

COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

15-CRDA-0313

Between

PrecisionHawk USA Inc.

And

**THE FEDERAL AVIATION ADMINISTRATION
WILLIAM J. HUGHES TECHNICAL CENTER**

This Cooperative Research and Development Agreement (CRDA), dated JUN 12 2015 is entered into by and between PrecisionHawk USA Inc. (hereinafter referred to as "Collaborating Party", or "PHK"), and the United States of America, as represented by the Federal Aviation Administration (FAA), William J. Hughes Technical Center (hereinafter referred to as "Technical Center"), located at the Atlantic City International Airport, New Jersey.

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SECTION A: DESCRIPTION

The purpose of this Cooperative Research and Development Agreement is to allow for a collaborative research and development activity between the FAA and PrecisionHawk USA Inc. for the collection of data, the development of operational standards, and the creation of technologies necessary to ensure an adequate level of safety in UAS operations. These technologies will permit PrecisionHawk, at some point in the future, to operate UAS within the NAS by using Extended Visual Line of Sight and Beyond Visual Line of Sight procedures. The Collaboration will focus on the areas of agriculture, forestry, and other rural industry.

Additional goals are detailed in the attached Appendix A "Obligation of the Parties".

SECTION B: TERM

The term of this Agreement is for a period of thirty-six (36) months, commencing on the Effective Date of this Agreement, unless otherwise modified pursuant to Article 6, Modifications, Extensions, Disputes, and Terminations.

SECTION C: PRINCIPAL INVESTIGATOR

The FAA agrees to assign a substantial portion of the work to be performed pursuant to Appendix A, Obligation of the Parties (OP) to this Agreement to Gemechu Gelgelu, as Principal Investigator (PI). The work for the Collaborating Party will be performed under the supervision of Tyler Collins, as PI.

SECTION D: FINANCIAL OBLIGATION

The FAA will not provide any funds to the Collaborating Party under this Agreement.

SECTION E: TITLE TO PROPERTY

All capital equipment developed, acquired, and paid for under this Agreement by the FAA shall be the property of the FAA, except that title to the items of capital equipment listed below provided to the FAA by the Collaborating Party or acquired by the FAA with funds supplied by the Collaborating Party shall remain or vest in the Collaborating Party:

PrecisionHawk USA Inc. will provide various types of UAS, control stations, and supporting assets, for use in the R&D. The assets will be returned upon completion of the CRDA activities.

Equipment to include but not limited to:

- PrecisionHawk UAS Platforms
- Other OEM UAS Platforms
- Ground Stations for all needed UAS Platforms
- LATAS (Low altitude tracking and avoidance system) On-Aircraft Transponders
- LATAS Traffic management ground based hardware/software

SECTION F: AGREEMENT

The Federal Technology Transfer Act of 1986, as amended (15 U.S.C. §3710a, *et seq.*), permits the Secretary of Transportation to authorize the Director of the Technical Center to enter into this CRDA consistent with that Act, associated Executive Orders, departmental regulations and agency policies.

Article 1. Definitions

As used in this Agreement, the following terms shall have the following meanings:

1.1 The term "*Agreement*" means this CRDA.

1.2 The term "*Cooperative Research and Development Agreement*" (CRDA) means any agreement between one or more Federal laboratories and one or more non-Federal parties under which the Government, through its laboratories, provides personnel, services, facilities, equipment, intellectual property, or other resources with or without reimbursement (but not funds to non-federal parties), and the non-Federal parties provide funds, personnel, services, facilities, equipment, intellectual property, or other resources toward the conduct of specified research or development efforts which are consistent with the mission of the laboratory; except that such term does not include a procurement contract or cooperative agreement as those terms are used in 31 U.S.C. §§6303, 6304, and 6305 nor does such term include "other transactions," as that term is used in 49 U.S.C. §106(l)(6). (See 15 U.S.C. §3710a(d)(1)).

1.3 The term "*Cooperative Research and Development Program*" means the research and development work or effort as defined in the OP in Article 2.1, Obligation of the Parties and Appendix A, Obligation of the Parties.

1.4 The term "*Created*" in relation to any copyrightable software work means the work is fixed in any tangible medium of expression for the first time, as provided for at 17 U.S.C. §101.

1.5 The term "*Developed*" means that an item, component, or process exists and is workable. Thus, the item or component must have been constructed or the process practiced. Workability is generally established when the item, component, or process has been analyzed or tested sufficiently to demonstrate to reasonable people skilled in the applicable art that there is a high probability that it will operate as intended. Whether, how much, and what type of analysis or testing is required to establish workability depends on the nature of the item, component, or process, and the state of the art. To be considered "developed," the item, component, or process need not be at the stage where it could be offered for sale or sold on the commercial market, nor must the item, component, or process be actually reduced to practice within the meaning of Title 35 of the United States Code.

