

Danger, Will Robinson!
Is Insurance Ready for Unmanned Vehicles?
Volume 2

By:

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1. Introduction

The Robot in *Lost in Space*, endowed with human characteristics and sometimes clairvoyance, often dramatically warned his young charge – “Danger, Will Robinson!” – of incoming dangers.¹ However, in seeking to advance into deep space, even the Robot seems not to have envisioned the advance of today’s technologies – “drones,” unmanned vehicles, artificial intelligence, and other technologies. It seems inevitable today, however, that drones will play an ever larger role in our lives in the coming years. In 2014, Amazon received patent rights to deliver its products to customers by drones, or unmanned aerial vehicles (UAVs).² Not to be outdone, other companies at that time also announced that they were looking to drones for delivery, including UPS for general delivery services³ and, for another kind of power, Domino’s for pizza.⁴

Perhaps the most exciting of all for those of us who grew up with the Robot, *Star Trek*, and the Jetsons: auto manufacturers are testing other unmanned vehicle systems (UVSs) – “driverless cars” – and the race to master those technologies span the globe. In 2016, a Chinese firm

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¹ Interestingly, set in 1997, 32 years in the future from its first airing in 1965, the series envisioned colonization of “deep space.” E.g., Wikipedia on *Lost in Space*, www.en.wikipedia.org/wiki/Lost_in_Space (accessed Feb. 10, 2016). Although 1997 has come and gone without the battles over deep space depicted in the series, we now are on the verge of advances that perhaps even the Robot did not envision.

² *Drones: Coming Not-So-Soon to a Business Near You*, YOUR ABA (July 2015), <http://www.americanbar.org/publications/youraba/2015/july-2015/drones--coming-not-so-soon-to-a-business-near-you-.html>.

³ Vikki Stone, *Insurance Coverage for Commercial Drones: Sky’s the Limit*, PROPERTY CASUALTY 360 (Jan. 15, 2014) (<http://www.propertycasualty360.com/2014/01/15/insurance-coverage-for-commercial-drones-skys-the?slreturn=1453917001>).

⁴ Ed Leefeldt, *Insurance for Your Drone*, INSURE.COM (Dec. 18, 2015), <http://www.insure.com/home-insurance/insurance-for-drone.html>.

debuted a prototype of a drone that can carry people.⁵ In the United States, the future is here, with autonomous-vehicle and other technologies converging:

- In 2016, Elon Musk, founder of Tesla, unveiled “Master Plan (Part Deux),” a plan to provide self-driving electric cars, heavy duty trucks, and high density passenger vehicles for urban transportation.⁶
- IBM and Local Motors, the company that created the first 3D printed car, have introduced “Olli,” a 12-person autonomous bus. Computer voice: “Scan your smart phone here.” Using IBM’s Watson technology, Olli chats with customers and makes restaurant recommendations.⁷
- In October 2017, Ford announced that it was partnering with rideshare service Lyft to provide transit services using transit apps and driverless cars. In addition to developing UVS technologies, Ford has made major acquisitions in artificial intelligence and 3D mapping.⁸
- GM expects to be mass-producing fully autonomous electric cars by the end of 2019. Even more revolutionary, the company announced that, through subsidiary Cruise Automatic, it is moving from a profit model based around producing vehicles to a profit model revolving around selling transportation services provided by “drones.”⁹

One think tank RethinkX, estimates that, by 2021, autonomous vehicles will be approved for widespread consumer use and that, by 2031, autonomous and electric vehicles will drive 95% of all passenger miles. These changes will “disrupt” – no, revolutionize – not only huge industries that we consider backbones of the modern economy, but also the way we live and think about transportation and other services. Consider these predictions:

- “Savings on transportation costs will result in a permanent boost in annual disposable income for U.S. households, totaling \$1 trillion by 2030. Consumer spending is by far the largest driver of the economy, comprising about 71% of total GDP and driving business and job growth throughout the economy.
- “Productivity gains as a result of reclaimed driving hours will boost GDP by an additional \$1 trillion.

⁵ David Goldman, *Human-Carrying Drone Debuts at CES*, CNN MONEY (Jan. 19, 2016), (<http://money.cnn.com/2016/01/06/technology/ces-2016-ehang-drone/>).

⁶ Elon Musk, Tesla Master Plan (Part Deux) (July 20, 2016) (<https://www.tesla.com/blog/master-plan-part-deux>). Musk estimates that worldwide approval of these kinds of autonomous vehicles will require six billion test miles (10 billion kilometers). That is a lot of driving given that, in 2016, there had been 3 million such test miles driven.

