

Drones: Free at last?

FAA moves closer to setting rules

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The FAA's release of a notice of proposed rulemaking (NPRM) for drones reveals the regulatory constraints likely to shape drone use for newsgathering. The NPRM proposes a single set of rules for the entire category of small unmanned aircraft systems (sUAS) weighing up to 55 pounds. They would not be subject to the protracted airworthiness and type certification required of manned aircraft—a process the FAA acknowledges takes three to five years—and likely would render the vehicles technologically obsolete before they are certified. They could be flown by a new category of airmen: sUAS operators, who pass an FAA-prescribed written knowledge test, but need not have pilots' licenses or take flight tests. They may fly only a few hundred feet above the ground, within the line of sight of the operator, in the daytime, and not over other people.

There's no question that the battle over the eventual terms of the drone rules will be fierce. There was division within the administration and even within the FAA over the content of the NPRM. Amazon and other drone proponents, especially in the agricultural industry think it is too restrictive; others, most notably, the Air Line Pilots Association and the crop dusters

want to disallow flying a two and a half pound Phantom drone unless one is a commercial pilot.

Separating Microdrones

The FAA specifically invited comment on the desirability of segmenting the broad category of sUAS ranging from 0 to 55 pounds into subcategories (or “groups”) based on vehicle weight and performance characteristics. Indeed, the NPRM provides a fair amount of detail on what the regulatory category for “micro-sUAS” might look like—less than 4.4 pounds, below 400 feet above the ground, within an operator's line of sight, with flights over people permitted, and operators allowed to self-certify rather than being tested.

We think such segmentation is desirable. Lightweight drones pose far less risk because they have less kinetic energy—although upping the weight limit to eight pounds would match the weight of a bird that must be fired into a transport aircraft engine at 200 knots during certification testing. These microdrones, including the DJI Phantom and Inspire and the 3Drobotics IRIS+, can perform quite useful newsgathering functions while the debate rages about how to regulate the larger ones, which pose greater risk, and likely will cost enough that they can absorb more airplane- and helicopter-like equipment requirements.

Comments Abound

Midway through the comment period, some 1300 comments have been submitted. Most of them are a few sentences, entered on the fly in the window for comments on the [regulations.gov](https://www.regulations.gov) website docket. About a third are from model aircraft hobbyists who copied and pasted a form, many without changing the bracketed, “[insert your name here...].” A few attach more serious documents of greater length and details. Most of the heavy hitters are waiting until closer to the deadline, taking time to work out disagreements within their membership, to craft their comment documents, and to see what other people say.

The Administrative Procedure Act obligates the FAA to review the comments and to justify any final rule with reference to them. It is not obligated to give much weight to frivolous or general comments, but it must not ignore serious criticisms and recommendations, especially when they are backed up by data or raise issues the agency has not considered. As a practical matter, the agency knows who is in a position to challenge the final rule in court and will take care to justify its position with reference to the details of those comments.

It is a guessing game as to what the result will be. The agency is under conflicting pressure from the commenters and must reconcile internal FAA conflicts. One can hazard two predictions, however, an optimistic one, and a pessimistic one. Going ahead and finalizing a micro-sUAS rule has much to recommend it. The NPRM risk analysis is more persuasive with respect to the small vehicles than with respect to those at the upper end of the 55-pound range.

An optimistic view for newsgathering

Under the optimistic scenario, the FAA would promulgate a final rule for micro-sUAS six months from the end of the comment period, or by the end of October, 2015. It persuasively could justify going ahead with the microdrone rule pretty much as proposed while it works longer on crafting technology requirements and practical test requirements for the medium and large categories. There is considerable persuasive force favoring such additional requirements for larger vehicles.