1.6 The term "*Effective Date*" means the date on which the Director of the Technical Center signs the Agreement.

1.7 The term "*Field of Use*" refers to a license in which the license rights may be divided among various markets, applications, use, or product distinctions.

1.8 The term "*Invention*" means any invention or discovery that is or may be patentable or otherwise protected under Title 35 of the U.S.C. or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. §2321*et seq.*).

1.9 The term “*Made*” in relation to any Invention means the conception or first actual reduction to practice of such Invention.

1.10 The term “*Principal Investigator*” (PI) means the person designated respectively by each Party to this CRDA who will be responsible for the scientific and technical conduct of the research or collaboration.

1.11 The term “*Proprietary Information*” means information which could provide a competitive advantage to the party possessing such information and which either embodies trade secrets developed at private expense and outside of any Government contract or is confidential technical, business or financial information provided that such information:

- a. is not generally known, or is not available from other sources without obligations restricting its disclosure;
- b. has not been made available by the owners to others without obligation restricting its disclosure;
- c. is not described in an issued patent or a published copyrighted work or is not otherwise available to the public without obligation restricting its disclosure; or
- d. can be withheld from disclosure under 15 U.S.C. §3710a(c)(7)(A) & (B) and the Freedom of Information Act (FOIA), 5 U.S.C. §552 *et seq.*; and
- e. is identified as such by labels or markings designating the information as proprietary.

1.12 The term “*Sensitive but Unclassified Information*” (SUI) means unclassified information in any form including print, electronic, visual, or aural forms that the FAA must protect from uncontrolled release to persons outside the FAA and indiscriminate dissemination within the FAA. It includes aviation security, homeland security, and protected critical infrastructure information. SUI may include information that may qualify for withholding from the public under the FOIA. SUI information must be handled in accordance with DOT FAA Order 1600.75 – Protecting Sensitive Unclassified Information (SUI).

1.13 The term “*Special Purpose License*” means a license to the Government conveying a nonexclusive, nontransferable, irrevocable, worldwide, royalty-free license to practice and have practiced an Invention for or on behalf of the Government for research or other government purposes and conveying a nonexclusive, nontransferable, irrevocable, worldwide, royalty-free license to use, duplicate, prepare derivative works, distribute or disclose copyrighted works or Proprietary Information in whole or in part and in any manner, and to have or permit others to do so, for research or other government purposes. Research or other government purposes include competitive procurement, but do not include the right to have or permit others to practice an Invention or use, duplicate, prepare derivative works, distribute or disclose copyrighted works or Proprietary Information for commercial purposes.

1.14 The term “*Subject Data*” means all recorded information first produced in the performance of this Agreement, excluding Proprietary Information.

1.15 The term “*Subject Invention*” means any invention made in the performance of work under this Agreement.

Article 2. Cooperative Research and Development Program

2.1 Obligation of the Parties. The cooperative research and development effort performed under this Agreement shall be performed in accordance with Appendix A, Obligation of the Parties (OP). The utilization of the FAA's personnel, resources, facilities, equipment, skills, know-how, computer software and information will be consistent with its own policies, missions, and requirements. It is understood that the nature of this cooperative effort is such that completion within the period of performance specified, or within the limits of financial support allocated, cannot be guaranteed. Accordingly, it is agreed that all collaboration is to be performed on a best efforts basis.

2.2 Review of Work. Periodic conferences or on-site visits may be held, when deemed necessary by both parties, between personnel of the FAA and the Collaborating Party for the purpose of reviewing the progress of work defined in the OP.

2.3 Work Performed by Contractors on Behalf of FAA. If the FAA wishes to utilize a contractor to perform certain work to fulfill FAA's obligations under this Agreement, the FAA shall provide the Collaborating Party a minimum of thirty (30) days advance notice prior to utilizing a contractor to perform such work. The Collaborating Party understands and agrees that the Government may not be able to offer the Collaborating Party the option to an exclusive license for a pre-negotiated field of use in a Subject Invention, as described in Section G, Intellectual Property of this Agreement, if a contractor makes, solely or jointly, such Subject Invention under this Agreement. (37 C.F.R. Section 401.14(c)).

Article 3. Reports

3.1 Quarterly and Final Reports. The FAA and Collaborating Party shall prepare and submit quarterly and final reports. These reports shall follow the guidelines in Appendix C, Report Format. All of the cooperative research and development activities and accomplishments will be recorded in a final report. The draft final report will be prepared and submitted by the Collaborating Party for FAA review 60 days prior to the expiration of this Agreement. The FAA will provide review comments within 30 days of receipt. The Collaborating Party will incorporate any FAA comments and submit the final report on or before the expiration date of this Agreement. Copies of any reports shall be distributed in accordance with Article 15, Notices.