⁷ See, e.g., EEWeb, “Local Motors & IBM Pave the Way for the Future of the Automobile” (<https://www.ibm.com/blogs/internet-of-things/olli-ai/>).

⁸ Gina Hall, “Ford Partners with Stealthy Silicon Valley Startup [Autonomic] on Transit Apps,” SILICON VALLEY BUSINESS JOURNAL (Oct. 9, 2017) (<https://www.bizjournals.com/sanjose/news/2017/10/09/ford-partners-with-software-startup-autonomic.html>).

⁹ Peter Valdes-Dalpena, “GM: Self Driving Cars Are Our Next Big Thing,” CNN MONEY (Nov. 30, 2017) (<http://money.cnn.com/2017/11/30/technology/gm-autonomous-cars-2019/index.html>).

- “As fewer cars travel more miles, the number of passenger vehicles on American roads will drop from 24.7 million to 44 million, opening up vast tracts of land for other, more productive uses. Nearly 100 million existing vehicles will be abandoned as they become economically unviable.”¹⁰

With their ability to film at remote locations and provide digital images, drones carry promise of disruption outside of transportation. For example, many UAVs carry sophisticated cameras as payloads. Those cameras can produce real-time maps with a resolution 20 times more precise than that generally available today on the internet. An investment of less than \$1,500 now can bring advances in software and other technologies within the reach of many small and other businesses, replacing the need to use helicopter or other flying or mapping services that cost upward of \$600 per hour.¹¹

The drones are coming, and the question is no longer whether they will disrupt mainline industries—but when and how many? The question is – can the insurance industry keep up?

2. The Changing Definition of “Drone”

What exactly is a drone? Simply put, a drone is an unmanned vehicle. However, the devil (or the drone) is in the details. The U.S. Federal Aviation Administration (FAA) in the FAQs on its drone-registration site¹² avers that a “drone and a UAS [unmanned aerial system] are the same for registration purposes.”¹³ According to the FAA, all unmanned aircraft qualify as “aircraft” under the definitions found in its foundational statute and implementing regulations.¹⁴ UAVs and UASs run the gamut from “toys” created for personal use – like remote-controlled cars or airplanes – to military long-endurance reconnaissance vehicles and systems.¹⁵ Most of the recent attention has focused on UAV aircraft – operated remotely via a ground-control system that involves remote-control systems and data-link transmissions.¹⁶

3. The Rise of Drones

For a long time, drones largely fell on one of these ends of the spectrum – toys or military tools. That is no longer the case. By 2020, the FAA estimates that about 30,000 small unmanned

¹⁰ RethinkX, *Rethinking Transportation 2020-2030: The Disruption of Transportation and the Collapse of the Internal Combustion Vehicle and Oil Industries* (May 2017).

¹¹ See, e.g., Tom Karol, General Counsel of National Association of Mutual Insurance Companies (NAMIC), “Unmanned Aerial Systems/Drones – Regulation, Liability, Insurance Requirements” at 2 (Feb. 26, 2015), <http://www.namic.org/newsreleases/150226fd01.asp>.

¹² All drones used in the United States for recreational or hobby purposes and weighing from .55 pounds (250 grams) to 55 pounds, including payload, now must be registered. The FAA does not currently sanction the use of drones for commercial use. See *infra*. See also the FAA registration site and accompanying information at <http://federaldroneeregistration.com>.

¹³ <http://federaldroneeregistration.com/faq>. Failure to register can lead to a \$27,500 civil penalty; criminal penalties include fines up to \$250,000 and up to three years’ imprisonment. *Id.*

¹⁴ 49 U.S.C. § 40102(a)(6) and 14 C.F.R. § 1.1, respectively.

¹⁵ *Drones: Coming Not-So-Soon to a Business Near You*, *supra* n.2.

¹⁶ *Drones: Coming Not-So-Soon to a Business Near You*, *supra* n.2; Stone, *supra* n.3.

aircraft will be in use in all types of businesses.¹⁷ Worldwide total spending for these systems is expected to exceed \$89 billion in the next ten years.¹⁸ In July 2015, the first FAA-approved drone courier service delivered medical supplies to a remote clinic providing medical services in Appalachia.¹⁹ It is estimated that 700,000 drones were sold during the 2015 holiday season.²⁰ The sales have continued to sky-rocket since then. As *Business Insider* stated in spring 2017: “The Consumer Technology Association projects drone sales will cross the \$1 billion mark in 2017, while [Gartner](#) expects global personal drone sales to grow from \$1.7 billion to \$2.36 billion in 2017.”²¹ Less than three weeks after the FAA launched its online registry, more than 181,000 drones were registered.²² These are neither the futuristic toys many of us remember from our youth nor large-scale military tools. They are a wholly different – and much more complicated – animal.

