Hobbyists – operators using model aircraft solely for hobby or recreational purposes – do not require FAA approval according to the 2007 guidance, provided they avoid populated areas and do not fly above 400 feet or within three miles of an airport.⁷¹ Recreational users must also maintain a clear visual of their devices from where they stand on the ground at all times during operation.⁷² In addition, the agency has said for some time that all drone activity, commercial or recreational, is banned in Class B airspaces without explicit FAA

⁶⁴ *Id.*

⁶⁵ Telephone Interview with Terry Miller, Owner and President, Transport Risk Management (Jan. 26, 2015).

⁶⁶ *Busting Myths*, *supra* note 29.

⁶⁷ Nicholas Sabatini, DEP'T OF TRANSP., FED. AVIATION ADMIN., DOCKET NO. FAA-2006-25714, UNMANNED AIRCRAFT OPERATIONS IN THE NAT'L AIRSPACE SYS. (Feb. 6, 2007); *see also Busting Myths*, *supra* note 29.

⁶⁸ *Id.*

⁶⁹ Koebler, *supra* note 47.

⁷⁰ *E.g.*, *Press Release – DOT and FAA Propose New Rules*, *supra* note 6.

⁷¹ Sabatini, *supra* note 67; *see also Busting Myths*, *supra* note 29.

⁷² Sabatini, *supra* note 67; *see also Woods*, *supra* note 31.

approval.⁷³ Such airspace includes urban areas and areas with the highest density of manned aircraft.⁷⁴ This restriction would be eliminated under the 2015 proposed regulations.⁷⁵ It is unlikely the average mall kiosk drone retailer is well versed on these complex guidelines, or on how to disseminate them to its customers. This void illustrates one of many reasons the federal regulations are necessary.

Thus far, the FAA has addressed uses it deems commercial or dangerous by sending cease-and-desist letters, and some users have been fined.⁷⁶ Its letters have affected a wide range of activities and users such as dry cleaners, the Washington Nationals baseball team, universities, and news stations.⁷⁷ However, in 2012 Congress enacted the FAA Modernization and Reform Act, which directed the agency to create a plan for safely integrating drones into U.S. airspace by September 30, 2015.⁷⁸ The Act required the plan address public, civil, and commercial use of drones of all sizes, including “small” drones – those under fifty-five pounds – which are of the greatest interest to most users.⁷⁹

⁷³ *Fact Sheet – Unmanned Aircraft Systems (UAS)*, FED. AVIATION ADMIN. (Jan. 6, 2014), http://www.faa.gov/news/fact_sheets/news_story.cfm?newsid=14153.

⁷⁴ *Id.*; but see FED. AVIATION ADMIN., U.S. DEP’T OF TRANSP., ORDER JO 7400.2K, PROCEDURES FOR HANDLING AIRSPACE MATTERS, 14-1-2 DEFINITIONS (Apr. 3, 2014) (defining Class B airspace as the areas around the nation’s busiest airports, but making no mention of urban areas specifically).

⁷⁵ *Overview of Small UAS Notice of Proposed Rulemaking*, FED. AVIATION ADMIN. (Feb. 15, 2015), http://www.faa.gov/regulations_policies/rulemaking/media/021515_sUAS_Summary.pdf; Thomas S. McGowan et al., *Final Approach: FAA Announces Long-Awaited Small UAS Notice of Proposed Rulemaking*, ASS’N OF CORPORATE COUNSEL, *Lexology* (Feb. 17, 2015), <http://www.lexology.com/library/detail.aspx?g=abae5780-d94c-4991-8d09-18c7f22465e4>.

⁷⁶ Todd Janzen, *Planet of the Drones: The Legal Implications of the Commonplace Use of Unmanned Aircraft Systems*, 58-OCT RES GESTAE 18 (Oct., 2014); Downes, *supra* note 3; see also Al Nash, *Guilty Verdict in Grand Prismatic Unmanned Aircraft Case*, NAT’L PARK SERVICE (Sept. 25, 2014), <http://www.nps.gov/yell/parknews/14078.htm> (explaining that a man was ordered to pay a \$1,000 fine and \$2,200 in restitution after crashing his drone into a hot spring in Yellowstone National Park, and pleading guilty to operating the device in violation of a ban on drones in all national parks).

⁷⁷ Berry & Syed, *supra* note 26.