3.2 Technical Notes and Data Reports. Technical notes and data reports shall be formatted as mutually agreeable between the parties.

Article 4. Publicity, Use of Name, and Endorsement

4.1 Use of FAA Name Prohibited. The Collaborating Party shall not use the name of the FAA on any product or service which is directly or indirectly related to either this Agreement or any patent license or assignment which implements this Agreement without the prior approval of the FAA.

4.2 No Endorsement by FAA. By entering into this Agreement, the FAA does not directly or indirectly endorse any product or service provided, or to be provided, by the Collaborating Party, its successors, assignees, or licensees. The Collaborating Party shall not in any way imply that this Agreement is an endorsement by the FAA of any such product or service.

Article 5. Publication

5.1 Consultation. The FAA and the Collaborating Party agree to confer and consult with each other prior to publication or other public disclosure of the results of work under this Agreement to ensure that no Proprietary Information, SUI, or military critical technology is released. Furthermore, prior to submitting a manuscript for publication or before any other public disclosure, each party will offer the other party ample opportunity to review such proposed publication or disclosure to submit objections.

5.2 Objections. If either party objects to the publication, the publication is not made until the dispute is resolved pursuant to Article 6.4, Disputes.

Article 6. Modifications, Extensions, Disputes, and Terminations

6.1 Modifications. If either party desires a modification in this Agreement, the parties shall, upon reasonable notice of the proposed modification by the party desiring the change, confer in good faith to determine the desirability of such modification. Such modification shall not be effective until a written modification is signed by all the parties hereto by their representatives duly authorized to execute such modification.

6.2 Scope Change. If at any time either PI determines that the research data dictates a substantial change in the direction of the work, they shall promptly notify the other party, and the parties shall make a good faith effort to agree on any necessary modification to the OP. Any substantial modification in the direction of work will be executed pursuant to this Article and will be formalized by a mutual agreement and a modification to the OP that specifies the new work to be performed.

6.3 Extensions. Extensions of the term of this Agreement may be made prior to the expiration of the Agreement without the need for additional review beyond that of the Director of the Technical Center. If the parties wish to continue the work called for under the OP after the expiration of this Agreement, they may enter into a new CRDA.

6.4 Disputes. The Collaborating Party and the FAA recognizes that disputes arising under this Agreement are best resolved at the local working level by the parties directly involved. Both parties are encouraged to be imaginative in designing mechanisms and procedures to resolve disputes at this level.

6.5 Continuation of Cooperative Research Pending Resolution. Pending the resolution of any dispute under this Article, work under this Agreement will continue as elsewhere provided herein; provided, however, if such dispute is not resolved within sixty (60) days of the onset of such dispute, either party may terminate this Agreement pursuant to Article 6.6, Termination.

6.6 Termination. Either party may terminate this Agreement upon delivery of written notice at least ninety (90) days prior to such termination. Each party shall bear its own costs resulting from or related to the termination.

6.7 Obligations Surviving Termination. Termination of this Agreement by either party for any reason shall not affect the rights and obligations of the parties accrued prior to the Effective Date of termination of this Agreement. No termination of this Agreement, however effectuated, shall release the parties hereto from their rights, duties, and obligations under this Agreement.

Article 7. Independent Entities

Independent Entities. The parties to this Agreement are independent entities and are not agents of each other, joint venturers, partners, or joint parties to a formal business organization of any kind. Neither party is authorized nor empowered to act on behalf of the other with regard to any contract, warranty, or representation as to any matter, and neither party will be bound by the acts or conduct of the other. Each party will maintain sole and exclusive control over its own personnel and operations.

Article 8. Representations and Warranties

8.1 No Warranty. Except as specifically stated below, the FAA and the Collaborating Party make no express or implied warranty as to any matter whatsoever, including the conditions of the research or any Invention or product, whether tangible or intangible, Made or developed under this Agreement, or the ownership, merchantability, or fitness for a particular purpose of the research or any Invention or product.

8.2 Representations and Warranties of the FAA. The FAA hereby represents and warrants to the Collaborating Party as follows:

8.2.1 Mission. The performance of the activities specified by this Agreement is consistent with the mission of the FAA.

8.2.2 Authority. All prior reviews and approvals required by regulations or law have been obtained by the FAA prior to the execution of this Agreement.

8.2.3 Statutory Compliance. The FAA, prior to entering into this Agreement, has (1) given special consideration to entering into CRDAs with small business firms and consortia involving small business firms; (2) has given preference to business units located in the United States which agree that products embodying Subject Inventions Made under the Agreement or produced through the use of such Subject Inventions will be manufactured substantially in the United States; and, (3) in the event this Agreement is made with an industrial organization or other person subject to the control of a foreign company or Government, taken into consideration whether or not such foreign Government permits United States agencies, organizations, or other persons to enter into CRDAs and licensing agreements with such foreign country.