In response to the rapid growth of the UAV industry, the FAA allocated \$63.4 billion to modernize the country’s air-traffic control systems and expand the National Airspace System (NAS) to accommodate the commercial use of UAVs.²³ Given its mission to ensure the safety of aviation, the FAA issued regulations for the use of personal UAVs. It established different regulations for commercial use of UAVs.²⁴ The FAA began accepting petitions for commercial exemptions as directed by the FAA Modernization and Reform Act of 2012²⁵ and, in the first year, 2014, issued 500 exemptions out of the 1,500 petitions received.²⁶ Pilots of drones for commercial use must obtain a Pilot Air Certificate, be at least 16 years old, and pass a TSA security assessment process.²⁷ Both recreational and commercial users must keep the “visual line of sight” regulations in mind, a restriction that proponents of drone use argue limits the use of drones.²⁸ However, as shown by growing sales of drones (and thus one must assume growing drone use), it is worth considering whether (how far and how fast) this regulation is falling

¹⁷ Stone, *supra* n.3; American International Group, *Important Facts about the Unmanned Aircraft Industry* (Aug. 2014), http://www.aig.com/Chartis/internet/US/en/Aerospace_Unmanned_Aircraft_Fact%20Sheet_tcm3171-652600.pdf.

¹⁸ Stone, *supra* n.3.

¹⁹ Donna Mahoney, “Drone Flights Present Risks, Rewards: Insurance Market Reacts to New Exposures,” *BUSINESS INSURANCE* at 1 (July 20, 2015).

²⁰ *Id.*

²¹ Jeff Dunn, “Drones Are Growing Rapidly, Regardless of What the Government Does” (May 23, 2017) (<http://www.businessinsider.com/drone-sales-in-us-chart-2017-5>).

²² Reuters and Associated Press, *FAA Says 181,000 Drones Have Been Registered Under New Rules*, *NBC News* (Jan. 6, 2016), <http://www.nbcnews.com/tech/innovation/faa-says-181-000-drones-have-been-registered-under-new-n491661>.

²³ Stone, *supra* n.3.

²⁴ Mahoney, *supra* n.19, at 35.

²⁵ Pub. L. 112-95, 49 U.S.C. §§ 41010 *et seq.*

²⁶ Section 333 of the FAA Modernization and Reform Act of 2012 authorized the agency to issue exemptions, allowing businesses to use UAVs commercially without an air worthiness certificate. *See, e.g.*, website of the Association of Unmanned Vehicle Systems International (AUVSI), <http://auvsi.org/home>. The FAA has been issuing exemptions on a case-by-case basis. *Id.* By 2016, the FAA had issued exemptions to businesses in 49 states, and estimates that it has issued as many as 94% of the exemptions to small businesses. Even so, these operations are estimated to have added already as many as 600,000 jobs to the U.S. economy. *Id.*, AUVSI website, <http://auvsilink.org/advocacy/Section333.html> (accessed Feb. 10, 2016). The FAA website reports that the agency has granted 3,314 Section 333 exemptions as of February 5, 2016, www.faa.gov/uas/legislative-programs/section333/.

²⁷ FAA guidelines for recreational and commercial drone use (https://www.faa.gov/uas/getting_started/).

²⁸ *Id.*

behind the times. The FAA also put in place regulations requiring registration of model aircraft (meaning recreational UAVs) weighing more than .55 pounds. However, a federal appeals court rejected that regulation in mid-2017.²⁹

As improved technology makes the use of UAVs and driverless cars in our daily lives an increasing reality, a wide spectrum of industries is examining how drones can make their operations more efficient. From real estate to agriculture to filmmaking to law enforcement, industry leaders are preparing to introduce drone technology in their businesses and work places.³⁰ On the forefront of this movement is news-reporting – a field where drones have already begun to assist in reporting news events and gathering images.³¹ We will also likely see UAVs put to use in border surveillance, pipe and power line surveillance, suspect tracking, traffic monitoring, disaster response and relief, mail and freight transport, flood mapping, mining, wildlife monitoring – and even insurance claims-handling.³² It seems likely that, in just a handful of years, there will be no part of our lives that is not touched by drones in some way.

