



DRONE

The Struggle to Regulate America's Crowding Skies

James Marion

A sky filled with flying robots—an image evocative of the future conjured by writers of science fiction.

That genre has long been the refuge of visionary thinkers, setting wild expectations for society to pursue. In 1865, Jules Verne's *From the Earth to the Moon* told the story of postwar weapons enthusiasts and their attempt to shoot three men to the lunar surface with a cannon from a location in Florida. Just over a hundred years later, Apollo 11 left Cape Canaveral for its historic journey on the tip of a Saturn V rocket, a proxy display of power in the Cold War nuclear arms race.

In the twenty-first century, science has once again caught up to science fiction, and this time the flying objects are unmanned. The proliferation of drones, or unmanned aerial vehicles (UAVs), has boomed from specialized use by the military and dedicated hobbyists to a worldwide commercial industry.

Most Americans first became familiar with this new technology in the wake of the September 11, 2001, terrorist attacks, when the United States Air Force and the Central Intelligence Agency began deploying the now-infamous MQ-1 Predator drone, complete with its payload of Hellfire missiles, to the skies over Afghanistan and the tribal areas of Pakistan. At higher altitude the Predator's big cousin, the RQ-4 Global Hawk, has

WARS

served as the pilotless answer to the classic U-2 spy plane. But these are large, fixed-wing UAVs with multimillion dollar price tags. The general public may never see, much less contemplate operating, this sort of drone. Only in the last decade has drone technology—in concert with camera technology—become small enough and cheap enough to encourage widespread use of small unmanned aerial systems (sUASs) for a variety of civil and recreational functions.

Often employing multiple helicopterlike rotor blades, the typical sUAS is operated by remote control, weighs under fifty-five pounds, and has the capacity to lift limited cargo. Today consumers can easily purchase a variety of small drones for \$1,000 or less. And purchase they have. Though data tracking in this new industry is still unrefined, estimates place small drone sales anywhere from \$600 million to \$1.3 billion globally in 2014. According to *The Washington Post*, the Federal Aviation Administration (FAA) conservatively estimates that, within a decade, private drones will constitute a \$90 billion industry. This broadening access to sUAS technology portends “disruption” in both the welcome and unwelcome sense of that word.

On one hand exists the potential to upend local retail and food delivery by exchanging cars for drones, cutting down on traffic and pollution. Several forays into the concept have grabbed the media’s attention recently, from the “TacoCopter” (hoax) to Domino’s Pizza “DomiCopter” (reality: it carries two large pies with your choice of topping), as well as Amazon’s demonstrated ability and desire to deliver packages through its





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LAWS? RULES? INTERPRETATIONS?

The legal regime currently informing the American public as to how or how not to use their drones is flimsy at best. This is due in part to the fact that drones, until recently, have defied definition within the existing federal statutes. But the larger issue is one of federal government foot dragging. With limited statutory authority to enforce drone use, particularly with regard to sUAS use, the FAA has thus far relied on a patchwork of congressional orders and court

Prime Air drone service. While full implementation of such projects is currently sidelined due to regulatory issues, sUASs have already proven effective for use in agricultural and natural resource management, search and rescue operations, and aerial mapping, photography, and filmmaking.

On the other hand, the increased prevalence of drones pretty much guarantees that some of them will end up where they are not welcome. This past year, drones have twice found their way through restricted airspace and onto the White House grounds. One arrived there errantly, one intentionally, and both prompted security lockdowns. Here in California, a sUAS prevented three planes carrying flame retardant from dropping their cargo on the raging Lake Fire in San Bernardino County earlier this summer. Firefighters in the West have repeatedly complained of hobbyists flying drones in and around the area of wildfires, prompting the U.S. Forest Service to issue temporary no-fly zones. Nationwide, a growing tally of privacy-minded homeowners have been arrested after shooting down drones seen hovering over their properties.

The growing concerns over issues of trespass and Fourth Amendment violations, along with the need to control properly the country's civil air space, have spurred a chorus of voices demanding regulatory clarity with regard to drone use. To date, while some temporary stopgaps have been implemented, legislative efforts continue to lag behind the building pace of UAV usage. As such, the drone's place in the history of American aviation remains unclear.

rulings. It has then issued its own interpretation of those marching orders to form restrictions and requirements for drone use, including a specific exemption granted for those who wish to fly a drone commercially. Still, this interpretation is not law, and the FAA is now slowly processing over thirty thousand public comments, while also fielding multiple petitions for review filed in the U.S. Court of Appeals for the District of Columbia Circuit, all questioning the validity of these purported rules. The FAA has subsequently issued a proposal for rules specifically addressing the regulation of small commercial drones, but this has prompted its own petitions for review from privacy advocates, and so the ultimate shape of these proposed regulations is still subject to change.

Unfortunately for those seeking a legal beacon, or some form of certainty in this emerging industry, it appears that this review will continue to play out for some time. Here is what we know now.