8.3 Representations and Warranties of the Collaborating Party. The Collaborating Party hereby represents and warrants to the FAA as follows:

8.3.1 Corporate Organization. The Collaborating Party, as of the date hereof, is a corporation duly organized, validly existing and in good standing under the laws of the State of Indiana.

8.3.2 Statement of Ownership. The Collaborating Party is neither foreign controlled nor a subsidiary of a foreign controlled entity.

8.3.3 Power and Authority. The Collaborating Party has the requisite power and authority to enter into this Agreement and to perform according to the terms thereof.

8.3.4 Due Authorization. The Board of Directors and shareholders of the Collaborating Party have taken all actions required to be taken by law, the Collaborating Party's Certificate or Articles of Incorporation, its bylaws or otherwise, to authorize the execution and delivery of this Agreement.

8.3.5 No Violation. The execution and delivery of this Agreement does not contravene any material provision of, or constitute a material default under any material Agreement binding on the Collaborating Party or any valid order of any court, or any regulatory agency or other body having authority to which the Collaborating Party is subject.

8.3.6 Change in Collaborator Status. The Collaborating Party agrees to notify the FAA within thirty (30) days should it become subject to the control of a foreign company or government at any time during this Agreement, or if any other change occurs relevant to this Agreement.

Article 9. Liability

9.1 Tort Liability of Government. The U.S. Government shall only be liable for those tortious acts for which relief is available pursuant to the Federal Tort Claims Act, 28 U.S.C. §2671*et seq.*

9.2 Personal Injury and Damage to Property. The Collaborating Party agrees to save and hold harmless the Government, its officers, agents, and employees from liability of any nature or kind, including costs and expenses, for, or on account of, any or all suits or damages of any character whatsoever resulting from injuries or damages sustained by any person or persons or property by virtue of negligence on the part of the Collaborating Party, its officers, agents, and employees in the performance of this Agreement.

9.3 Indemnification. The Collaborating Party holds the U.S. Government harmless and indemnifies the Government for all liabilities, demands, damages, expenses, and losses arising out of the use by the Collaborating Party, or any party acting on its behalf or under its authorization, of the FAA's research and technical developments or out of any use, sale, or other disposition by the Collaborating Party, or others acting on its behalf or with its authorization, of products Made by the use of the FAA's technical developments. This provision shall survive termination of this Agreement.

9.4 Disposal of Toxic or Other Waste. The Collaborating Party shall be responsible for the removal from the FAA property of any and all toxic or other material used, provided, or generated in the course of performing this Agreement. The Collaborating Party shall obtain at its own expense all necessary permits and licenses as required by local, state, and Federal law and shall conduct such removal in a lawful and environmentally responsible manner.

Article 10. Force Majeure

Neither party shall be liable for any unforeseeable event beyond its reasonable control not caused by the fault or negligence of such party, which causes such party to be unable to perform its obligations under this Agreement (and which it has been unable to overcome by the exercise of due diligence), including, but not limited to, flood, drought, earthquake, storm, fire, pestilence, lightning, and other natural catastrophes, epidemic, war, riot, civic disturbance, or disobedience, strikes, labor dispute, or failure, threat of failure, or sabotage, or any order or injunction made by a court or public agency. In the event of the occurrence of such a *force majeure* event, the party unable to perform shall promptly notify the other party. It shall further

use its best efforts to resume performance as quickly as possible and shall suspend performance only for such period of time as is necessary as a result of the *force majeure* event.

Article 11. Miscellaneous

11.1 Officials Not to Benefit. No member of, or delegate to, the United States Congress, or resident commissioner, shall be admitted to any share or part of this Agreement, nor to any benefit that may arise there from; but this provision shall not be construed to extend to this Agreement if made with a corporation for its general benefit.

11.2 Governing Law. The construction, validity, performance, and effect of this Agreement for all purposes shall be governed by the laws applicable to the Government of the United States.

11.3 Entire Agreement. This Agreement constitutes the entire Agreement between the parties concerning the subject matter of this Agreement.

11.4 Headings. Titles and headings of the Sections and Articles of this Agreement are for the convenience of references only and do not form a part of this Agreement and shall in no way affect the interpretation thereof.

11.5 Waivers. None of the provisions of this Agreement shall be considered waived by any party hereto unless such waiver is given in writing to all other parties. The failure of any party to insist upon strict performance of any of the terms and conditions hereof, or failure or delay to exercise any rights provided herein or by law, shall not be deemed a waiver of any rights of any party hereto.

11.6 Severability. The illegality or invalidity of any provisions of this Agreement shall not impair, affect, or invalidate the other provisions of this Agreement.

11.7 Assignment. Neither this Agreement nor any rights or obligations of any party hereunder shall be assigned or otherwise transferred by either party without the prior written consent of the other party.

