
United States Department of Transportation

Federal Aviation Administration

SUPPORTING STATEMENT

OMB 2120-XXXX

Unmanned Aircraft Systems REMOTE IDENTIFICATION MESSAGE ELEMENTS

INTRODUCTION

The Department of Transportation (DOT) submits this draft Supporting Statement to the Office of Management and Budget (OMB) in preparation for requesting an approval for information collections related to the proposed rule titled “Remote Identification of Unmanned Aircraft Systems” (Remote Identification rule) (RIN 2120-AL31). DOT requests this information collection approval include information transmitted from unmanned aircraft systems (UAS) through an internet connection to Remote Identification UAS Service Suppliers (Remote ID USS) acting on behalf of the Federal Aviation Administration (FAA). Certain UAS – called standard remote identification UAS by the FAA -- would also be required to broadcast this information directly from the unmanned aircraft. With certain limited exceptions, the Remote Identification rule would prohibit the operation of UAS within the airspace of the United States unless the UAS are capable of connecting to the internet and transmitting certain remote identification message elements through that internet connection to a Remote ID USS – and broadcasting those message elements, as appropriate – throughout their operation. An exception to the general rule is when a UAS is not equipped with remote identification but is operated within visual line of sight and within an FAA-recognized identification area.

A. JUSTIFICATION

1. *Explain the circumstances that make the collection of information necessary.*

The FAA is integrating UAS operations into the airspace of the United States through a phased, incremental, and risk-based approach. An important next step in the integration process is the

promulgation of regulatory requirements to enable the remote identification of UAS operating in the airspace of the United States. Remote identification of UAS is necessary to ensure public safety and the safety and efficiency of the airspace of the United States. Section 2202 of the FAA Extension, Safety, and Security Act of 2016, Pub. L. 114-190 (July 15, 2016), requires the Administrator to convene industry stakeholders to facilitate the development of consensus standards for remotely identifying operators and owners of UAS and associated unmanned aircraft and to issue regulations or guidance based on any standards developed. The Administrator is granted the authority under 49 U.S.C. 44805 to establish a process for, among other things, accepting risk-based consensus safety standards related to the design and production of small UAS. Under 49 U.S.C. 44805(b)(7), one of the considerations the Administrator must take into account prior to accepting such standards is any consensus identification standard regarding remote identification of unmanned aircraft developed pursuant to section 2202 of Pub. L. 114-190.

Additionally, section 44809(f) of 49 U.S.C. provides that the Administrator is not prohibited from promulgating rules generally applicable to unmanned aircraft, including those unmanned aircraft eligible for the exception for limited recreational operations of unmanned aircraft. Among other things, this authority extends to rules relating to the registration and marking of unmanned aircraft and the standards for remotely identifying owners and operators of UAS and associated unmanned aircraft.

Remote identification will provide airspace awareness to the FAA, national security agencies, and law enforcement entities. This information could be used to distinguish compliant airspace users from those potentially posing a safety or security risk. The remote identification framework would provide UAS specific data, which may be used in tandem with new technologies and infrastructure to facilitate future, more advanced operational capabilities (such as detect-and-avoid and aircraft to aircraft communications that support beyond visual line of sight operations) and to develop the necessary elements for comprehensive UAS traffic management (UTM).

The Remote Identification rule proposes to require standard remote identification UAS and limited remote identification UAS be equipped to connect to the internet and transmit certain remote identification message elements through that internet connection to Remote ID USS throughout the operation of the UAS.¹ Standard remote identification UAS would also be required to broadcast remote identification message elements directly from the unmanned aircraft using radio frequency spectrum in accordance with 47 CFR part 15, where operations may occur without an Federal Communications Commission (FCC) individual license. Under the proposed rule, a Remote ID USS would be a person or entity qualified by the FAA to provide remote identification services to UAS.

A standard remote identification UAS must broadcast and transmit through an internet connection to a Remote ID USS the following remote identification message elements:

- (a) The identity of the UAS consisting of:
 - (1) A serial number assigned to the unmanned aircraft by the person responsible for the production of the standard remote identification unmanned aircraft system; or
 - (2) A session ID assigned by a Remote ID USS.
- (b) An indication of the latitude and longitude of the control station.
- (c) An indication of the barometric pressure altitude of the control station.
- (d) An indication of the latitude and longitude of the unmanned aircraft.
- (e) An indication of the barometric pressure altitude of the unmanned aircraft.
- (f) A time mark identifying the Coordinated Universal Time (UTC) time of applicability of a position source output.
- (g) An indication of the emergency status of the UAS.

