



DEPARTMENT OF THE ARMY
U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT COMMAND
6662 GUNNER CIRCLE
ABERDEEN PROVING GROUND, MARYLAND 21005-5201

February 18, 2020

Office of the Chief Counsel

Mr. John Greenewald
The Black Vault
27305 W. Live Oak Road
Suite 1203
Castaic, CA 91384-4520
john@greenewald.com

Dear Mr. Greenewald:

This letter is in response to your Freedom of Information Act (FOIA) request, dated January 28, 2020, reference number **CCDC FA-20-0016**, wherein you requested a copy of the active Cooperative Research and Development Agreement (CRADA) with Lockheed Martin Corporation.

We have enclosed three (3) records that are responsive to your request (35 total pages). We determined portions of the records are exempt from release pursuant to Title 5 U.S.C. § 552(b)(3), ("Exemption 3"), (b)(4) ("Exemption 4") and (b)(6) ("Exemption 6"). Exemption 3, 15 USC § 3710a(c)(7) protects from disclosure "[T]rade secrets or commercial or financial information that is privileged or confidential, under the meaning of section 552(b)(4) of Title 5, which is obtained in the conduct of research or as a result of activities under this chapter," which pertains to cooperative research and development agreements for the purpose of technological and industrial innovation. Exemption 4 protects "trade secrets and commercial or financial information... [that is] privileged or confidential." Exemption 6 and Department of Defense policy protects Army personnel from an unwarranted invasion of personal privacy. We removed the names, phone numbers, and email addresses of personnel who are not general officers, are not division chiefs, who do not normally work with the general public, or who are not federal employees.

Please note that this decision is made as an initial determination only. General John M. Murray, Commanding General, U.S. Army Futures Command, is the Initial Denial Authority and by position, I have been delegated authority as an Initial Denial Authority. You should send your appeal to this office, and in turn, we will forward it to the Army General Counsel, the designated Army Freedom of Information Act appellate authority. To meet the deadline for appeal, the appeal letter must be received by this office and forwarded to the Secretary of the Army within ninety (90) days of the date of this letter. Please send correspondence to the following address: CCDC Legal Office, ATTN: FOIA (Ms. Kelly Knapp), E3331 Ricketts Point Road, Rm 120-2, Gunpowder, MD 21010.

CCDC FOIA FA-20-0016 – Mr. John Greenewald

For further assistance to discuss any aspect of your request, you have the right to contact the Army FOIA Public Liaison Officer, Ms. Alecia Bolling, by email at usarmy.belvoir.hqda-oaa-ahs.mbx.rmda-foia-public-liaison@mail.mil or by telephone at 571-515-0306. Additionally, you may contact the Office of Government Information Services (OGIS) at the National Archives and Records Administration (NARA) to inquire about the FOIA mediation services they offer. Contact information for OGIS is as follows: NARA-OGIS, 8601 Adelphi Road-OGIS, College Park, MD 20740-6001; email at ogis@nara.gov; telephone number at 202-741-5570; toll free number at 877-684-6448; or by facsimile at 202-741-5769.

FOIA processing fees were not assessed. Should you have any questions or concerns regarding the processing of this FOIA request, **CCDC FA-20-0016**, please contact Ms. Kelly Knapp at 410-436-7312 or kelly.d.knapp.civ@mail.mil.

Sincerely,

Jan S. McNutt
Initial Denial Authority, CCDC

Enclosures

This document is made available through the declassification efforts
and research of John Greenewald, Jr., creator of:

The Black Vault



The Black Vault is the largest online Freedom of Information Act (FOIA)
document clearinghouse in the world. The research efforts here are
responsible for the declassification of hundreds of thousands of pages
released by the U.S. Government & Military.

Discover the Truth at: <http://www.theblackvault.com>

COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA)

FOR

DOMESTIC TECHNOLOGY TRANSFER

BETWEEN

**U.S. ARMY
RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
*RDECOM HEADQUARTERS***

And

LOCKHEED MARTIN CORPORATION

The purpose of this Agreement is to establish a cooperative effort between the U.S. Army *RDECOM Lab/Centers*, and Lockheed Martin Corporation (hereafter PARTNER or Lockheed Martin Corporation at 6801 Rockledge Drive, Bethesda, Maryland) which involves research and development that is consistent with the military requirements of *RDECOM Lab/Centers* and PARTNER's commercial technology goals.