11.8 Export Controls. Information and/or products developed pursuant to this Agreement may contain information for which export is restricted by the Arms Export Control Act (22 U.S.C. §2751, *et seq.*), the Export Administration Act (50 U.S.C. App 2401 *et seq.*), or other applicable export control laws and regulations. Nothing in this Agreement shall be construed to permit any disclosure in violation of those restrictions.

SECTION G: INTELLECTUAL PROPERTY

Article 12. Patents

12.1 Prior Patents of the Collaborating Party. The following inventions of the Collaborating Party are the subject of pending patent applications or are disclosed in issued patents.

[Please list any inventions that meet the description above]

13/892,358 – US 151099 - CA 155430 - CA 155431 - CA 29/454,606 - US 29/487,734 - US	29/487,762 - US 002235762 - EP 61/925,045 – US PCT/CA2015/000001 - WO 62/011,123 - US 62/139,272 - US	62/046,619 - US
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12.2 Reporting of Inventions. The FAA shall promptly report to the Collaborating Party each Subject Invention reported to the FAA by its employees. The Collaborating Party shall promptly disclose to the FAA each Subject Invention reported to the Collaborating Party by any of its employees. Each party shall provide the other party with copies of the patent applications it files on any Subject Invention along with the power to inspect and make copies of all documents retained in the official patent application files by the applicable patent office, except as may be prohibited by 35 U.S.C. §181 relating to Inventions affecting national security.

12.3 Rights in Subject Inventions

12.3.1 Inventions Made Solely by Government Employees. The FAA may agree to grant to the Collaborating Party, for reasonable compensation when appropriate, licenses or assignments, or options thereto to any Subject Invention Made solely by a Federal employee of the FAA. In addition the Collaborating Party, for reasonable compensation, shall have an option to choose an exclusive license in the following specific fields of use:

UAS integration in the NAS.

12.3.2 Subject Inventions Made Solely by the Collaborating Party. The Technical Center, on behalf of the U. S. Government, agrees that the Collaborating Party shall retain title to any Subject Invention made solely by its employees under this Agreement. The Collaborating Party shall disclose each Subject Invention to the Technical Center within 2 months after the inventor discloses it in writing to the Collaborating Party, or, if earlier, within 6 months after the Collaborating Party becomes aware that a subject invention has been made.

12.3.2.1 The Collaborating Party hereby grants to the Government, in advance, a Special Purpose License in any Subject Invention Made by the Collaborating Party employees under this Agreement to practice or have practiced throughout the world by or on behalf of the Government each invention made in whole or in part by its employees under this Agreement.

12.3.2.2 In the exercise of such license, the Government shall not publicly disclose trade secrets or commercial or financial information that is privileged or confidential within the meaning of 5 U.S.C. §552(b)(4) or which would be considered as such if it had been obtained by a non-federal party.

12.3.3 Joint Inventions. The Technical Center, on behalf of the U. S. Government, agrees that the Collaborating Party shall have the first option to retain title to each Subject Invention made jointly by FAA and Collaborating Party employees.

12.3.4 Subject Inventions Made by Contractor Employees and Other Third Parties. In some cases, contractor personnel support Government employees in the various activities at the FAA including supporting Government personnel engaged in a CRDA. If a Subject Invention is Made by support contractor personnel, the rights of the support contractor are

determined by the contract between the support contractor and the Government. It may be that the Government is not authorized to grant any rights in such Inventions to the Collaborating Party under this Agreement. (37 C.F.R. Section 401.14(c)).

The Collaborating Party shall have no rights in any inventions made by third parties, except as provided by separate agreement between the Collaborating Party and such third party. Such separate agreement regarding rights in inventions shall not denigrate any rights allocated by this Agreement between the Collaborating Party and the U. S. Government. Should an invention be made jointly by an employee of the U. S. Government, and one or more third parties and not by any employee of the Collaborating Party, the Collaborating Party shall have no rights in any such invention, except as provided by separate agreement among all inventors or their assignees. Should an invention be made jointly by employees of the U. S. Government the Collaborating Party and any third parties, all joint inventors, or their assignees, agree to negotiate such cross licenses as may be necessary to effect the maximum commercialization of the invention.

12.4 License Agreements. Each license by either party shall be memorialized in a written instrument that establishes and confirms the rights that the Government has acquired in the Subject Invention. This License Agreement shall be in a form acceptable to both parties.