A limited remote identification UAS must transmit the following remote identification message elements through an internet connection to a Remote ID USS:

- (a) The identity of the UAS consisting of:

¹ For purposes of the proposed rule, a “standard remote identification UAS” is a UAS with remote identification equipment capable of both: (1) connecting to the internet and transmitting through that internet connection to a Remote ID USS; and (2) broadcasting directly from the unmanned aircraft. A “limited remote identification UAS” is a UAS that: (1) is designed and produced to operate no more than 400 feet from its control station; (2) is capable of connecting to the internet and transmitting the remote identification message elements through that internet connection to a Remote ID USS; and (3) cannot broadcast remote identification message elements.

- (1) A serial number assigned to the unmanned aircraft by the person responsible for the production of the limited remote identification unmanned aircraft system; or
- (2) A session ID assigned by a Remote ID USS.
- (b) An indication of the latitude and longitude of the control station.
- (c) An indication of the barometric pressure altitude of the control station.
- (d) A time mark identifying the Coordinated Universal Time (UTC) time of applicability of a position source output.
- (e) An indication of the emergency status of the unmanned aircraft system.

The collection of this information in the remote identification message elements is necessary to comply with the statutory requirement to develop standards for remotely identifying operators and owners of UAS. The collection of this information would also provide airspace awareness to enable the FAA, national security agencies, and law enforcement entities, which could be used to distinguish compliant airspace users from those potentially posing a safety or security risk.

2. *Indicate how, by whom, and for what purpose the information is to be used.*

Unmanned aircraft systems with remote identification are mandated to broadcast and transmit through an internet connection to a Remote ID USS the remote identification message elements addressed in this supporting statement, on occasion (when the unmanned aircraft system with remote identification is operated in the airspace of the United States). This requires unmanned aircraft system: disclosure; and Remote ID USS: recordkeeping and reporting.

The remote identification message elements would be sent from the UAS to the Remote ID USS over the internet. The Remote ID USS would, in turn, transmit the information collected to the FAA, as required. To implement remote identification, the FAA anticipates establishing a cooperative data exchange mechanism between the FAA and Remote ID USS.

The information transmitted in the message elements would be used by the FAA and other Federal partners to provide airspace awareness of UAS operations in the airspace of the United States, which could be used to distinguish compliant airspace users from those potentially posing a safety or security risk. The same information would be broadcast from standard remote identification unmanned aircraft.

The remote identification message elements that operators would be required to transmit under this rule would be considered publicly accessible information. To ensure safety in the airspace of the United States, the FAA may require access to the remote identification message elements transmitted by UAS with remote identification to Remote ID USS. This request may take the form of an individual query or a continuous connection to the Remote ID USS. In addition, the FAA anticipates providing that information, as necessary and when appropriate, to other airspace users, authorized Federal Government partners, and law enforcement entities. Upon request, a Remote ID USS would be required to provide the FAA: (1) the near real-time remote identification message elements that meet the minimum message element performance requirements; and (2) stored remote identification data.

The remote identification message elements transmitted through an internet connection to a remote ID USS by a standard remote identification UAS or limited remote identification UAS, and broadcast by a standard remote identification UAS, may be available to the general public. Remote ID USS would be required to provide to the public, for no cost, the UAS Identification message element, either the unmanned aircraft's serial number or the session ID assigned by the Remote ID USS. The FAA considers that there is no more inherent right to privacy in the physical location of either the unmanned aircraft or the control station than there would be in the location of manned aircraft.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection.

The collection of information through the transmission of message elements would be entirely automatic. The collection would fully use automated, electronic, and related technological collection techniques. This framework would make it relatively simple and straightforward for individuals to comply with the transmission requirements by operating UAS produced to meet the minimum performance requirements of the proposed rule. A compliant standard remote identification UAS and a compliant limited remote identification UAS would automatically

connect to the internet and transmit the remote identification message elements through that internet connection to a Remote ID USS. A compliant standard remote identification UAS would also automatically broadcast the message elements directly from the unmanned aircraft.

A person could operate a UAS only if: (1) it has a serial number that is listed on an FAA-accepted declaration of compliance; (2) its remote identification equipment is functional and complies with the requirements of the proposed rule from takeoff to landing; and (3) its remote identification equipment and functionality have not been disabled.

Under this proposed rule, all UAS with remote identification would be designed and produced such that the remote identification functionality is always enabled. UAS with remote identification would be designed and produced to notify the person manipulating the flight controls of the UAS of any remote identification malfunctions, failures, or anomalies.