⁷⁸ Pub. L. No. 112-95, 126 Stat. 11; see *Busting Myths*, *supra* note 29.

⁷⁹ Berry & Syed, *supra* note 26.

The FAA, however, has attempted to temper expectations with the caveat, “safe integration will be incremental.”⁸⁰ It has already missed many of its self-imposed deadlines for the new plans, and a recent government audit concluded the agency would miss the main deadline Congress set in the legislation.⁸¹ The regulations proposed in the February 2015 notice of proposed rulemaking will not likely be finalized until 2017.⁸² Much of this delay is likely a result of the conflicting mandates of the legislation; the rules must be adopted quickly to allow businesses to begin taking advantage of the economic benefits, while the rules must also be carefully constructed so as not to compromise the safety standards already in place.⁸³

B. *The Pirker Case*

In 2011, Raphael Pirker was fined \$10,000 for using a drone without FAA approval to produce a promotional video for the University of Virginia Medical Center because the FAA claimed he operated the device too close to people on the ground.⁸⁴ When Pirker challenged the accusation, a federal administrative law judge granted dismissal of the charge and accompanying fine, holding that the FAA had exceeded its regulatory authority.⁸⁵ The ruling focused first on whether the small unmanned aircraft that he was operating was in fact an “aircraft,” as defined by the applicable FAA materials.⁸⁶ Next, the administrative law judge considered whether the guidance the FAA relied on for the charges was a sufficient basis to bring such an action.⁸⁷ On both issues, the judge found against the FAA, concluding that this small device did not fit within the definition of an “aircraft”, and that the agency failed to promulgate any rules or regulations capable of supporting such a charge.⁸⁸

⁸⁰ See *Busting Myths*, *supra* note 29.

⁸¹ Saurabh Anand, *Hovering on the Horizon: Civilian Unmanned Aircraft*, 26 NO. 1 AIR & SPACE LAW. 9 (2013); Downes, *supra* note 3.

⁸² Whitlock, *supra* note 7.

⁸³ Whitlock, *supra* note 1; see also Warren, *supra* note 1, at 20.

⁸⁴ Whitlock, *supra* note 1.

⁸⁵ *FAA v. Pirker*, No. CP-217, 2014 WL 3388631, at *1 (N.T.S.B. Mar. 6, 2014).

⁸⁶ *Id.* at *4-5.

⁸⁷ *Id.* at *2.

⁸⁸ *Id.* at *5.

However, the FAA appealed this ruling, and in November 2014 the National Transportation Safety Board (NTSB) overturned the decision and remanded the case back to the administrative law judge for a factual determination of whether Pirker operated his drone in a careless or reckless manner.⁸⁹ The NTSB decision held that the statutory definition of the term “aircraft” did include unmanned aircraft, regardless of its size.⁹⁰ The decision further concluded the agency is able to take actions regarding drone use it deems careless or reckless, and that the guidance currently in place provides a sufficient basis for such actions.⁹¹ The issue on remand would have been whether he operated the drone dangerously, rather than whether he could legally use it for a commercial purpose.⁹² Even this narrow issue would not reach a satisfying conclusion, though, because on January 22, 2015, Pirker’s attorney released a statement explaining that the two sides had reached a settlement agreement.⁹³ The settlement reduced the fine to \$1,100 and Pirker did not admit to any wrongdoing.⁹⁴

Under the current guidelines, hobbyist use is permitted when the few rules currently in place are followed and the user does not operate the drone in a dangerous manner.⁹⁵ But, even for hobbyist use, the 1981 material is only an advisory circular – guidance that calls for “voluntary compliance” with safety guidelines applicable to non-commercial, or model, users.⁹⁶ Commercial use is completely banned, except with explicit FAA approval, according to the agency’s 2007 memo.⁹⁷ The agency likely knew this guidance might not be upheld since it was not created under any proper rulemaking

⁸⁹ *Press Release – FAA Statement on NTSB Decision in Huerta v. Pirker*, FED. AVIATION ADMIN. (Nov. 18, 2014), http://www.faa.gov/news/press_releases/news_story.cfm?newsId=17734.

⁹⁰ John Goglia, *NTSB Overturns Pirker Case*, FORBES (Nov. 18, 2014), <http://www.forbes.com/sites/johngoglia/2014/11/18/ntsb-overturns-pirker-finds-for-faa-that-drones-are-aircraft-subject-to-its-rules/>.