4. A Fast-Changing Regulatory Landscape

Just why are today’s drones different than the remote-control airplanes and cars of our childhoods? Today’s drones are becoming increasingly sophisticated, rapidly growing the list of uses to which they can be put. Rotors now allow drones to hover rather than simply to fly; fuel cells provide power rather than the traditional gas motors and allow for quieter voyages, and today’s drones are equipped with GPS technology.³³ Together, these improvements allow drones to travel further and higher than the models of the past.³⁴ However, with these improvements also may come perceived threats to public safety – and the perceived need for increased government regulation.

With respect to unmanned aircraft, it is already possible to see the complex regulatory structure that may ultimately develop in order to manage the risks, real or perceived, posed by an increasing number of drones in U.S. airspace. The FAA – which is responsible for U.S. airspace – first authorized the use of drones for public-interest uses – including disaster relief, search and rescue, and law enforcement – in the 1990s.³⁵ Over the years since, other uses have arisen including emergency and disaster-management programs, national weather-service tracking,

²⁹ The United States Court of Appeals for the D.C. Circuit ruled in May 2017 that the FAA does not have the authority to regulate model aircraft. *Taylor v. Huerta*, 856 F.3d 1089 (D.C. Cir. 2017). In reaching this result, the court relied on the FAA Modernization and Reform Act of 2012, Pub. L. No. 112–95, 126 Stat. 11, which authorized the FAA to study and implement policies to integrate the use of UAS into the national airspace. The court concluded that, under section 336 of that Act, the FAA could not promulgate “any rule or regulation regarding model aircraft.” The court also pointed to the statutory definition of “model aircraft” as “an unmanned aircraft that is — (1) capable of sustained flight in the atmosphere; (2) flown within visual line of sight . . .; and (3) flown for hobby or recreational purposes.”

³⁰ *Drones: Coming Not-So-Soon to a Business Near You*, *supra* n.2.

³¹ *Id.*; Nabiha Syed & Michael Berry, *Journo-Drones: A Flight over the Legal Landscape*, 30 COMMS.. LAWYER, no. 3 (June 2014),

http://www.americanbar.org/publications/communications_lawyer/2014/june/journodrones_flight_over_legal_landscape.html.

³² *Important Facts about the Unmanned Aircraft Industry*, *supra* n.17.

³³ Leefeldt, *supra* n.4.

³⁴ *Id.*

³⁵ *Drones: Coming Not-So-Soon to a Business Near You*, *supra* n.2.

border and port surveillance, scientific research, traffic-management programs, and environmental monitoring by the National Aeronautics and Space Administration (NASA).³⁶

Since that time, and as UAV technology has continued to develop, the FAA has continued to reexamine its position on the use of drones in the NAS. In 2007, the FAA banned commercial drones, but permitted aircraft modelers to fly drones within strict guidelines.³⁷ Initially, the FAA distinguished between hobby craft and UASs used for commercial purposes.³⁸ Section 40102(a)(6) of the U.S. Code defines an aircraft as “any contrivance invented, used, or designed to navigate or fly in the air,” and FAA regulations define an aircraft as “a device that is used or intended to be used for flight in the air.”³⁹ In June 2014, the FAA issued its interpretation that “any operation not conducted strictly for hobby or recreation purposes could not be operated under the special rule for model aircraft. Clearly, commercial operations would not be hobby or recreation flights.”⁴⁰ However, the FAA Modernization and Reform Act of 2012 authorized the FAA to grant “Section 333 exemptions” allowing commercial use. Therefore, perhaps signaling its acceptance that drone technology is here to stay, the FAA proposed the Section 333 exemption-approval process for operators of small commercial drones weighing between .55 and 55 pounds.⁴¹

The Act gives the FAA the authority to determine whether:

1. A UAV system poses a hazard to users of the NAS or to the public or poses a threat to national security⁴²; and
2. A waiver or certificate of airworthiness is required.

The FAA has established a two-step process for determining whether to grant a “Section 333 exemption”:

- First, that the UAV can be operated safely, without creating risks for the public, national security, or those operating in the NAS.
- Second, that the drone can be operated safely without an airworthiness certificate.

