PARTNERSHIP FOR REMOTE IDENTIFICATION COLLABORATION

A

MEMORANDUM OF UNDERSTANDING

Between

Federal Aviation Administration

and

Intel Corporation

Date: January 7, 2020

1. PARTIES

The Federal Aviation Administration (FAA) and Intel Corporation , also known as (aka) the "Parties".

2. PURPOSE

The purpose of this Memorandum of Understanding (MOU) is to establish a working relationship between (FAA) and Intel Corporation that will facilitate a collaborative working environment for the development of a technical and legal framework for initial prototyping and testing that will inform a national capability for Remote ID Unmanned Aircraft System (UAS) Service Suppliers (UAS) future of Remote Identification (Remote ID).

The result of this collaboration will be the creation of Remote ID Unmanned Aircraft Service Supplier (USS), via a Memorandum of Agreement (MOA) between the FAA and FAA-qualified organizations. Please be advised that participation in the Remote ID cohort collaboration sessions, as detailed and contemplated in this MOU, does not guarantee that an organization will be qualified as a Remote ID USS for a future USS MOA.

The purpose of this MOU is to establish a relationship between the FAA and Intel Corporation to pursue mutual goals and to leverage resources, expertise and information, to enable innovation, development and maturation of Remote ID technology. Equally important, this partnership will facilitate the sharing of experience and best practice in fostering a culture of innovation across the FAA and industry partners.

3. BACKGROUND

In 2016, as the FAA promulgated and implemented 14 CFR Part 107 – Small Unmanned Aircraft Systems (sUAS), the FAA recognized a need to create a streamlined and scalable authorization process to address operations of small unmanned aircraft in controlled airspace.

To address the need for timely responses to authorization requests, the FAA determined that automation was necessary and decided to test the Unmanned Aircraft Traffic Management (UTM) principles of data exchange with third parties. To that end, the FAA developed the Low Altitude Authorization and Notification Capability (LAANC). LAANC automates the application and approval process for airspace authorizations. For remote pilots, LAANC provides near real-time access to controlled airspace below FAA approved altitudes. For FAA Air Traffic, LAANC provides awareness of planned drone operations at low altitudes and quick access to the drone operators.

To develop and implement LAANC, the FAA surveyed industry's interest and ability to provide near term solutions through a Request for Information (RFI), which was issued in August of 2016. From industry's responses to the RFI, FAA established a cohort of approximately a dozen potential partners in December 2016. By September 2018, LAANC was rolled out to nearly all FAA Air Traffic Facilities in a national beta evaluation with five FAA qualified LAANC USS partners. The FAA will continue to open onboarding periods for interested third parties to participate in the initiative. Onboarding includes signing an MOA outlining the legal framework under which services can be provided, proving they can meet the LAANC USS Performance Rules, and testing the end-to-end system and connections. LAANC serves as a "proof point" for the FAA-USS model, as it demonstrates that a fully automated solution offered by industry and enabled by data sharing with the Air Navigation Service Provider is viable.

The FAA believes that the use of a rules-based governance structure with USS have been an effective mechanism to implement the requirements, also known as USS Operating Rules, for airspace authorizations. The FAA anticipates using the same concepts for additional UTM capabilities, such as UAS Remote ID. The FAA emphasizes that it views LAANC USS as independent of and separate from Remote ID USS. Nothing in this framework requires or precludes (i) a LAANC USS from also operating as a Remote ID USS or (ii) a Remote ID USS from conducting only Remote ID USS activities.

The FAA anticipates continuing this philosophy in future uses of USS. As USS roles and the services provided expand, the FAA anticipates that some USS may choose to offer an entire suite of services, while others may choose to specialize in one service. The FAA is agnostic to the USS business models.

Remote ID USS would provide remote identification services to UAS operating in the national airspace system (NAS) in coordination with the FAA. The FAA expects that the initial Remote ID USS business models may transform to include other services related to UTM. FAA also expects that Remote ID USS services will be provided at no cost to the FAA. As long as a single Remote ID USS is available to provide services, the data exchange model is viable. The FAA does not intend on becoming a Remote ID USS. FAA believes certain Federal agencies (e.g. DoD, DOI) will consider creating their own Remote ID USS to manage and control their own assets and flights.

Under this arrangement, the FAA would establish the operational framework (requirements and criteria) for Remote ID USS and provide supporting data to airspace users as necessary for collaboration and safe operations.