12.5 Filing Patent Applications. Subject to negotiation, the Collaborating Party shall have the first option to file a joint patent application on any joint Subject Invention Made under this Agreement, which option shall be exercised by giving notice in writing to the FAA and by filing a patent application in the U.S. Patent and Trademark Office (USPTO) within six (6) months after written notice is given. If the Collaborating Party elects not to file or not to continue prosecution of a patent application on any such Invention in any country or countries, the Collaborating Party shall notify the FAA thereof at least three (3) months prior to the expiration of any applicable filing or response deadline, priority period or statutory bar date. In any country in which the Collaborating Party does not file, or does not continue prosecution of, or make any required payment on, an application or patent on any such Invention, the FAA may file, or continue prosecution of, or make any required payment on, an application or patent. The Collaborating Party then assigns to the FAA whatever right, title and interest the Collaborating Party has in and to such Invention.

12.6 Government Interest. Any patent application filed on any Subject Invention Made under this Agreement shall include in the patent specification thereof the statement: "This invention was made in the performance of a Cooperative Research and Development Agreement **No. 15-CRDA-0313** with the Federal Aviation Administration, Department of Transportation. The Government of the United States has certain rights to use the invention."

12.7 March-In Rights The Government may require the Collaborating Party to grant licenses in subject inventions under the exceptional circumstances identified at 15 U.S.C. 3710a(b)(1)(B and C).

12.8 Patent Expenses. Unless otherwise agreed, the party filing an application shall pay all patent application preparation and filing expenses and issuance, post issuance and patent maintenance fees associated with that application. Any party having an obligation to pay a maintenance fee who decides not to pay such expenses shall so notify the other party of that decision in sufficient time to permit the other party to preserve its interest in the patent.

12.9 Patent Cooperation. Both parties agree to cooperate in executing all necessary documents and obtaining cooperation of its employees in executing such documents related to such application or patent.

Article 13. Copyrights

13.1 Ownership of Copyright. The Collaborating Party shall have the right to copyright all software (including modifications and enhancements thereto), documentation, and other works created in whole or in part by the Collaborating Party under this Agreement. The Collaborating Party shall mark any such works with a copyright notice showing the Collaborating Party as the author or co-author and shall in its reasonable discretion determine whether to file applications for registration of copyright.

13.2 Copyright Notice. The Collaborating Party will clearly mark all copyrighted software or other works provided to the Government with appropriate notices.

13.3 No License to Government. Title to software developed by the Collaborating Party exclusively at private expense shall remain in the Collaborating Party. Rights in patentable computer software are covered in Article 12, Patents, above. The Government, however, is not precluded from negotiating for rights in copyrighted works, including computer software, created or developed under this Agreement.

Article 14. Proprietary Information

14.1 Ownership of Proprietary Information. Subject to Articles 12 and 13, Patents and Copyrights, the Collaborating Party shall own all Proprietary Information that it solely developed under this Agreement. The Collaborating Party hereby grants to the Government "limited rights" in all technical data and "restricted rights" in all computer software that it developed at private expense under this Agreement. Those rights described as "limited rights" and "restricted rights" may be found at 48 C.F.R. 52.227-14(g)(3) and (g)(4), respectively. No other rights are granted except as may be provided under this CRDA.

14.2 Proprietary Notice. The parties will mutually develop an appropriate proprietary notice(s) for use in connection with this Agreement. The parties agree to cooperate in removing or remarking any information marked as Proprietary Information which ceases to be Proprietary Information for reasons set forth in Article 1.11, Definitions or because the information was publicly disclosed in a patent, copyrighted work, or as may be required by law.

14.3 Effect of the Freedom of Information Act (FOIA), 5 U.S.C. §552.

14.3.1 Proprietary Information Developed by the Collaborating Party. The Government shall not disclose any trade secret or commercial or financial information that is privileged or confidential under the meaning of §552(b)(4) of Title 5 of the United States Code that is obtained from or solely developed by the Collaborating Party in the course of performing work under this Agreement.

14.3.2 Jointly Developed Proprietary Information. The Government shall not disclose any trade secret or commercial or financial information that is privileged or confidential under the meaning of §552(b)(4) of Title 5 of the United States Code that is developed solely by the Government, or jointly by the Government and the Collaborating Party, in the course of

performing work under this Agreement for a period of five (5) years after the date of development of such Proprietary Information.

SECTION H: NOTICES AND CERTIFICATION

Article 15. Notices

Notices, communications, and payments hereunder shall be deemed made if given postage prepaid and addressed to the party to receive such notice, communication or payment at the address given below, or such other address as may hereafter be designated by notice in writing.