⁹¹ *Press Release – FAA Statement on NTSB Decision*, *supra* note 89.

⁹² Koebler, *supra* note 47.

⁹³ Brendan Schulman, *Team BlackSheep Drone Pilot Raphael Pirker Settles FAA Case*, TEAM BLACKSHEEP (Jan. 22, 2015), <http://www.team-blacksheep.com/docs/pirker-faa-settlement.pdf>.

⁹⁴ *Id.*

⁹⁵ Koebler, *supra* note 47.

⁹⁶ R.J. Van Vuren, *Advisory Circular 91-57*, FED. AVIATION ADMIN. (June 9, 1981), http://www.faa.gov/documentLibrary/media/Advisory_Circular/91-57.pdf.

⁹⁷ Koebler, *supra* note 47.

process, so it did not charge Pirker for operating his drone for a commercial purpose.⁹⁸ Instead, it chose to pursue charges based on a claim that he was operating his device in an unsafe manner.⁹⁹ However, in recent guidance issued on January 8, 2015, the FAA maintained it has full authority to ban any unauthorized commercial drone activity and that its current guidance sufficiently does so.¹⁰⁰ One week later, the regulation proposal that could end this ban on commercial drone operations was released to the public.¹⁰¹

C. Signs of Progress

The FAA had shown some signs of progress in the area of commercial drone use, even before the release of its proposed regulations, by granting authorization for certain filmmakers¹⁰² and a handful of private companies.¹⁰³ In 2012, the agency established the Unmanned Aircraft Systems Integration Office as a division focused solely on integrating these devices into the national airspace.¹⁰⁴ It also created six test sites throughout the country with the goal of testing various drones and collecting data to be used for implementing safety guidelines and applicable regulations.¹⁰⁵

Under pressure for an accelerated introduction of commercial drones into the national airspace, the FAA announced in May of 2014 that it would consider waivers for low risk business operations.¹⁰⁶ Within days it received a pile of applications, including those from some of the largest corporations in the country, such as State Farm

⁹⁸ Schulman, *supra* note 93.

⁹⁹ *Id.*

¹⁰⁰ *Law Enforcement Guidance for Suspected Unauthorized UAS Operations*, FED. AVIATION ADMIN. (Jan. 8, 2015), http://www.faa.gov/uas/regulations_policies/media/FAA_UAS-PO_LEA_Guidance.pdf (requesting the assistance of local law enforcement agencies in combating and investigating unauthorized or dangerous private drone activities, and explaining the agency's position on the current legal landscape).

¹⁰¹ *E.g.*, *Press Release – DOT and FAA Propose New Rules*, *supra* note 6.

¹⁰² *E.g.*, Downes, *supra* note 3.

¹⁰³ Jansen, *supra* note 54.

¹⁰⁴ *Fact Sheet*, *supra* note 73.

¹⁰⁵ Whitlock, *supra* note 1.

¹⁰⁶ Craig Whitlock, *FAA Drone Approvals Bedeviled by Warnings*, WASH. POST (Dec. 21, 2014), http://www.washingtonpost.com/world/national-security/faa-drone-approvals-bedeviled-by-warnings-conflict-internal-e-mails-show/2014/12/21/69d8a07a-86c2-11e4-a702-fa31ff4ae98e_story.html.

Insurance, Chevron, Dow Chemical, and – of course – Amazon.¹⁰⁷ In September 2014, the FAA gave the green light to six Hollywood filmmakers to utilize drones for their productions.¹⁰⁸ Unfortunately, the approvals were marred by conflict as reports later surfaced that officials ignored warnings from safety experts that some of the filming operations were unsafe.¹⁰⁹ In addition, the reportedly ignored warnings appeared at least partially validated when a drone used on one of the sets disappeared during flight and was not found until the following day.¹¹⁰

In the three months following the filmmakers' approvals, the FAA received at least 167 applications from companies in a wide range of industries seeking the coveted approvals.¹¹¹ In yet another sign of the negative effects of the conflicting forces at work, several FAA employees have anonymously reported feeling pressured by agency officials to “rubber stamp” applications.¹¹²

In December, however, the FAA took another step forward in the integration process when it approved commercial use drone activities for four corporations.¹¹³ All four companies submitted plans that called for the use of “small drones,” weighing less than fifty-five pounds.¹¹⁴ The proposed uses include conducting aerial surveys, inspecting flare stacks for oil operations, surveying construction sites, and aerial mapping.¹¹⁵ For commercial operations lucky enough to gain FAA approval, there is still a laundry list of limitations and requirements – including record keeping and even health checks.¹¹⁶