It is understood by the Parties that the term "PARTNER" as used herein refers to Lockheed Martin Corporation with respect to intellectual property.

TABLE OF CONTENTS

PARAGRAPH	PAGE No.
PREAMBLE	4
Article I General	4
Article II Definitions.....	4
Article III Cooperative Research	6
Article IV Reports.....	7
Article V Financial Obligation.....	8
Article VI Title to Property.....	8
Article VII Patents	9
Article VIII Copyrights.....	13
Article IX RESERVED.....	14
Article X Exchange of Technical Data and Software	14
Article XI Protected Information.....	14
Article XII Publications	17
Article XIII Export Control	17
Article XIV Competitiveness.....	18
Article XV Termination.....	18
Article XVI Disputes	19
Article XVII Liability	19
Article XVIII Enforcement.....	20
Article XIX Modification	21
Article XX Assignment.....	21
Article XXI Notices	21

Article XXII	Endorsement.....	22
Article XXIII	Duration of Agreement	22
Article XXIV	Acceptance.....	23
APPENDIX A	Joint Work Statement Sample.....	24
APPENDIX B	25

COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

PREAMBLE

The U.S. Army *RDECOM Lab/Centers* (hereinafter "RDECOM") and Lockheed Martin Corporation (hereinafter "PARTNER") enter into this Cooperative Research and Development Agreement (CRADA), (hereinafter "Agreement") and agree as follows:

Article I. General

1.1. Authority

This Agreement is entered into pursuant to the Federal Technology Transfer Act of 1986, (Public Law No. 99-502), as codified in 15 United States Code (U.S.C.) 3710a and implemented by Executive Order 12591 (10 April 1987). This Agreement is not a procurement contract, grant or cooperative agreement as those terms are used in 31 U.S.C. 6303, 6304, and 6305.

1.2. RDECOM Representative

The person signing this Agreement on behalf of RDECOM represents that he or she has authority to enter into this Agreement subject to review in limited situations.

1.3. PARTNER Representative

The person signing this Agreement on behalf of PARTNER represents that he or she has the authority to bind the PARTNER to the terms of this Agreement.

1.4. 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 PARTNER or any valid order of any court, or any regulatory agency or other body having authority to which PARTNER is subject.

Article II. Definitions

2.1. Background Inventions or Non-Subject Data - means Inventions or information that do not meet the definition of Subject Inventions or Subject Data, respectively.

2.2. Computer Software or Software - means computer programs, source code, source code listings, object code listings, designs, details, algorithms, processes, flow charts, formulae, and related material that would enable the software to be reproduced, recreated, or recompiled. Computer Software does not include computer databases or computer software documentation.

2.3. Data - means recorded information of any kind regardless of the form or method of the recording, including Technical Data and Computer Software.

- 2.4. Government - means the United States of America and the agencies thereof.
- 2.5. Government Purposes - means any activity in which the Government is a party, but does not include commercial purposes or commercial activity.
- 2.6. Government Purpose Rights – means the right of the Government to use, duplicate, or disclose Data, in whole or in part, and in any manner, for Government Purposes only, and to have others to do so for Government Purposes only. Government Purpose Rights includes competitive procurement, but does not include the right to have or permit others to use, duplicate or disclose Data for commercial purposes.
- 2.7. Invention - means any invention or discovery, which is or may be patentable or otherwise protected under U.S.C. Title 35 or any novel variety of plant, which is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 7321 et seq.).
- 2.8. Intellectual Property – means patents, copyrights, and other forms of comparable property rights protected by Federal law and foreign counterparts.
- 2.9. Joint Subject Invention – means a Subject Invention Made jointly by employees of RDECOM and employees of PARTNER in the performance of work under this Agreement.
- 2.10. Made - means, when used in conjunction with any Invention, the conception or first actual reduction to practice of the Invention.
- 2.11. Party or Parties - means RDECOM and/or PARTNER based upon usage.
- 2.12. Proprietary Information - means information that embodies trade secrets developed at private expense, or business, commercial, or financial information that is privileged or confidential, provided that such information: (a) is not known or available from other sources without obligations concerning its confidentiality; (b) has not been made available by the owners to others without obligation concerning confidentiality; (c) is not already available to the Government without obligation concerning its confidentiality; and (d) has not been developed independently by persons who have had no access to the information.
- 2.13. Protectable Invention Information – means information about an Invention in which the Government owns or may own a right, title, or interest, and that are subject to confidentiality under 35 U.S.C. 205 for a reasonable time in order for a patent application to be filed.
- 2.14. Restricted Access Information – means Subject Data generated by the Government that would be Proprietary Information if the information had been obtained from a non-Federal collaborator participating in a CRADA. Under 15 U.S.C. 2710a(c)(7)(B) the collaborators mutually may agree to provide appropriate protection to Subject Data generated by the Army against public dissemination or release under the Freedom of