In November 2015, the FAA issued its Small UAS Notice of Proposed Rulemaking (NPRM).⁴³ In October of 2017, the FAA posted the following regarding a Presidential Initiative aimed at

³⁶ *Id.*

³⁷ *E.g., id.* The FAA defines “hobby” use of drones as a “pursuit outside one’s regular occupation engaged in especially for relaxation” and recreation as “refreshment of strength and spirits after work; a means of refreshment or diversion.” 14 C.F.R. § 1.1. The FAA considers use of UAVs in furtherance of or even incidental to a business use as a commercial, not a “hobby,” use. *Id.*

³⁸ FAA Modernization & Reform Act, Pub. L. 112-95, 49 U.S.C. § 40101, *et seq.*

³⁹ 14 C.F.R. § 1.1.

⁴⁰ 14 C.F.R. Part 19.

⁴¹ *See, e.g.,* FAA website FAQs, www.faa2.gov/uas/#qn1.

⁴² The analysis of risk or threat discussed in paragraph 1 of the text above includes consideration of the drone’s size, weight, speed, and operational capabilities, as well as whether it will be operated within visual line of sight (VLOS) and in populated areas or close to airports. Pub. L. 112-95, 49 U.S.C. § 40101 *et seq.*; 14 C.F.R. § 1.1. Such certificates are authorized by statute, 49 U.S.C. § 44704. *See* FAA website, www.faa.gov/uas.

shaping the regulatory framework for drones going forward, after previous fits and starts in the regulatory efforts to address these new technologies:

On October 25, 2017, the President announced a new initiative that pairs unmanned aircraft operators with state, local, and tribal governments to safely expand cutting-edge unmanned aircraft operations. The program will shape a regulatory framework that balances the benefits of UAS technology while lessening the risks to public safety and security.⁴⁴

The widespread interest in drones is not only of interest to the FAA. The past several years have seen the proliferation of proposed state laws – or the amendment of existing state laws – in response to this rapidly changing aspect of our society.⁴⁵ Companies operating in more than one country must consider other national regulatory schemes.⁴⁶ Those using drones for either personal or commercial use will find themselves not only having to sort out the interplay between federal and state laws and regulations, but having to keep up with what will likely be – at least for some time – constantly changing legal and regulatory landscapes as we come to learn more about the risks presented by drones and as the technology used in their development becomes ever more sophisticated. Widespread use of drones like that envisioned by Amazon (for general package delivery); Google, DHL and other couriers (for remote package delivery); and Domino’s (for those midnight pizzas) also may run into limitations posed by popular opinion. In December 2014, only 21% of more than 1,000 Americans surveyed approved use of commercial UAVs for such purposes. More than 90% of respondents expressed concern that private operators of UAVs could lead to violations of people’s reasonable expectations of privacy.⁴⁷ Although public opinion on these technologies is evolving, education may still be in order.

In addition to these risks, there also comes the increased potential for civil fines and penalties should a user violate federal or state laws and regulations addressing this emerging technology. As with most regulated areas of our world, there is likely to be much confusion and debate over the interplay of state and federal, and in some instances international, laws and regulations, along with issues surrounding the interpretation of individual laws or regulations. Until what is likely to be confusing territory initially can be clarified, those using drones may need to navigate a very complicated legal and regulatory environment.

⁴³ 14 C.F.R. Parts 21, 43, 45, 47, 61, 91, 101, 107, and 183, Docket No. FAA-2015-015, Notice 15-01, *reproduced at* www.faa.gov/regulations_policies/rulemaking/recently_published/media/2120_AJ60_NPRM_2-15-2015_joint_signature.pdf.

⁴⁴ FAA UAS Integration Pilot Program (Oct. 25, 2017) (www.faa.gov/uas).

⁴⁵ Indeed, in 2015, 168 bills related to drones were introduced in 45 states. *See e.g.*, National Conference of State Legislatures, “Current Unmanned Aircraft State Law Landscape” <http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx> (accessed Feb. 10, 2016).

⁴⁶ For a discussion of international regulations on drones, see Marsh, *Insights 2015: Dawning of the Drones: The Evolving Risk of Unmanned Aerial Systems*, at 11-14 (June 2015), <http://www.marsh.com/US/insight/dawning-of-the-drones.html> (accessed Dec. 15, 2015).

⁴⁷ Reported in NAMIC February 2015 Report, *supra* n.11, at 4.