A. Formal notices under this Agreement shall be addressed as follows:

FAA:

Name: John Hensyl
Technology Transfer Program Manager
Address: Federal Aviation Administration
William J. Hughes Technical Center
Atlantic City International Airport
New Jersey 08405
Telephone: (609) 485-7140
Email: john.hensyl@faa.gov

Collaborating Party

Name: Rhonda Rodenbaugh
Vice President
Address: 9001 Glenwood Ave. Ste. 100
Raleigh, NC 27617
Telephone: (b) (6)
Email: (b) @precisionhawk.com

B. Correspondence relating to technical matters and reports should be addressed as follows:

FAA:

Name: Gemechu Gelgelu, AJV-11
Address: FAA
800 Independence Ave.
Suite 423E
Washington D.C. 20591
Telephone: (202) 267-9413
Email: gemechu.gelgelu@faa.gov

Collaborating Party

Name: Tyler Collins, Business Development - Director
Address: 9001 Glenwood Ave. Ste. 100
Raleigh, NC 27617
Telephone: (b) (6) [REDACTED]
Email: (b) (6) @precisionhawk.com

With copies to:

Name: Nancy Clarke, ANG-E4
Address: Federal Aviation Administration
William J. Hughes Technical Center
Atlantic City International Airport
New Jersey 08405
Telephone: (609) 485-7044
Email: nancy.ctr.clarke@faa.gov

Article 16. Review, Ratification, and Certification

16.1 Review. One copy of this document must be presented to an authorized official of the FAA for review. Receipt of this document by such authorized official will begin a thirty (30) day period during which the Agreement may be disapproved or modification required. If no notice of disapproval or required modification is received from the authorized official during the review period, this Agreement shall enter into effect as of the date of the signature of the Director of the Technical Center.

16.2 Ratification. In the event that the authorizing official of the FAA exercises the authority reserved by Article 16.1, Review, the Collaborating Party shall have thirty (30) days from notification of the required modifications to ratify the modifications or terminate the Agreement.

16.3 Certification. This Agreement has been received by Gary A. Norek. The effort called for under this Agreement is consistent with the mission of the FAA and the participation by the FAA in this Agreement is endorsed and supported by the Airspace Policy & Regulation Group



Gary A. Norek, AJV-11 Airspace Policy & Regulation Group

DATE: 4 June 2015

IN WITNESS THEREOF, the Parties have caused this Agreement to be executed in duplicate by their duly authorized representatives as follows:

PrecisionHawk USA Inc.

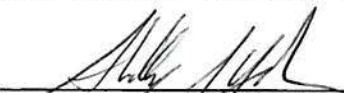
BY: 

NAME: Christopher Dean

TITLE: CEO

DATE: May 22, 2015.

FAA William J. Hughes Technical Center

BY: 

NAME: Shelley Yak

TITLE: Director (Acting)

DATE: 6/12/15

APPENDIX A

OBLIGATION OF THE PARTIES

Background

PrecisionHawk USA Inc. is an unmanned aerial systems (UAS) and remote sensing company founded in 2010. The company provides a holistic, end-to-end solution for aerial data gathering, processing and analysis to provide actionable information to clients across a wide range of civilian industries. The team is comprised of professionals with backgrounds in remote sensing, manned aviation, unmanned aircraft operations, software development, hardware development, data processing and GIS systems development. The company operates out of offices in Indianapolis, Ind., Raleigh, N.C. and Toronto, Ont.

The company also develops technologies to track and manage all sizes of unmanned aircraft at varying altitudes. These technologies include hardware "transponders" on-board the UAS coupled with software running on ground based servers which aim to help manage air traffic for UAS in the NAS.

Objective and Plan

The objective of this Agreement is to develop technologies that will allow PrecisionHawk USA Inc., at some point in the future, to operate UAS within the NAS system in beyond line of sight / extended visual line of sight operations in support of aerial data gathering including but not limited to autonomous systems operating unattended without observers. As a notional goal, PrecisionHawk USA Inc. envisions extended visual line of sight sUAS's operational over farmlands, forests, and other industry locations (in a limited capacity and within FAA Test Site rules and regulations) in lightly populated areas within 12 months of research commencement.

Precisionhawk USA Inc. long term UAS program envisions turnkey operations of multi-rotor and fixed-wing UAS for real-time transmission of high-resolution and multi-spectrum imagery for the purposes of aerial data collection for a variety of applications including farmland, forests, and other industry observations, and infrastructure inspection. This long-term vision includes both operations of UAS in the National Airspace System.

PrecisionHawk USA Inc. desires to acquire research data, develop operational standards and create technologies necessary to ensure an adequate level of safety in UAS operations by developing the following capabilities:

- For UAS operating within the NAS to follow 4D trajectories. This includes the capability to navigate over land and water with the aid of automated system, meet vertical and lateral navigation restrictions, and automatically execute failsafe procedures in the event of violation of those restrictions.
- For command and control of UAS to leverage various PrecisionHawk wireless networks. This includes the capability to monitor and control multiple UAS from a centralized location.
- For UAS to operate with sense and avoid technology appropriate to the size and operation of the system.
- For UAS to be tracked and managed by an automated airspace traffic management system.

Data collected from this project through developed technologies and operational standards will help enable PrecisionHawk and other UAS manufacturers and operators, in the future, to conduct safe and efficient UAS operations in the NAS.