Moreover, the micro category is the brainchild of the UAV America Fund, which is ably represented by Brendan Schulman of the New York law firm of Kramer Levin--probably the most successful lawyer in the drone space,

A micro-sUAS rule, as proposed, would provide plenty of room for ENG operations. Vehicles below eight--and even the proposed four--pounds carry good cameras and gimbals and come with sophisticated control systems right out of the box. Some of them include two control stations, one for the drone operator (DRO) and one for the photographer. Journalism organizations almost certainly will want to use both a DRO and a photographer. If one person tries to fly the drone and also operate the camera, he can do neither well.

A pessimistic view of the timeline

A more pessimistic scenario would involve much more delay, say 18 to 24 months, rather than six, before any kind of final rule exists. The final rule might reinstate a pilots' license requirement and/or practical testing and aeronautical experience for a separate sUAS category. It would likely include equipment requirements.

The problem for journalism is not the content of such a rule: most of the popular drones are already equipped with systems the FAA is likely to require, and it would not be hard to recruit private pilots by the dozens who would welcome the opportunity to fly ENG drones, either as a new career track, or as a way of earning money to fund their more conventional aviation career ambitions. The problem is delay. Not only would it take many more months -- and perhaps another notice of proposed rule breaking -- to work out these requirements, but also the equipment and practical test requirements involve erection of an organizational structure which does not now exist to develop standards, review applications, and perform certification testing.

For now, drone flight for any commercial purpose—including newsgathering-- remains illegal unless under a Section 333 exemption or other explicit FAA permission. Many observers hoped that the FAA might relax the Section 333 exemption criteria to match the NPRM, but it has shown no sign of doing so yet; it still requires private pilots' licenses, separate observers, and 48-hour notification of the FAA before each flight. It did, however, announce a new policy this week, not to require prenotification in exemptions involving

flights below 200 feet.

Newsrooms watch closely

None of the Section 333 exemption petitions presented so far involve newspapers or television broadcasters—at least none of them are in the names of journalism organizations; it's possible of course that some of the petitioners aspire to be contractors for journalism. Ken Pyatt, of ENG operator Sky Helicopters, said, "We are certainly looking at drones for newsgathering. In smaller markets they are a no-brainer... if news stations aren't already using them they will be shortly."

Some journalism organizations are cooperating with universities to do research and demonstration on newsgathering drones. The largest of these efforts is the site at Virginia Tech. Its level of actual activity is opaque, however. The executive director did not respond to an email request for an interview for this story.

In the meantime, if you want to begin gathering news with drones when your Section 333 exemption petition is granted or when the rules become final, you need to get started. Are you going to use a contractor or do it yourself? Are you going to fly them with existing reporters and photographers or with a separate team of drone operators? How will you recruit the DROPs? What kind of training will you or your contractor give them? Are you going to use them to cover breaking news or only stories planned in advance? Will you dispatch them with ENG trucks and crews?

Preventing abuse

Regardless of how sensible the final regulations are, there will always be some nuts who get their hands on them and do something dangerous, like the guy in Seattle who jeopardized the safety of two news helicopters and then was caught on video casually flying the drone home, picking it up, and strolling back into his house with it. There's no indication that he was flying commercially, so he was outside the existing ban. Even if he did have a commercial purpose, it's unlikely that requiring him to get a drone operator certificate would've made any difference to his behavior.

How to restrain the rogues is a major challenge. Depending on trends with respect to such irresponsible behavior, it ultimately may be necessary to require that certain limitations be technologically built into drones, disabling them from flying above 400 feet, beyond the line of sight of the operator, or within five miles of an airport. Any governmental requirements for specific technology is fraught with the risk of stifling innovation and deterring deployment of the best new technologies. If this approach becomes necessary, the FAA must be creative in imposing certain performance requirements and leaving the details up to engineers and manufacturers.

At a Senate Aviation Subcommittee hearing this week, the senators pushed the FAA hard to speed up the process, and to be more flexible in granting Section 333 petitions during the

“16 to 18 months” before the final rules become effective. They especially pushed for allowing beyond-line-of-sight operations with appropriate technology and allowing newsgathering operations over people.

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