The FAA says it received approximately twenty-five reports of drones flying near manned aircraft and airports in 2014.¹¹⁷ As a result, the government agency and drone industry officials have

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *E.g.*, Jansen, *supra* note 54.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ Aaron Cooper, *Commercial Drone Permission Comes with Strings Attached*, CNN, http://www.cnn.com/2015/02/13/politics/drone-federal-aviation-administration/index.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+rss%2F+latest%28RSS%3A+Most+Recent%29 (last updated Feb. 13, 2015, 10:19 AM).

¹¹⁷ *FAA, Industry Launch Drone Safety Campaign*, *supra* note 44.

partnered up for a safety campaign and created a new website, www.knowbeforeyoufly.org, which will provide instructional videos for both hobbyist and commercial users.¹¹⁸ Online retail giant Amazon has also seen fit to address the concerns directly with its customers, by posting a special page on its site with safety instructions for private drone users.¹¹⁹

IV. THE FAA'S NOTICE OF PROPOSED RULEMAKING FOR SMALL UAS

A. Scope and Rules of the Proposal

On February 15, 2015, the FAA released its long-awaited proposal for regulations to govern the private drone industry.¹²⁰ The proposal would allow for the routine use of “small” drones – those weighing less than fifty-five pounds – and focuses primarily on safety rules for non-recreational, or commercial uses.¹²¹ The regulations proposed would not affect operations of model aircraft – small drones being used solely for non-commercial purposes.¹²² The proposal discusses the possibility of creating a more flexible framework for a special category labeled “micro” drones – those weighing less than 4.4 pounds.¹²³ The public will have sixty days to comment on the potential regulations once the proposal has been published in the Federal Register.¹²⁴

Perhaps the most significant provisions are those that restrict flights to daylight hours and allow operations only within the visual-line-of-sight (VLOS) of the operator.¹²⁵ The proposed rules allow, but do not require, a visual observer to assist the operator; however this would not satisfy the VLOS requirement, so the operator would still need to be able to see the device.¹²⁶ Similarly, a first-person view camera mounted to the device would be permitted, but not required,

¹¹⁸ KNOW BEFORE YOU FLY, <http://knowbeforeyoufly.org> (last visited Jan. 3, 2015); FAA, *Industry Launch Drone Safety Campaign*, *supra* note 44.

¹¹⁹ FAA, *Industry Launch Drone Safety Campaign*, *supra* note 44.

¹²⁰ *E.g.*, Press Release – DOT and FAA Propose New Rules, *supra* note 6.

¹²¹ *E.g.*, *Id.*

¹²² *Overview*, *supra* note 75.

¹²³ *E.g.*, Press Release – DOT and FAA Propose New Rules, *supra* note 6.

¹²⁴ *E.g.*, *Id.*

¹²⁵ *E.g.*, *Id.*

¹²⁶ *E.g.*, *Id.*

and the camera alone would not satisfy the VLOS requirement.¹²⁷ A drone could not be flown directly over people not involved in the operation.¹²⁸ Flights would be restricted to a height of 500 feet and a maximum speed of 100 miles per hour.¹²⁹ Dropping objects from drones would be prohibited,¹³⁰ as would transporting property for compensation.¹³¹

If approved, the regulations would maintain the prohibition against careless or reckless operations, even for hobbyists.¹³² Operations in “Class A” airspace would be prohibited expressly, but also inherently since this represents airspace above 18,000 feet and no operations would be permitted above 500 feet.¹³³ There would be no special restrictions in “Class G” airspace.¹³⁴ However, in Class B, C, D, and E airspace, operations would be permitted, but only with approval of the local Air Traffic Controller (ATC).¹³⁵ The FAA’s reasoning behind this provision was that the ATC for a particular area would have the best understanding of the local airspace, its usage, and traffic patterns.¹³⁶ The ATC could deny operations due to traffic density, controller workload, communication issues, or any other issue it felt could impact safety.¹³⁷

The proposal labels a person in control of a drone an “operator,” and requires such individual be at least seventeen years of age.¹³⁸ An operator would need to pass an aeronautical knowledge test and, in order to maintain approval, retake and pass it every

¹²⁷ *Overview, supra* note 75.