Expected Results

The Expected Results of this Agreement are PrecisionHawk and the FAA will have a better understanding of processes, procedures and technologies to help safely integrate UAS into the NAS through data that is collected within the CRDA scope. PrecisionHawk USA Inc. and the FAA will gain a strong understanding of different types of UAS and payloads that can assist in the support of aerial data gathering for farmlands, forests, and other rural industry. PrecisionHawk USA Inc. and the FAA will also gain strong understandings of the potential use of automated traffic control systems and tracking technologies for UAS as well as operational standards through analysis of data that is collected through the phases of this project.

Outputs

The Outputs of this Agreement are:

1. Within 12 months, some sUAS operations above survey locations including farmlands, forests, and other rural industry. Either via Section 333, COA, Test Site COA, CRDA CONOPS, or FAA Exemption.
2. Within 36 months, based on test results and technology, a better understanding of the path to integration of sUAS fixed wing systems integrated into NAS.
3. Testing and evaluating potential sUAS sense and avoid technology.
4. Testing and evaluating of automated traffic control systems and real time tracking/communication technologies.
5. Further development of 4D navigational systems.

Constraints

To the extent possible, cooperative test activities will be scheduled by mutual agreement. However, there may be times when either party has schedule constraints, which may not be agreeable to the other party. All cooperative efforts will be proposed in writing and will be executed upon mutual agreement by both parties, subject to availability of resources.

Obligations of the FAA:

The FAA will provide access to agreed upon technologies and test data results related to UAS operations in the NAS, including navigation, sense and avoid and human/machine interface, and air traffic interfaces. This data will assist PrecisionHawk USA Inc. in supporting its aerial data gathering program utilizing UAS and supporting technologies.

Obligations of PrecisionHawk USA Inc.:

The Collaborating Party will provide various types of UAS, control stations, and supporting assets, for use in the R&D. PrecisionHawk USA Inc. will also provide R&D test flights and test data to the FAA which will assist them in integrating UAS into the NAS

Test Data will include but not be limited to:

1. Incident reporting (Engine failures, GPS failures, Near Misses, Containment Issues, or any time emergency procedures are required)
2. Mean-time-between-Failure information
3. Flight logs (indicating flight times, locations)
4. Access to aircraft log books
5. Access to aircraft telemetry files.

***This CRDA does not authorize the Collaborating Party to operate an Unmanned Aircraft System (UAS) in the National Airspace (NAS). Separate authorization to do so is required.**

APPENDIX B

QUARTERLY PROGRESS REPORT

CRDA #: 15-CRDA-0313 Quarterly Report # ____ Date: _____

Synopsis:

PI: Gemechu Gelgelu

Routing Symbol: AJV-11 Phone: _____

Effective Date: _____ Expiration Date: _____

Collaborating Party: PrecisionHawk USA Inc.

STATUS:
(Brief narrative)

Successes (How the project met or exceeded its objectives):

Shortcomings (Disappointments, limitations, shortfalls):

Continuing Activities (Follow-on work; other research; additional agreements):

Intellectual Property (status of patent applications, patents, licenses, etc.):

Technology Transfer Applications (Commercial applications, markets, etc.):

Check appropriate box:

- Will complete on time
- Will require more time (only)
- Will require more time and minor change in Obligations of the Parties (OP)
- Will require major change in OP
- Will complete on time and extend activities under a new CRDA
- Other: _____

FINAL REPORT

CRDA #: 15-CRDA-0313

Date: _____

Synopsis:

PI: Gemechu Gelgelu

Routing Symbol: AJV-11

Phone:

Effective Date: _____

Expiration Date: _____

Collaborating Party: PrecisionHawk USA Inc.

Prepare a brief narrative report discussing the highlights of the project. Address the following topics (use additional pages if necessary).

Successes (How the project met or exceeded its objectives):

Shortcomings (Disappointments, limitations, shortfalls):

Continuing Activities (Follow-on work; other research; additional agreements):

Intellectual Property (status of patent applications, patents, licenses, etc.):

Technology Transfer Applications (Commercial applications, markets, etc.):

CRDA 313 Value/Benefit

Vendor: PrecisionHawk USA, Inc.

FAA PI: Gemechu Gelgelu, AJV-11

Expires: XX/XX/XXXX Executed: XX/XX/XXXX Last Amended: N/A

Value/Benefit:

The safe integration of Unmanned Aircraft Systems (UAS) into the National Airspace System (NAS) is critical to the FAA. Aerial data gathering, processing and analysis to provide actionable information to clients across a wide range of civilian industries are critical to the nation.

Technologies developed within this CRDA will assist in UAS integration in the NAS, including technologies that will allow for operations within a structured volume of airspace. The successful development and use of UAS technologies in aerial data gathering will have a significant benefit to the local, regional and national communities.