Remote identification for unmanned aircraft systems (UAS) as proposed by the US FAA

31st December 2019

Full document on https://federalregister.gov/d/2019-28100

My commentary

Note that this will apply to the United States but I imagine that the EU and the CAA will implement something similar or identical.

Key points

- All UASs will be expected to carry identification equipment, either transmitting to the internet and directly to a system set up by the FAA, or to the internet alone. The latter will only be allowed to fly up to 400 feet from the start point.
- Some model aircraft without identification equipment will be allowed to fly only in defined areas called recognized identification areas. These areas will be defined once and for all and new ones will not then be permitted.
- The FAA expects that unidentified model flying will decline over time.
- Each aircraft will have to be separately registered and possibly a fee be paid for each.

Selected text from the full document

Full implementation of remote identification relies on three interdependent parts that are being developed concurrently. The first is this proposed rule, which establishes operating requirements for UAS operators and performance-based design and production standards for producers of UAS. The second is a network of Remote ID UAS Service Suppliers (Remote ID USS) that would collect the identification and location in real-time from in-flight UAS. The Remote ID USS would perform this service under contract with the FAA, based on the same model the FAA currently uses for the Low Altitude Authorization and Notification Capability (LAANC). The third part of the remote identification ecosystem is the collection of technical requirements that standards-setting organizations will develop to meet the performance-based design and production requirements in this proposed rule.

This proposal establishes design and production requirements for two categories of remote identification: standard remote identification UAS and limited remote identification UAS. Standard remote identification UAS would be required to broadcast identification and location information directly from the unmanned aircraft and simultaneously transmit that same information to a Remote ID USS through an internet connection. Limited remote identification UAS would be required to transmit information through the internet only, with no broadcast requirements; however, the unmanned aircraft would be designed to operate no more than 400 feet from the control station. Under this proposal, the vast majority of UAS would be required to comply with one of these two categories of remote identification. For those limited exceptions, which include certain amateur-built UAS and UAS manufactured prior to the compliance date, operators flying UAS without remote identification capabilities would be permitted to fly only at certain specific geographic areas established under this rule specifically to accommodate them

A person operating a UAS without remote identification equipment would always be required to operate within visual line of sight and within an FAA-recognized identification area. Under the proposed rule, an FAA-recognized identification area is a defined geographic area where UAS without remote identification can operate.

XV. FAA-Recognized Identification Areas

In § 89.120, the FAA is proposing to allow UAS to operate without remote identification equipment if they do so within visual line of sight and within certain defined geographic areas approved by the FAA, called FAA-recognized identification areas. For UAS not equipped with Remote ID, the way to identify and comply with the intent of the remote identification rule is to operate within the FAA-recognized identification areas. The intent is to minimize the regulatory burden for operators of UAS that do not have remote identification equipment, while still meeting the intent of the rule. This proposal would not preclude UAS with remote identification from operating in or transiting the airspace over FAArecognized identification areas; it would simply limit UAS with no remote identification equipment from operating anywhere else.

The FAA recognizes that UAS flying sites exist today without a significant impact on aviation safety. As proposed in § 89.205, only a community based organization (CBO) recognized by the Administrator would be eligible to apply for the establishment of a flying site as an FAA-recognized identification area to enable operations of UAS without remote identification within those areas. For clarification purposes, the concept of FAA-recognized identification areas proposed in this rule is different and independent from the fixed-site concept in 49 U.S.C. 44809(c)(1) and a fixed site would not automatically be approved as an FAArecognized identification area.

The FAA would maintain a list of FAA-recognized identification areas at https://www.faa.gov. The location of FAA-recognized identification areas would be made available to the public to:

(1) advise UAS operators of where operations of UAS without remote identification are permitted;

(2) advise both manned and unmanned aircraft operators of where operations of UAS without remote identification are taking place;

(3) inform security and law enforcement agencies of where operations of UAS without remote identification are taking place. Operators of UAS with remote identification would be able to avoid these locations if they prefer to operate in areas where there are no UAS without remote identification. Law enforcement and security personnel would be able to identify if a suspect UAS has remote identification and, if not, determine if it is legally operating within an FAA-recognized identification area.

The FAA is proposing to accept applications for FAA-recognized identification areas within 12 calendar months of the effective date of a final rule. At the end of that 12-month period, no new applications for FAA-recognized identification areas would be accepted. After that date, the number of FAA-recognized identification areas could therefore only remain the same or decrease. Over time, the FAA anticipates that most UAS without remote identification will reach the end of their useful lives or be phased out. As these numbers dwindle, and as compliance with remote identification requirements becomes cheaper and

easier, the number of UAS that need to operate only at FAA-recognized identification areas would likely drop significantly.

[Registering individual model aircraft]

In the case of amateur-built aircraft, either the owner or builder must designate the aircraft model name and serial number. Once an unmanned aircraft is registered, the FAA issues a Certificate of Aircraft Registration (AC Form 8050-3) to the aircraft owner. The certificate expires three years after date of issuance. A Certificate of Aircraft Registration may be renewed by submitting a renewal application and paying a renewal fee.

Currently, part 48 allows for registration of multiple unmanned aircraft used exclusively for limited recreational operations under a single Certificate of Aircraft Registration without requiring the applicant to submit the aircrafts' serial numbers.This means that the FAA has no aircraft-specific data for aircraft operated under a single Certificate of Aircraft Registration.

Second, part 48 requires the provision of an unmanned aircraft's serial number, only if available, and only if the aircraft is registered individually. This means that the FAA does not have a data set that includes the serial numbers of all unmanned aircraft registered under part 48 and cannot correlate the registration data to the remote identification data which would be broadcast or transmitted by unmanned aircraft under the proposed rule. Thus, the FAA believes that the current registration requirements of part 48 are not sufficient to support the remote identification framework proposed in this NPRM.

A change to the registration requirements of part 48 is therefore necessary to enable the FAA to gather all of the necessary data to support the unique identification of unmanned aircraft registered under part 48. The lack of aircraft-specific data for aircraft registered under part 48 inhibits the FAA and law enforcement agencies from correlating the remote identification data proposed in this rule with data stored in the Aircraft Registry. Thus, the FAA proposes to revise part 48 to require the individual registration of all small unmanned aircraft and the provision ofadditional aircraft-specific data. Owners of small unmanned aircraft would have to complete the registration application by providing aircraft-specific information in addition to basic contact information. This means that every small unmanned aircraft registered under part 48 would need to have its own Certificate of Aircraft Registration. To ease the financial burden on operators who previously registered multiple model aircraft under a single registration number, the FAA would explore ways to minimize the registration fee when multiple aircraft are registered at the same time.

As of November 25, 2019, are currently 1,081,329 recreational flyers registered under part 48 – but because these registrants do not currently register each individual UA the FAA does not have administrative data on the number or type of recreational UAs being flown. As a point of comparison, as of November 25, 2019, under part 48 there are also 417,663 UAs registered individually as non-model unmanned aircraft.