5. Liability Risks

The outcome is obvious – the expanded use of drones likely will raise significant liability risks. Homeowners might claim that drones were trespassing on their property. Spying, stalking, and harassment claims could result from the use of drones to gather photographs or videos. Invasion of privacy claims potentially loom large. Even criminal charges could be brought in connection with some of these claims. What about issues of airspace ownership? Significant cybersecurity risks come with the use of drones and related video, wifi, and data-gathering equipment, to access data. Viruses could prevent a drone from functioning properly and hacking could permit someone other than the intended person to control the drone and its mission. The liability exposures even include the most basic of low-tech risks – a drone could simply cause bodily injury or property damage by crashing into a person or object. The list could go on.⁴⁸

Perhaps the most well-known case involving some of these risks is the matter of Raphael “Trappy” Pirker – a drone enthusiast who was hired to take aerial photos and videos of the University of Virginia campus using drone technology.⁴⁹ The FAA levied civil penalties against Trappy in the amount of \$10,000, alleging that he had flown his drone “at extremely low altitudes, through tunnels with moving cars below, and in close proximity to railway tracks and individuals . . .”.⁵⁰ Those actions violated FAA regulations prohibiting the operation of an aircraft “in a careless or reckless manner so as to endanger the life or property of another.”⁵¹ While this situation led to a number of appeals and associated lawsuits questioning the FAA’s authority, it nonetheless highlights one of the major scenarios that those using drones risk encountering as the regulatory landscape surrounding drones continues to shift and change in coming years.

Even more frightening is the realization that some of the risks contemplated by experts are very real. In March 2014, a near mid-air collision was reported over Tallahassee, Florida, between a drone flying 2,300 feet above the ground and a commercial airliner.⁵² While the two objects narrowly missed each other, “[i]f the unmanned aircraft had crashed into the jet or had been ingested by one of its turbine engines, the result could have been catastrophic.”⁵³

If there was any question that courts would confront disputes involving drones, that question was resolved by the filing in the United States District Court for the Western District of Kentucky, Louisville Division, of the complaint in *John David Boggs v. William H. Merideth*.⁵⁴ On July 26, 2015, Mr. Boggs was operating an unmanned aircraft by wireless controller, equipped with a camera, at an altitude of about 200 feet above ground.⁵⁵ Mr. Boggs was using the camera to take video footage.⁵⁶ Approximately two minutes into the flight, Mr. Merideth – now known beyond his immediate environs as the “drone slayer”⁵⁷ – shot down Mr. Boggs’ drone using a shotgun.

⁴⁸ Stone, *supra* n.3; Schwartz, *supra* n.12.

⁴⁹ Syed, *supra* n.26.

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² Jennifer Henry, *Commercial Use of Drones in a Holding Pattern*, FOR THE DEFENSE, Aug. 2014, at 48.

⁵³ *Id.*

⁵⁴ Complaint, *Boggs v. Merideth*, No. 3:16-cv-6-DJH, at ¶ 13 (W.D. Ky. filed Jan. 4, 2016).

⁵⁵ *Id.* at ¶ 8.

⁵⁶ *Id.* at ¶ 10.

⁵⁷ *Id.* at ¶¶ 13, 15. T-shirts pictured in the Complaint (¶ 15) were at the time of this writing available on e-Bay.

He alleged that the drone had been taking photographs of his daughter and that he was protecting his right to privacy and preventing further trespass over his property.⁵⁸ As a result, Mr. Merideth was charged with felony wanton endangerment and criminal mischief.⁵⁹ A state criminal court judge dismissed those criminal charges, finding that Mr. Merideth “had a right to shoot the aircraft.”⁶⁰ The civil lawsuit followed.

The court in April 2017 dismissed the complaint on jurisdictional grounds, finding that the complaint did not raise a federal question and thus, under 28 U.S.C. § 1331, the court had no jurisdiction to entertain the claims raised by Mr. Boggs. Although the court dismissed this case, the ruling leaves open questions about federal authority to regulate in this area and the applicability of trespass and similar laws as they apply to UASs. For those reasons, it is worth considering the claim this complaint raised. In his complaint, Mr. Boggs sought a declaration that:

- An “unmanned aircraft is an ‘aircraft’ under federal law”;
- An unmanned aircraft operating in Class G airspace “is operating in ‘navigable airspace’ within the exclusive jurisdiction of the United States”;
- He was operating his drone “within the navigable airspace within the exclusive jurisdiction of the United States and not within” Mr. Merideth’s property;
- Operating an unmanned aircraft as Mr. Boggs was doing did not violate Mr. Merideth’s reasonable expectation of privacy; and
- A “property owner cannot shoot at an unmanned aircraft operating in navigable airspace within the exclusive jurisdiction of the United States when that aircraft is operating” as Mr. Boggs was operating his drone.⁶¹

Mr. Boggs also sought monetary compensation for trespass to chattels.⁶² Although the amount at issue – \$1,500 for the drone and payload – was not large, the stakes raised by such claims reaming potentially huge, raising conflicts between common-law concepts on the rights of property ownership and the FAA’s asserted statutory right to regulate airspace down to the ground. As the complaint stated,

This turn of events has set the stage for a conflict between state-based claims of trespass to property, invasion of privacy, and trespass to chattles [sic] and long standing exclusive federal jurisdiction over the national airspace and the protection of air safety. The tension between private property rights and right to traverse safely the national airspace was resolved during the formative days of

⁵⁸ *Id.* at ¶ 11.