One critical element of implementing remote identification will be establishing a cooperative data exchange mechanism between the FAA and the Remote ID USS. The FAA is proposing to implement the remote identification requirements in a way that will allow the marketplace to grow in collaboration with the FAA. The FAA, working with the selected industry cohort, intends to build out a feature set and hold a prototype evaluation. The FAA also intends to evaluate the features in the prototype, address findings, and then roll the features out in a larger evaluation.

USS would be allowed to provide remote identification services if they enter into an agreement with the FAA to provide those specific services and demonstrate they can meet a set of technical requirements applicable specifically to Remote ID USS (Remote ID USS Performance Rules). The relationship between Remote ID USS and the FAA would be governed by a legal framework signed by both parties called a memorandum of agreement (MOA), which will be generated in parallel with the operational framework.

4. OBJECTIVES

The MOU establishes a framework for cooperation and collaboration between the FAA and Intel Corporation , in developing a technical and legal framework for initial Remote ID prototyping and testing that will inform a national capability. This collaboration is anticipated to accomplish the following activities:

- Form a cohort of industry participants to collaboratively solve the challenges (technical/legal) with the FAA around establishing Remote ID capability using the UAS Service Supplier Model. Develop demonstrations of information sharing capabilities that

offer “proofs-of-concept” for supporting sUAS Remote ID operations in a “live” environment;
- Deploy one or more systems or services to support sUAS Remote ID capabilities, with an evolution path to adding functionality, capacity and users over time; and,
- Apply collaborative problem solving among FAA and USS (e.g., virtual and in-person workshops) to identify sUAS information sharing needs, assess experience data collected from demonstrations, and recommend system enhancements

A key objective of this cohort collaboration is the establishment of an initial sUAS Remote ID capability accomplishing the following four objectives:

1) Market research and initial collaboration phase: Gather information from industry regarding appropriate Remote ID technologies and issues. Information will be gathered as a result of the Remote ID request for information previously posted, one-on-one discussions, and UAS Remote ID demonstration planning workshops. Outputs from this phase will shape the initial demonstrations framework.

2) Demonstration phase: Deploy working demonstrations of information exchange capabilities between FAA and commercial providers that address Remote ID requirements as determined through the market research and initial collaboration activities. FAA anticipates that one or more Remote ID demonstration systems will be fielded.

3) Demonstration collaboration phase: Establish collaborative problem-solving among FAA, other government entities, and industry cohort to address sUAS Remote ID information and data sharing needs, assess experience data collected from demonstrations, and recommend system enhancements. Data collection requirements and strategies will be developed as part of the workshop collaborations.

4) Expanded capability phase: Building on experience gained from the initial demonstrations, expand Remote ID and data exchange capabilities, taking into consideration the following:

    - Alternative approaches, technology solutions, development models, business models, evolution paths, scaling strategies, etc., for information sharing;
    - Assuring UAS Remote ID capabilities fulfill the complete set of requirements for the greatest number of potential sUAS operators;
    - How to collect, integrate, and display sUAS Remote ID operational information, government agencies, and local and regional authorized users of the capability.

5. EXPECTED BENEFITS

a) Establish the operational framework (requirements and criteria) for Remote ID USS and provide supporting data to airspace users as necessary for collaboration and safe operations.
b) Pursue the establishment of a practical approach to information and data sharing for the purpose of implementing an enterprise Remote ID capability.
c) Development of technical and legal framework for initial prototyping and testing that will inform a national capability.

6. RESPONSIBILITIES OF THE PARTIES

a. Both parties will:
   i. Engage collaboratively with Remote ID cohort members to develop demonstrations of information sharing capabilities that offer "proof of concept" for supporting sUAS Remote ID operations in an operational or field environment.
   ii. Apply collaborative problem solving amongst FAA and Remote ID cohort.
   iii. Work toward a goal of building prototype network Remote ID capabilities by December 2020.

b. The FAA will:
   i. Provide access to data sets, ConUse document, draft Performance Rules and ICD.
   ii. Provide subject matter expert review and advice to proposed technology products, concepts, equipment, software, and other related activities.

c. Intel Corporation will:
   i. Participate in monthly meetings (nominally 2 days in duration) in person in the Washington, D.C. area.
   ii. Send 2-3 representatives from its organization to each meeting referenced in Section 6(c)(i) of this MOU. Representatives that Intel Corporation provides for these meetings must possess the demonstrated capability to cover strategic, technical, and/or legal aspects of Remote ID.

d. Products. If applicable: All data and information produced as a result of Intel Corporation performing, managing and administering its responsibilities under this MOU shall be made available to the FAA for use in connection with its ongoing programs. This includes publication of results where appropriate, except in cases prohibited by proprietary and security considerations.

e. Public information. Subject to the terms set forth under Section 7 of this MOU, any press releases or published information resulting from Intel Corporation performing, managing and administering its responsibilities under this MOU must be coordinated with the FAA's POC, who will act as liaison with the FAA's Office of Communications. The FAA Program POC must be copied on all requests.

