

Progress slow for commercial use of drones in the US

The potential for the use of small unmanned aircraft systems ('UAS') - or drones - in the e-commerce world may be substantial, given the strong interest expressed by large e-commerce companies such as Amazon in using drones to deliver orders. In the US however, new proposed rules from the Federal Aviation Administration ('FAA') would, as currently written, restrict the use of drones in commercial delivery. Michelle Cohen, Member and Chair of the E-Commerce Practice at Ifrah Law examines the FAA's proposed rules and the reaction from industry.

On 23 February 2015, the Federal Aviation Administration ('FAA'), the US agency responsible for overseeing the US aerospace system, issued a Notice of Proposed Rulemaking ('NPRM') concerning the operation of small UAS in the US¹. The FAA's proposals are now subject to a sixty day comment period through to 24 April 2015. Amazon has repeatedly expressed its strong interest in using an 'Amazon Air' service to deliver packages in thirty minutes or less². Amazon and others have complained about the delays in authorising drones in the US in comparison to other areas. By way of example, while at the end of March the FAA finally acted upon Amazon's petition filed in July 2014 for research and development testing outdoors in Seattle, Amazon recently told a US Senate Subcommittee that the drone the FAA approved is already obsolete.

Background

The FAA issued its NPRM to propose allowing small UAS to operate for non-hobby or non-

recreational purposes. Small UAS weigh less than 55 pounds. Currently, the FAA only allows non-recreational UAS use through special exemptions, certificates or waiver or other case-by-case authorisations. However, companies and individuals have used drones outside of the FAA's regime. For instance, a recent *Washington Post* article³ noted wedding photographers operating drones, essentially without authorisation.

The FAA is understandably concerned about persons operating drones without proper supervision. Issues such as national security and personal privacy abound. The fundamental principle for collision avoidance in the skies is for pilots to 'maintain vigilance "so as to see and avoid other aircraft."⁴ UAS present special concerns because no human beings are on the UAS. However, Congress and the FAA recognise the potential benefits of drone use for business and non-business applications, especially in areas that are hard for manned aircraft to reach. Amazon and others have indicated they are ready to use drones to deliver packages quickly.

In 2012, Congress passed the FAA Modernization and Reform Act. Among other measures, this law required the Secretary of Transportation to determine whether UAS operations presenting the least amount of public risk and no threat to national security could safely be operated in the national airspace system. If the Secretary determined that UAS could be operated safely and securely, then the Secretary was directed to establish regulations for operating UAS. The Secretary tasked the FAA with this UAS review.

Proposed drone rules

While the proposed rules permit

UAS operation, the FAA has set forth several restrictions that, if adopted, would not permit operations proposed by certain organisations, including Amazon. Under the FAA's proposed rules, to qualify under the new regime:

Operations

- The unmanned aircraft must weigh less than 55 lbs (25 kg). The FAA seeks comment concerning the possibility of more flexible rules for 'micro' UAS under 4.4 lbs.
- The UAS must remain within the visual line of sight ('VLOS') of the operator or a designated visual observer (the FAA seeks comment on whether the rules should permit operations beyond line of sight).
- The operator or designated observer must always be able to see the aircraft, with vision only aided by corrective lenses.
- No person may act as an operator or visual operator for more than one unmanned aircraft operation at one time.
- The UAS may not operate over any persons not directly involved in the operation (thus, Amazon would presumably not be able to fly drones with packages over communities).
- The UAS may operate in the daylight only (official sunrise to official sunset, local time).
- Transportation of property via UAS is allowed only if not done for compensation and the total weight of the aircraft, including the property, is less than 55 pounds.
- The UAS must always yield right-of-way to other aircraft, manned or unmanned.
- The maximum speed of a UAS is 100 mph (87 knots).
- The maximum altitude of a UAS is 500 feet.
- No operations are allowed in Class A (18,000 feet and above) airspace.
- No operations in airport flight paths and restricted airspace areas.