All message elements are proposed to be transmitted electronically between the UAS and the Remote ID USS without input from the UAS operator.

4. *Describe efforts to identify duplication.*

The FAA does not anticipate receiving any duplicate data because there has not been any collection from this specific population before. The FAA knows of no other agency collecting the same information. The information sought is specific to unmanned aircraft being operated in the airspace of the United States. The information is available from that UAS only, not from any other source.

5. *If the collection of information has a significant impact on a substantial number of small businesses or other small entities.*

The information collection makes no distinction between whether the UAS operator is a private person, owner of a small business, or commercial operator. The transfer of the message elements from

the UAS to the Remote ID USS is done completely electronically and creates no burden or impact on any UAS operator.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

Without this information collection, compliance with the statutory requirement will not be possible. As a result, the FAA will have a greatly diminished ability to ensure public safety and the safety and efficiency of the airspace of the United States. Absence of the information would frustrate the development of new technologies and infrastructure to facilitate future, more advanced operational capabilities (such as detect-and-avoid and aircraft-to-aircraft communications that support operations beyond visual line of sight) and to develop the necessary elements for UTM. Furthermore, the inability to collect this information would prevent the FAA, national security agencies, and law enforcement entities from having airspace awareness, which could be used to distinguish compliant airspace users from those potentially posing a safety or security risk.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with the general information collection guidelines in 5 CFR 1320.5(d)(2).

The collection of information is consistent with the guidelines in 5 CFR 1320.5(d)(2)(i)-(viii).

8. Describe efforts to consult persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Section 2202 of the FAA Extension, Safety, and Security Act of 2016 (Pub. L. 114-190) tasked the Administrator and the Secretary to convene industry stakeholders to facilitate the development of consensus standards for remotely identifying operators and owners of UAS and associated unmanned aircraft. As part of the standards development, the Administrator was directed to consider: (1) requirements for remote identification of UAS; (2) requirements for different classifications of UAS; and (3) the feasibility of the development and operation of a

publicly accessible online database of unmanned aircraft and operators, and criteria for exclusion from the database.

To comply with the Congressional mandate, on May 4, 2017, the Administrator chartered the Unmanned Aircraft Systems (UAS) Identification (ID) and Tracking Aviation Rulemaking Committee (ARC) (UAS-ID ARC) to inform the FAA on technologies available for remote ID and tracking of UAS and to make recommendations for how remote ID and tracking may be implemented.² The FAA charged the UAS-ID ARC with the following three objectives:

1. Identify, categorize, and recommend available and emerging technology for the remote identification and tracking of UAS.
2. Identify the requirements for meeting the security and public safety needs of the law enforcement, homeland defense, and national security communities for the remote identification of UAS.
3. Evaluate the feasibility and affordability of available technical solutions, and determine how well those technologies address the needs of the law enforcement and air traffic control communities. Develop evaluation criteria and characteristics for making decisions, and rate the available technical solutions provided.

The Administrator was also tasked with submitting a report to Congress regarding any standards developed and issuing regulations based on the standards developed. On June 30, 2017, the Administrator sent a letter to the Chairman of the Commerce, Science, and Transportation Committee detailing the FAA's considerations and efforts in supporting the development and implementation of remote identification standards.

The ARC made a number of recommendations related to the following topics: the areas of applicability of remote identification and tracking requirements; methods to provide remote identification and tracking information; approaches to remote identification and tracking requirements; stages of implementation of remote identification and tracking rule; minimum data requirements for remote identification and tracking; air traffic control interoperability, and airports and critical infrastructure.

² The UAS-ID ARC was composed of 74 members representing aviation community and industry member organizations, law enforcement agencies and public safety organizations, manufacturers, researchers, and standards bodies that are involved in the promotion and production of UAS and in addressing security issues surrounding the operation of UAS.

Finally, the FAA will be providing this information collection for public comment in the Remote Identification of Unmanned Aircraft Systems notice of proposed rulemaking (RIN 2120-AL31). The public will have an opportunity to provide input concerning the proposed information collections outlined in the notice of proposed rulemaking.

9. *Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.*

There are no gifts or payments to respondents.

10. *Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.*

No assurance of confidentiality is being provided. However, the FAA is not proposing that the identity of the owner of the UAS be included in the message elements, because the message elements may generally be available to the public. The message elements that the FAA is proposing are the minimum necessary to achieve the FAA's safety and security goals. The FAA has determined that requiring other information would potentially raise privacy concerns. However, owner information would still be available to the FAA and law enforcement because the FAA would retain the ability to correlate the unmanned aircraft's serial number with the unmanned aircraft's registration information.