⁵⁹ *Id.* at ¶ 12.

⁶⁰ *Id.* at ¶ 12.

⁶¹ *Id.* at ¶ 25.

⁶² *Id.* at ¶¶ 26-29.

manned aviation. The issue is now arising in the context of unmanned aircraft, also known as “drones.”⁶³

As the NAMIC observed in its January 2017 report on UVSs:

By the FAA determination that all airspace – from the ground up – is federal navigable airspace for UAS, the FAA now claims authority to allow UAS access to all superadjacent airspace over private property. By authorizing all FAA-compliant UAS flights in this previously superadjacent airspace over private property, the FAA has opened to the general public an enormous amount and variety of space that had previously been the exclusive private property of the landowners’ reasonable use.⁶⁴

As the “Drone Slayer suit” shows, new technologies will not prevent companies, in the “new” and “old” industries, from facing other liabilities and laws that regulate conduct. One example is the class action suit filed against camera maker Go-Pro, alleging that the company had exaggerated the functionality and customer demand of its Karma drone line and thus had deceived investors in its statements about the availability of the product for retail sale and related revenue projections. In July 2017, the court dismissed the company’s motion to dismiss, finding that Go Pro’s “statement of present opinion is not forward-looking [and thus not mere ‘puffery’], and therefore is not covered by the [Private Securities Litigation Reform Act’s] safe harbor provision.”⁶⁵

6. First-Party Property Insurance Risks

The value of drones may be exceeded by their payload – the camera or video equipment or any hardware or software aboard enabling communications or data-transfer functions. For small systems, insurance may not be cost-effective. Large systems, however, may merit “full insurance.” In such cases, the coverage may apply on an as-agreed value or other basis. Surely, insurers and policyholders alike will consider other issues when insuring the value of UVSs.

7. General Considerations for Insurance

Insurability concerns include the platform used, the experience and training of the operators, the drone’s intended use, and the likelihood of accidents (proximity of populated areas or valuable equipment), and standard operating procedures. As in other types of insurance (boiler and machinery, cyber risk insurance as two examples), insurance underwriting, with its focus on safety considerations and minimizing risk, may play an important role in managing risks and “regulating” operator conduct.

⁶³ *Id.* at Introduction, p.1.

⁶⁴ NAMIC, *Unmanned Aircraft: Defining Private Airspace* at 4 (Jan. 2017).

⁶⁵ Cara Mannion, “GroPro Can’t Escape Investors’ Drone Recall Suit,” *LAW360* (July 27, 2017).

If unmanned aircraft bring significant liability risks to the table, self-driving vehicles are certain to up the ante even further. Widespread adoption of “autonomous vehicles” or self-driving cars⁶⁶ could in some cases change the very nature of insurance itself. Some analysts look to autonomous vehicles (and perhaps other kinds of drones) to remove what many see as the biggest risk factor in many endeavors – human error.⁶⁷ If use of driverless cabs and cars replaces humans as “pilots,” the use of these technologies then could reshape the evaluation of risk – and the nature and structure of at least certain types of insurance. For example, in a future where autonomous cars are the norm, the frequency of accidents could decline; in such a world, failures then might be due to software or other non-driver error. In that world, while the frequency of loss from operation of automobiles might decline, the severity could skyrocket, and the assignment of fault could revolutionize automobile insurance.

8. Insuring Drones – Are Insurers Ready?

Given these increased – and very real – risks and disruptors, it should come as no surprise that, as drone sales increase, insurance companies are bracing, at the very least, for the impact of the claims that they anticipate may follow in their wake. Each of the risks discussed above – from the chance of property damage claims for damages caused by a wayward drone to significant privacy claims made as a result of photographic or video footage gathered by a drone – brings with it the likelihood of a claim for insurance coverage. But will drone operators find coverage under their traditional policies? And are insurers ready to provide coverage to those who seek proactively to ensure that such coverage is part of their insurance programs?