¹²⁸ *E.g., Press Release – DOT and FAA Propose New Rules, supra* note 6.

¹²⁹ *E.g., Id.*

¹³⁰ *Id.*

¹³¹ DEP’T OF TRANSP., FED. AVIATION ADMIN., DOCKET NO. FAA-2015-0150, OPERATION AND CERTIFICATION OF SMALL UNMANNED AIRCRAFT SYS. 39, http://www.faa.gov/regulations_policies/rulemaking/recently_published/media/2120-AJ60_NPRM_2-15-2015_joint_signature.pdf.

¹³² *Press Release – DOT and FAA Propose New Rules, supra* note 6; *Overview, supra* note 75.

¹³³ *Overview, supra* note 75; DEP’T OF TRANSP., *supra* note 131, at 84; *see also* McGowan, *supra* note 75.

¹³⁴ *Overview, supra* note 75.

¹³⁵ *Id.*; DEP’T OF TRANSP., *supra* note 131, at 85; *see also* McGowan, *supra* note 75.

¹³⁶ *Overview, supra* note 75; DEP’T OF TRANSP., *supra* note 131, at 85; *see also* McGowan, *supra* note 75.

¹³⁷ DEP’T OF TRANSP., *supra* note 131, at 86.

¹³⁸ *E.g., Press Release – DOT and FAA Propose New Rules, supra* note 6.

twenty-four months.¹³⁹ An operator would also need to obtain a FAA UAS operator certificate,¹⁴⁰ but would not need any further private pilot certificates.¹⁴¹ Experts say obtaining the small UAS operator certificate would save operators thousands of dollars compared to the cost of private pilot or commercial pilot certificates.¹⁴² As for the devices themselves, the proposed regulations would not require FAA airworthiness certification.¹⁴³ The drones would, however, be required to have Aircraft Registration, like all other types of aircraft.¹⁴⁴

B. A Good, If Belated, Start:¹⁴⁵ Industry Reactions

The proposed regulations are more balanced and less restrictive than many in the industry had anticipated.¹⁴⁶ The proposal shows the agency recognizes that technology is outpacing policy, and that the rules must therefore be flexible.¹⁴⁷ Obviously, though, the proposal does not come without some criticism.¹⁴⁸ One expert said the plan is flawed in that it characterizes drone research and testing as a commercial activity.¹⁴⁹ He also criticized the rules prohibiting nighttime operations and flying above 500 feet, as well as the inherent ban on package delivery by drone.¹⁵⁰

Unsurprisingly, Amazon was displeased with the proposal, pointing out that the VLOS and daylight hour operation rules effectively prohibit the drone package delivery system it has been developing for some time.¹⁵¹ Amazon and others have been working on technology that would allow drones to sense objects around them to alleviate the need for the VLOS requirement,¹⁵² and thus allow for

¹³⁹ *E.g., Id.*

¹⁴⁰ *E.g., Id.*

¹⁴¹ *Id.*; see also McGowan, *supra* note 75.

¹⁴² McGowan, *supra* note 75.

¹⁴³ *Overview, supra* note 75.

¹⁴⁴ *Id.*

¹⁴⁵ *Proposed Drone Rules Strike Careful Balance, supra* note 15.

¹⁴⁶ See McGowan, *supra* note 75; see also Dillow, *supra* note 18.

¹⁴⁷ Dillow, *supra* note 18.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ *Proposed Drone Rules Strike Careful Balance, supra* note 15.

¹⁵² *Id.*

long-range package delivery.¹⁵³ The FAA's proposal does recognize that new technology could eliminate the need for this provision, but says the technology is not sufficiently matured at this point.¹⁵⁴ This requirement is one of the areas the agency has specifically requested feedback on during the public comment period.¹⁵⁵

Amazon's original hope was to roll out their delivery technology in 2015, and while that goal will not be reached, the company says it is still committed to drone delivery.¹⁵⁶ The online retail giant said it would continue to prepare for drone delivery in other countries, where regulations will allow it to do so.¹⁵⁷ The company already has a research and development facility for the devices in England, and just five hours from there is an independent operation that has the United Kingdom Civil Aviation Authority's permission for outdoor testing and limited long-range trials.¹⁵⁸ Australia is another area of interest, as it has been more welcoming of the technology, and fellow Internet titan Google has already tested drone delivery there.¹⁵⁹ In addition, in China, Amazon competitor Alibaba has begun drone delivery.¹⁶⁰

C. Expectations and Potential Consequences

If approved, the proposed regulations would eliminate the need for the vast majority of commercial use exemptions the FAA has been considering and issuing on a case-by-case basis.¹⁶¹ Once finalized, the agency estimates more than 7,000 businesses will obtain permits for drone operations within three years under the new rules.¹⁶² However, it is important to remember this is merely a proposal, and the process for adoption is projected to take at least

¹⁵³ See McGowan, *supra* note 75.