As noted, the FAA is proposing that the remote identification message elements could potentially be accessed by the public. The FAA considers that there is no more inherent right to privacy in the physical location of either the unmanned aircraft or the control station than there would be in the location of manned aircraft. The FAA proposes in this rule that the broadcast message be sent using radio frequency spectrum in accordance with 47 CFR part 15, where operations may occur without an Federal Communications Commission (FCC) individual license, which means that this message could potentially be received by any device capable of receiving that broadcast. Additionally, the FAA would include provisions in the Memorandum of Agreement signed between the FAA and each Remote ID USS to, at a minimum, make the serial number or session ID available to the general public.

Although the serial number or session ID could be associated with an individual through the FAA’s registration database, at this time, the FAA does not intend to make registration data held under 14 CFR part 48 available to Remote ID USS or the general public. The FAA would provide registration data associated with a particular serial number or session ID to authorized persons from law enforcement or Federal Government.

11. Provide additional justification for any questions of sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

There are no questions of a sensitive nature.

12. Provide estimates of hour burden of the collection of information.

Remote identification message elements are transmitted electronically from the UAS to the Remote ID USS without input from the UAS operator.

The following table shows the number of respondents who will be required to transmit remote identification message elements beginning with year 3 after the effective date of the final rule.³ To transmit remote identification message elements, each operator would be required to subscribe to a Remote ID USS on an annual basis. It is estimated that it would take 5 minutes to complete the subscription form.

Table 1a: Burden in Hours for Respondents to Complete Remote ID USS Subscription Form

Year	Part 107 Remote Pilots	Recreational Flyers	Total Respondents	Hours Expended Completing Form
1				
2	109,049	313,449	422,498	35,208
3	296,326	675,932	972,258	81,022

To transmit remote identification message elements, the FAA assumes each operator would subscribe to a Remote ID USS on an annual basis. It is estimated that it would take an individual five minutes to complete and submit the USS subscription form that would be made available through an internet app. The opportunity cost of time for a part 107 remote pilot to complete the

³ It is anticipated that Remote ID USS services will become available in year 2.

form is \$1.48 per minute (for a total opportunity cost of \$7.40 per subscription).⁴ Likewise, the opportunity cost of time for a recreational flyer to complete the form is \$0.237 per minute (for a total opportunity cost of \$1.185 per subscription).⁵ The table below shows the cost burden for respondents to subscribe to a Remote ID USS.

Table 1b: Annual Cost Burden to Subscribe to a Remote Identification USS

Year	Part 107 Remote Pilots	\$7.40 per Subscription	Recreational Flyers	\$1.185 per Subscription	Total Cost Burden
1					
2	109,049	\$806,962	313,449	\$371,437	\$1,178,399
3	296,326	\$2,192,812	675,932	\$800,979	\$2,993,791

13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information.

There are no capital or start up costs or operation and maintenance components affiliated with the information collection.

14. Provide estimates of annualized cost to the Federal Government.

There are no annualized costs to the Federal Government generated by the transmission of the remote identification message elements.

⁴ The FAA estimates the wage earned by Part 107 operators to be similar to that of a fully burdened wage (compensation + benefits) of an FAA technical subject matter expert (rest of U.S), which is \$81.46 per hour (\$1.36 per minute). Source: https://employees.faa.gov/org/staffoffices/ahr/program_policies/policy_guidance/compensation/PayTables/.

The total compensation includes a wage multiplier of 1.466 (based on Table A of the Employer Costs for Employee Compensation December 2018 news release https://www.bls.gov/news.release/archives/ecec_03192019.pdf).

⁵ Department of Transportation Departmental Guidance on Valuation of Travel Time in Economic Analysis, September 27, 2016. Table 4 Recommended Hourly Values of Travel Time Savings, Page 17. In constant dollars, the hourly value of time for personal travel is \$14.21 per hour (\$.237 per minute). This value is used as a proxy for the value of time of someone operating UAS for recreational operations.

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-I.

This new collection of information would provide airspace awareness to enable the FAA, national security agencies, and law enforcement entities, which could be used to distinguish compliant airspace users from those potentially posing a safety or security risk.

16. For collections of information whose results will be published, outline plans for tabulation and publication.

No results of the information collection will be published.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

The FAA is not seeking approval to not display the expiration date for the information collection.

18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submissions," of OMB Form 83-I.

No exceptions to the certification statement are proposed.