Operators

The FAA has proposed to regulate UAS ‘pilots’ as ‘operators’; however, UAS operators would not be as heavily regulated as general aviation pilots. Specifically, operators would be required to pass an initial aeronautical knowledge test every 24 months at an FAA-approved knowledge testing centre and be ‘vetted’ by the Transportation Security Agency (‘TSA’). They would not require regular medical testing akin to commercial pilots or further private pilot certifications. The FAA has proposed that operators:

- Obtain an unmanned aircraft operator certificate with a small UAS rating (would not expire).
- Be at least 17 years old.
- Present to the FAA, upon request, the small UAS for inspection or testing.
- Report an accident to the FAA within 10 days of any operation resulting in injury or property damage.
- Conduct a preflight inspection, to include specific aircraft and control station systems checks, to ensure the UAS is safe to operate.

UAS aircraft requirements

- While a traditional FAA airworthiness certification would not be required, the FAA proposes that an operator must maintain the UAS for safe operation and must inspect the UAS pre-flight.
- Aircraft registration would be required.
- Aircraft markings required (in the largest practicable manner).

Concerns

The Small Unmanned Aerial Vehicles (‘UAV’) Coalition, a group that includes Amazon, expressed support for some aspects of the FAA’s proposals. However, the Coalition announced that the proposals fell short in several respects. In particular, the

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Coalition disagrees with the ban on operation over persons not directly involved in operation (assuming the operations are within the line of sight). The Coalition also believes that the FAA should allow small UAVs to operate at any hour (rather than the proposed sunrise to sundown restrictions), provided the UAS can be operated safely. The Coalition urges the FAA to allow operations at higher altitudes, and to allow companies to test drones on private property. As to the proposed ‘line of sight’ requirement, the Coalition asserts that First Person View technology is available and can automate this space. The Coalition argues that unless small UAS are “able to go beyond the line of sight, we are not maximizing the technology as other countries already do.”⁵

Next steps

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Congress has authority over the FAA’s funding authorisation and can direct the agency to review and take certain actions. It seems likely potential commercial users will be advocating to their Congressional representatives for changes to the proposed rules.

At a recent hearing of the Senate Subcommittee on Aviation, Operations, Safety and Security, Amazon’s Vice President of Global Public Policy noted that the US is not allowing businesses to innovate by using drones. Elsewhere, Amazon has only had to wait one or two months to begin testing⁷. The FAA had, ironically, just acted to streamline drone use by those entities already granted

exemptions. The agency established an interim policy that allows exempted UAS operators to utilise 55 lbs or less UAS at or below 200 feet anywhere in the country except restricted airspace and other areas, such as major cities, where the FAA prohibits UAS operations. Previously, an operator had to apply for and receive a certificate of authority for a particular airspace block⁸. This interim policy does not, however, present a solution for Amazon, which is particularly critical of the ‘line of sight’ restrictions.

FAA staff will review the public input and then issue its regulations, although it could take some time. New rules are subject to challenge in the courts, which can be expected if the FAA thwarts industry’s desired drone usage by promulgating the proposed rules concerning line of sight, daytime, and prohibitions on flying over persons.

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1. https://www.faa.gov/regulations_policies/rulemaking/recently_published/media/2120-AJ60_NPRM_2-15-2015_joint_signature.pdf
2. <http://www.amazon.com/b?node=8037720011>. Amazon has stated that it is developing aerial vehicles that travel over 50 miles per hour, and will carry 5 lbs payloads, see <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0474-0001>
3. <http://www.washingtonpost.com/blogs/innovations/wp/2015/02/24/drone-the-next-big-thing-in-wedding-photo-graphy-or-a-tacky-intrusion/>
4. NPRM at 21.
5. <http://www.smalluavcoalition.org/wp-content/uploads/2015/02/sUAS-NPRM-press-release-Small-UAV-Coalition-5.pdf>
6. <http://www.reuters.com/article/2015/02/24/us-usa-drones-lobbying-idUSKBN0LS04R20150224>
7. <http://www.forbes.com/sites/ryanmac/2015/03/24/amazon-hammers-faa-for-lack-of-impetus-over-progressive-drone-policy/>
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