Numerous insurers are developing specialized “Unmanned Aerial Vehicle Insurance” or “Unmanned Aircraft Insurance.” Aviation insurers, with their familiarity with aviation risks, have been the first to embrace the burgeoning market for insuring UAVs.⁶⁸ Coverages relevant to UAVs include hull coverage, liability coverage, and transit coverage among others.⁶⁹ These policies are marketed as containing “policy language drafted specifically to respond to the exposures of unmanned aircraft.”⁷⁰ They also take into consideration such unique attributes of drone scenarios; as examples, underwriting likely will include information about those on the ground controlling the drone and considerations about whether the drone could potentially be hacked or otherwise taken over by someone without permission to do so.⁷¹

⁶⁶ One could say that a driverless car is autonomous but not “unmanned.” The very purpose of such a product is to transport people (and other cargo). A UAV is unmanned but perhaps not “autonomous” because a human is piloting it. (At least that is true today, Will Robinson).

⁶⁷ See, e.g., Ted Griggs, “Corporations Turn to Drones To Reduce Accidents” (May 9, 2015), <http://theadvocate.com/news/business/12299434-123/flight-to-safety> (accessed Nov. 1, 2015).

⁶⁸ See, e.g., Global Aerospace, “Unmanned Aviation Risk Management, Accident Prevention and Insurance” (Apr. 2015), <http://uavus.org/wp-content/uploads/2015/05/Unmanned-Aviation-Risk-And-Insurance-White-Paper.pdf> (accessed Jan. 15, 2016).

⁶⁹ *Remotely Piloted Aviation Insurance*, OVERWATCH DIV. OF AVALON RISK MGMT., <http://www.riskoverwatch.com/aviation.html> (accessed Jan. 21, 2016); American International Group, *Right on Time: Introducing Unmanned Aircraft Insurance* (Apr. 2014), available at http://www.aig.com/Chartis/internet/US/en/Aerospace_Unmanned%20Aircraft%20Product%20Profile_tcm3171-652601.pdf.

⁷⁰ *Right on Time: Introducing Unmanned Aircraft Insurance*, *supra* n.69.

⁷¹ *Id.*

Some insurers in the traditional liability insurance markets have been offering endorsements designed to add limited coverage for drones to the commercial general liability (CGL) insurance policies their policyholders already carry. This is important because traditional CGL policies exclude coverage for “aircraft” risks, including exposures posed by commercial drone operators, manufacturers, dealers, and providers of “drone services.”⁷² For example, Lexington Insurance Company, an AIG insurer, developed an Unmanned Aircraft Liability Endorsement intended to provide public entities with express liability coverage for their uses of unmanned aircraft.⁷³

Lexington anticipates offering this endorsement for many other risks including “farming, infrastructure maintenance, construction, and oil and gas exploration.”⁷⁴

In addition, in June 2015, the Insurance Services Office, Inc. (ISO), issued endorsements for CGL insurance. For example, insurers in traditional CGL markets can use ISO form CG 24 50 06 15 – entitled “Limited Coverage for Designated Unmanned Aircraft” – to write coverage for scheduled drones being used in scheduled products or operations as an amendment to the CGL coverage otherwise provided.⁷⁵ The aim of other such standard-form provisions that ISO approved is largely to exclude coverage for UAV or drone risks off traditional CGL insurance.⁷⁶

While the increased use of drones in our world is a certainty, the ways in which drones will change the world of insurance and liability and first-party risks certainly are not. As the market and uses of UAVs and other UVSs evolve, policyholders, and their counsel, should review insurance policies carefully to ensure that they will provide the protection desired. As with past revolutions in technology, insurance can be part of the engine of innovation – as long as the insurance in question evolves appropriately to address the new and evolving exposures. In coming years, we anticipate significant coverage litigation as the insurance world scrambles to keep up with this new type of risk – and the multitude of new types of claims it may bring.

⁷² *E.g., id.* at 6. The exclusions often do not reach purely hobby or model aircraft uses, but even incidental commercial use could lead to denial of coverage.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *See also* Limited Coverage for Designated Unmanned Aircraft (Coverage B only) (ISO Forms CG 24 51 06 15 and CG 24 52 06 15).

⁷⁶ *E.g.,* Exclusion – Unmanned Aircraft ISO Form CG 21 09 06 15); Exclusion – Unmanned Aircraft (Coverage B only) (ISO Form CG 21 11 06 15).