¹⁵⁴ DEP'T OF TRANSP., *supra* note 131, at 36.

¹⁵⁵ *Id.*; McGowan, *supra* note 75.

¹⁵⁶ Chris Morris, *FAA Plans Ground Amazon's Drone Program*, FORTUNE (Feb. 16, 2015, 1:23 PM), <http://fortune.com/2015/02/16/faa-amazon-drones/>.

¹⁵⁷ Chris Morris, *Where Can Amazon Legally Fly Its Drones?*, FORTUNE (Feb. 18, 2015, 12:02 PM), <http://fortune.com/2015/02/18/amazon-drones-legal-countries/>.

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ DEP'T OF TRANSP., *supra* note 131, at 35.

¹⁶² Whitlock, *supra* note 7.

until early 2017.¹⁶³ Experts warn that with proposed regulations this significant and far-reaching, even fielding the public comments will be a substantial and lengthy undertaking.¹⁶⁴ The FAA is still drafting rules for larger drones, but that phase could take several more years before anything is proposed.¹⁶⁵ The special provisions for “micro” drones could still make it into the final draft and would permit operators to submit a statement to the agency saying they are familiar with basic aviation safety measures in lieu of passing the aeronautical knowledge test.¹⁶⁶

V. LIABILITY COVERAGE FOR PRIVATE DRONES

A. How to Cover Private Drone Use

One expert says insurance companies are recognizing a void in the industry regarding coverage of drones.¹⁶⁷ However, drafting agreements in this area will be difficult at the outset because full data on crashes and other incidents cannot be collected until the regulations are clear and the airspace is truly opened up to drone users.¹⁶⁸ Providers may estimate the necessary figures by extrapolating data from the aviation industry, but adjustments will need to be made for the inherent distinctions between manned and unmanned aircraft.¹⁶⁹ Experts suggest using data from U.S. military non-combat drone operations as a starting point to gauge the risks involved for insuring private usage.¹⁷⁰

Businesses utilizing drones will need to provide for various risks and liabilities including personal injury, invasion of privacy,

¹⁶³ *Id.*; see also McAdams, *supra* note 7.

¹⁶⁴ McAdams, *supra* note 7 (quoting Robert Kamensky, attorney with law firm Thompson Coburn, LLP).

¹⁶⁵ Whitlock, *supra* note 7.

¹⁶⁶ *Id.*

¹⁶⁷ Bedord, *supra* note 21.

¹⁶⁸ See David K. Beyer, Donna A. Dulo, Gale A. Townsley, & Stephen S. Wu, *Risk, Product Liability Trends, Triggers, and Insurance in Commercial Aerial Robots*, WE ROBOT 2014 CONFERENCE ON LEGAL & POLICY ISSUES RELATING TO ROBOTICS, 1 (April 5, 2014), http://robots.law.miami.edu/2014/wp-content/uploads/2013/06/Beyer-Dulo-Townsley-and-Wu_Unmanned-Systems-Liability-and-Insurance-Trends_WE-ROBOT-2014-Conference.pdf.

¹⁶⁹ *Id.* at 1.

¹⁷⁰ *Id.* at 3.

property damage, and workers' compensation,¹⁷¹ to ensure all potential exposures are covered. Liability coverage generally includes personal injury, which also encompasses invasion of privacy.¹⁷² Insurance providers will want to determine the purpose of the operation, where it will take place, and what altitudes it will be reaching.¹⁷³ When drafting policies, it will be crucial for insurers to identify the type of data that will be collected and how it will be used.¹⁷⁴ In addition, underwriters will be interested in the knowledge, training, and experience of the operator.¹⁷⁵