CONGRESS AND THE COURTS

While the FAA's Code of Federal Regulations (FAR) has



dictated proper use of civilian aircraft for decades, it was not until November of last year that the National Transportation Safety Board (NTSB) ruled that a drone was, by definition, an “aircraft,” and therefore subject to regulation under FAR section 91.13, which prohibits the “careless or reckless” operation of an aircraft.

The ruling resulted after the FAA fined drone operator Raphael Pirker \$10,000 for what it deemed to be his unsafe use of a drone in the airspace over the University of Virginia in 2011.

The FAA has arguably taken the ruling to mean that *all* FAR provisions are therefore applicable to drones. Some have read this decision to be much narrower, suggesting that the NTSB’s ruling pertains only to section 91.13.

This debate helped to inform the passing of the FAA Modernization and Reform Act of 2012, of which sections 331 through 336 instruct the FAA as to what it can and cannot do to regulate drones. Section 336 specifically prohibits the FAA from promulgating “any rule or regulation regarding a model aircraft,” providing the aircraft weighs under fifty-five pounds, is “flown strictly for hobby or recreational use,” stays away from airports and manned aircraft without notice, and operates in accordance with community-set safety standards. This is where things start to get tricky. Raphael Pirker’s drone, while being flown for profit—he was being paid to shoot aerial footage of the university—would otherwise have fit this description of a model aircraft. While the NTSB’s ruling makes clear that any drone cannot be flown carelessly or recklessly, this presumably includes model aircraft that could be as small as a five-ounce toy. Should it therefore be the case that all FAR provisions for civilian aircraft also apply to something

The FAA is now also issuing exemptions to the commercial drone ban, providing that certain requirements are met. These section 333 exemptions have even spawned a niche legal market for attorneys helping entrepreneurial drone pilots navigate applications and compliance.

akin to a paper airplane? The FAA’s take on NTSB precedent in conjunction with the 2012 act only further complicates matters.

ADMINISTRATION INTERPRETATION

In June 2014, the FAA issued its Interpretation of the Special Rule for Model Aircraft to directly address the model aircraft “safe harbor” provided in section 336 of the 2012 act. The interpretation adheres to the requirement that model aircraft be noncommercial, but then goes on to

state that drones operating near airports with prior notice can still be denied permission. It also prohibits the use of “first person view” navigation technology (think video goggles that allow the drone operator to see from the cockpit perspective while standing on the ground), and then proceeds to tie the whole package together in noting that *all* existing FAR provisions apply to drones.

Enter the thirty thousand public comments and multiple petitions to the court of appeals that the FAA is still laboring to digest.

Drone users and advocacy groups alike immediately read the FAA’s interpretation as promulgating *new* regulations for model aircraft in direct contradiction to the specific language of section 336. Among other things, the petitions claim the interpretation to be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law, in excess of statutory jurisdiction, authority, or limitations, and without observance of procedure required by law.”

Whether as a reaction to the public outcry, or in recognition of its tenuous legal footing, the FAA has almost



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entirely refrained from enforcement of its new rules. Likewise, it has all but ceased enforcement of its commercial use ban. Since Pirker, only a handful of drone operators have been subject to enforcement actions, and these are limited to incidents in which “UAS operation has a medium or high risk of endangering the operation of another aircraft or endangering persons or property on the ground.” Violators have also been issued “educational letters” from the FAA under the threat that multiple issuances will lead to enforcement actions, but overall this amounts to a fairly anemic deterrent.

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THE REGULATIONS OF TOMORROW

Not content to stick with the makeshift system, the FAA issued its sUAS notice of proposed rulemaking (NPRM) in February of 2015 to initiate the process of codifying drone regulations within the FAR. The proposed rules would solidify the authority of section 336 of the 2012 act, and also allow for commercial drone use under specific conditions. A “Micro-Drone” option would also exist for sUASs that weigh less than four and a half pounds.

This may be a step in the right direction for the sUAS community. Conversely, it will be hard for the FAA to please everyone. The NPRM immediately prompted its

own petitions for review, this time from civil liberties groups disturbed by the lack of privacy-based limitations on drone flight.

That battle is largely being fought at the local level, with states and municipalities establishing their own no-fly zones. But to borrow the parlance of constitutional law, the federal government “occupies the field” when it comes to aviation. As such, federal preemption is generally inevitable. Nonetheless, it remains to be seen when

Washington will finally get its act together and manage to reconcile the diverse field of critics. While it may be that America’s skies are soon to be filled with drones, those drones will likely need radar to negotiate thick clouds of regulation.

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Drone Law

The law in this field is developing rapidly. Some recent updates include:

- In Kentucky, a judge dismissed a case against a man charged with criminal mischief and wanton endangerment for shooting down a drone hovering over his family home.
- Governor Jerry Brown recently signed a bill intended to prevent paparazzi drones from flying over private property.