7. USE OF NAME, ENDORSEMENT AND PUBLICITY

a. Use of FAA Name Prohibited

Intel Corporation must not use the name of the FAA on any product or service, which is directly or indirectly related to either this MOU or any patent license or assignment, which implements this MOU without the prior approval of the FAA.

b. No Endorsement by the FAA

By entering into this MOU, the FAA does not directly or indirectly endorse any product or service provided, or to be provided, by Intel Corporation, its successors, assignees, or licensees Intel Corporation must not in any way imply that this MOU is an endorsement by the FAA of any such product or service.

c. Publicity

Nothing in paragraphs a and b of Section 7 shall prevent Intel Corporation or the FAA from publicizing this MOU or activities taken pursuant to this MOU; provided that: (A) except as otherwise required by law, neither Intel Corporation nor the FAA shall publicize statements from the other Party's employees or the other Party's positions (regardless of whether such statements and/or positions were presented orally, visually or in writing) without the prior written approval of such Party, which may be withheld in its sole discretion; and (B) prior to any public announcements being released, Intel Corporation and the FAA each agree to provide such announcements in writing to the other Party for review.

8. POINTS OF CONTACT

For the Federal Aviation Administration:
Casey Nair
FAA UAS Services; Program Manager
Phone: (202)-267-0369
Email: casey.nair@faa.gov

For the Intel Corporation
NAME: Gabriel Cox
TITLE: System Architect
Phone: [redacted]
Email: [redacted]

9. FUNDING

No funds are obligated under this MOU. Each party shall bear the full cost it incurs in performing, managing and administering its responsibilities under this MOU.

10. WARRANTIES

Neither the FAA nor the Intel Corporation makes any express or implied warranty as to any matter arising under this MOU.

11. EFFECTIVE DATE/TERM/TERMINATION

This MOU will take effect upon the date of the last signature of the Parties.

12. This MOU will remain in effect for a period of eighteen (18) months from its effective date. Any Party may terminate its participation in this MOU unilaterally by providing written notice to the other Parties at least thirty (30) calendar days in advance of the effective date of termination, or by mutual agreement.

13. CHANGES AND MODIFICATIONS

This MOU may be amended, including the inclusion of additional agencies and partners, at any time during the term by mutual agreement of the Parties and signed by the original signatories to the MOU or their designees or successors.

The Parties shall document the details of any such amendment in a writing signed by both parties.

14. CONSTRUCTION

The parties understand and agree that this MOU does not confer any legal rights, duties or obligations on either party and is not subject to dispute in any forum. Neither party is authorized or empowered to act on behalf of the other with regard to any matter. Neither party shall be bound by the acts or conduct of the other in connection with any activity under this MOU. This provision shall survive termination of this MOU.

Nothing in this MOU shall be interpreted as limiting, superseding, or otherwise affecting a Party from conducting normal operations or making decisions in carrying out its mission and duties. This MOU does not limit or restrict the Parties from participating in similar activities or arrangements with other entities.

15. PROTECTION OF CONFIDENTIAL/PRIVILEGED INFORMATION

Each party shall take appropriate measures to protect proprietary, privileged or otherwise confidential information obtained as a result of its activities under this MOU.

16. LEGAL AUTHORITY

The authority for this MOU is 49 U.S.C 106 (f)(2)(A) and 106(*l*) and (m).

17. SIGNATURES

The FAA and Intel Corporation agree to the provisions of this MOU as indicated by the signatures of their duly authorized representatives:

[redacted] ANIL NANDURI VP, Drone Group, Intel Corporation Jan 17, 2020 Le[redacted]	
CASEY L NAIR Digitally signed by CASEY L NAIR Date: 2020.01.21 09:41:06 -05'00' Casey Nair UAS Services Program Manager Federal Aviation Administration	
STEPHEN JENNISS Digitally signed by STEPHEN JENNISS Date: 2020.01.21 11:05:42 -05'00' Stephen Jenniss Contracting Officer Federal Aviation Administration	