One unidentified insurance company has reportedly told a customer that his homeowner's policy already in place would protect against liability in the event the individual's drone crashed, caused bodily injury, or property damage, providing it was being used solely for non-commercial purposes.¹⁷⁶ Another company, specializing in insurance for agribusiness, says that farmers' policies have typically excluded coverage for aircraft.¹⁷⁷ Some of the insurers in the agricultural market have refused to offer coverage for drones out of fear of privacy and intrusion issues, and their inherent liability.¹⁷⁸ While some companies shy away from the area, others in this market offer to add drone coverage to already existing policies at no cost, finding that the operation of drones is merely an extension of the agribusiness activities.¹⁷⁹

B. Insurance Specifically for Drones

A small group of insurance companies already provide coverage specifically for private drones.¹⁸⁰ One such provider in Colorado, Transport Risk Management – a brokerage, currently offers two broad types of UAV/UAS coverage for private and government use.¹⁸¹ The first type of policy is available to

¹⁷¹ Stone, *supra* note 23.

¹⁷² *Id.*

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ Beyer, Dulo, Townsley, & Wu, *supra* note 168, at 18.

¹⁷⁶ Amato, *supra* note 19.

¹⁷⁷ Bedord, *supra* note 21.

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

¹⁸⁰ Amato, *supra* note 19.

¹⁸¹ *UAS UAV Drone Insurance*, *supra* note 22.

manufacturers, owners, and operators of drones and it covers a wide range of uses including various commercial and recreational activities.¹⁸² This policy covers physical damage to the drone, as well as liability coverage of up to \$100 million.¹⁸³ The second type of policy is offered for non-owned drone use, meaning situations in which companies or individuals make use of drones operated by third parties.¹⁸⁴ Similar to the first type of policy, this plan can include a wide range of commercial or recreational uses and provides for liability up to \$100 million.¹⁸⁵

This company offers drone coverage for both public and private – commercial or recreational – users, and includes purposes such as law enforcement and emergency response, agriculture, construction and real estate, and even filmmaking and newsgathering.¹⁸⁶ One element not addressed on its website, though, is any mention of FAA approval.¹⁸⁷ Terry Miller, Owner and President of Transport Risk Management, says the FAA regulations have nothing to do with whether his brokerage offers insurance for the risk.¹⁸⁸ The company insures all seven of the Hollywood filmmakers that already have FAA approval, but also insures numerous other commercial operations taking place without explicit FAA approval.¹⁸⁹ Miller says that, similar to airplanes and helicopters – which do not require insurance in the U.S., drone insurance is tied to the certificate of the operator.¹⁹⁰ However, for applicants who do

¹⁸² *Id.*

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

¹⁸⁸ Telephone Interview with Terry Miller, *supra* note 65; Denise Howell, *This Week in Law* 284, TWiT (Dec. 4, 2014), <http://twit.tv/content/this-week-in-law-284-transcript> (interviewing Terry Miller, owner and President of Transport Risk Management).

¹⁸⁹ Telephone Interview with Terry Miller, *supra* note 65; Howell, *supra* note 188.

¹⁹⁰ Telephone Interview with Terry Miller, *supra* note 65; Scott Spangler, *Insurance and the Future of Commercial Drone Operations*, DRONEPORT (Mar. 14, 2014), <http://www.droneport.com/insurance-and-the-future-of-commercial-drone-operations/>, (quoting Terry Miller, owner and President of Transport Risk Management).

not have FAA approval, the company requires the pilot of the drone to successfully complete a FAA private pilot ground school.¹⁹¹

Of course, the FAA's failure to timely promulgate regulations further complicates this issue.¹⁹² Like many other liability policies, the agreements will likely exclude coverage for criminal, malicious, or grossly negligent acts.¹⁹³ This type of exclusion may be all that is needed for an insurer to protect itself against being required to indemnify an insured for accidents that occur while operating without FAA approval.

C. Evolving Laws and Insurance Requirements

In the U.S., product liability law concerning private drones will originate in the states.¹⁹⁴ State law will determine what causes of action are available for issues arising from defective drones and what tests the courts will apply.¹⁹⁵ When it comes to insuring against this and other risks, drone insurance products will fall into three broad categories: aviation safety, privacy, and cyber security.¹⁹⁶ Insurance companies hoping to address the wide range of issues will have to deal not only with mechanical and operational risks, but also regulatory uncertainty and changes in the evolving technology.¹⁹⁷

The FAA's five-year plan for the integration of drones into the U.S. airspace does not address any minimum requirements of insurance for drone operators, or mention any insurance program for the industry generally.¹⁹⁸ Even the 2015 proposed regulations do not include any provisions regarding insurance for drone operations.¹⁹⁹ The absence may be a result of the fact that insurance requirements, such as compulsory automobile insurance, generally originate at the

¹⁹¹ Spangler, *supra* note 190.

¹⁹² See Koebler, *supra* note 47.

¹⁹³ Beyer, Dulo, Townsley & Wu, *supra* note 168, at 17.

¹⁹⁴ *Id.* at 9.

¹⁹⁵ *Id.*

¹⁹⁶ *Id.* at 15.

¹⁹⁷ *Id.* at 16.

¹⁹⁸ Raymond L. Mariani, *Rise of the Drones*, 43-SUM BRIEF 18 19, 25 (2014) (discussing how insurance coverage will emerge and evolve in the private drone industry).

¹⁹⁹ DEP'T OF TRANSP., *supra* note 131, at 56.

state level.²⁰⁰ This may be the case in the drone industry as well, as the area develops and the need for tools to protect the public become more apparent. Many countries that are integrating drones into their airspace faster than the U.S., such as Australia and Canada, already require liability insurance.²⁰¹ Experts suggest liability coverage will eventually be a condition of operation in the U.S. as well.²⁰² The rules and regulations the FAA ultimately promulgates will likely direct the market in determining where the risks associated with drone operations should fall, and who will be in the best position to incur the costs.²⁰³

Dr. Darryl Jenkins, Chairman of the American Aviation Institute, spoke to a drone user group in June of 2013 and articulated the significance of the role insurance companies will play in the growth of the private drone industry.²⁰⁴ He said insurance providers, more so than government agencies, would determine the way businesses grow around private drone operations.²⁰⁵ No company exploring uses for the devices will be able or willing to implement them in the real world without knowing their activities are covered for possible liabilities.²⁰⁶ Jenkins also suggested the insurance industry might well be the best means for policing activities of private drone users.²⁰⁷ If, for instance, a policy includes a provision stating that no invasions of privacy are to take place, an operator found to be violating that requirement would be at risk of losing its insurance, and thereby losing its ability to continue operating and growing its business.²⁰⁸

²⁰⁰ See *When Did Auto Insurance Become Mandatory?*, AUTOINSURANCE.ORG, <http://www.autoinsurance.org/when-did-auto-insurance-become-mandatory/> (last visited Jan. 3, 2015).

²⁰¹ *Drone Insurance*, *supra* note 8; DEP'T OF TRANSP., *supra* note 131, at 56.

²⁰² Reuter, *supra* note 8; see also Howell, *supra* note 188.

²⁰³ Elaine D. Solomon, *Part Three: Unmanned Aircraft Systems*, BLANK ROME LLP (June 2014), <http://www.blankrome.com/index.cfm?contentID=37&itemID=3343>.

²⁰⁴ Reuter, *supra* note 8.

²⁰⁵ *Id.*

²⁰⁶ *Id.*; see also Giuseppe Contissa et al., *Liabilities and Automation in Aviation*, SESARWPE, at 8 (Nov. 27, 2012) <http://www.sesarinnovationdays.eu/files/SIDs/2012/SID%202012-36.pdf> (describing how insurance rates are currently higher in Europe for drones compared to manned aircrafts, and how this threatens to stifle growth of the industry).

²⁰⁷ Reuter, *supra* note 8.

²⁰⁸ *Id.*

VI. CONCLUSION

In this rapidly growing and evolving industry, private drone users are exploring a vast range of commercial and recreational purposes. There is a clear potential for a multi-billion dollar industry with massive impacts on the U.S. economy. The FAA must strike a balance between expediently approving uses so innovators may explore the opportunities, while maintaining a safe national airspace and avoiding additional incidents like the ones that have already occurred. The agency has recently taken some steps in the right direction, but is not moving fast enough, and the U.S. is at risk of losing out on some of the largest research expenditures currently being undertaken. The regulations proposed in February 2015 are generally regarded as a good start, but will need some significant alterations to ensure more business activities remain in the U.S.

The insurance market will grow with the industry for private drones, and the direction will be clearer as regulations are finalized and the skies open up to hobbyists and businesses. Some insurance providers' plans already cover these activities, while a small group of companies have opened a niche market for drone-specific coverage. The laws and regulations will continue to develop, and their related issues will be resolved as the industry continues its progress and rapid growth. In time, we will likely see states implement compulsory insurance regulations for private drone use.