Information Act (FOIA) for a period of up to five (5) years after development of the Subject Data.

- 2.15. Subject Data - means recorded information first produced in performance of this Agreement. Subject Data includes both Technical Data and Computer Software. The term does not include Data incidental to the administration of this Agreement, such as financial or management information. Subject Data does not include minor modifications (as defined in DFARS 252.227-7014(a)(13) (FEB 2014)) to pre-existing Computer Software, regardless of whether first produced in performance of this Agreement, which shall remain Non-Subject Data. The Parties' respective rights in non-minor modifications to pre-existing Computer Software, if applicable, shall be as set forth in the applicable Joint Work Statement.
- 2.16. Subject Invention - means any Invention Made in the performance of work under this Agreement.
- 2.17. Technical Data - means recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation and databases). The term does not include Computer Software or Data incidental to the administration of this Agreement, such as financial or management information.
- 2.18. Unlimited Rights – means the right to use, modify, reproduce, release, disclose, perform, or display Technical Data or Computer Software in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so.

Article III. Cooperative Research

3.1. Joint Work Statement (JWS)

Cooperative research and development efforts under this Agreement shall be performed in accordance with Joint Work Statements (hereafter "JWS") issued from time to time under this Agreement. PARTNER may enter into a JWS with any RDECOM Lab/Center pursuant to this Agreement, and said JWS will become effective only upon signature of an RDECOM Lab or Center Technical Director having CRADA signature authority. Each JWS will be assigned a sequential number for project identification purposes. Each JWS will be assigned a sequential number for project identification purposes. Each JWS or project shall include the following appendices: (1) a statement of work and accounting/payment instructions; (2) an estimate of resources; and (3) administrative and technical points of contacts and signature blocks. Each JWS shall be subject to the terms and conditions of this Agreement. A JWS shall not be binding unless and until it is signed by both Parties. A JWS may vary individual terms of this Agreement by specifying such variance [e.g., "Master CRADA paragraph x.y is replaced with the following: ___ "], but only for the terms of that particular JWS. RDECOM and PARTNER will participate in this cooperative effort and utilize such personnel, facilities, equipment, know-how, and information consistent with the JWS and their own policies.

3.2. Review of Work

RDECOM and PARTNER will hold periodic conferences to review the CRADA progress. The Parties agree that the general exchange of information pursuant to this Agreement is not a "collection of information" as defined at 44 U.S.C. 3502(3) and, therefore, that this CRADA is not subject to the requirements of the Paperwork Reduction Act (44 U.S.C. §§ 3501 et seq.).

3.3. Joint Technical Effort

For each JWS issued under this Agreement, RDECOM and PARTNER agree to establish a joint research and development team (hereinafter the "Team") that shall conduct the sponsored research outlined in the JWS. The members of the Team shall be specified in each JWS. The nature of this cooperative effort is such that completion of this effort within the period of performance specified or the resources planned cannot be guaranteed. Accordingly, each Party pledges to support the Team in a mutually cooperative manner, and on a reasonable best effort basis.

3.4. Independent Parties

The relationship of PARTNER and RDECOM to this Agreement is that of independent Parties and not as agents of each other or as a joint venture. RDECOM shall maintain sole and exclusive control over its personnel and operations. PARTNER shall maintain sole and exclusive control over its personnel and operations.

3.5. JWS Changes

Each Party may suggest changes to the scope and direction of the cooperative effort and the JWS. The Parties shall make a good faith effort to agree to any changes consistent with the basic scope of research set forth in the JWS. Any change to a JWS shall be made by a modification to such JWS signed by both Parties in accordance with Section 19.2.

3.6. Administrative Points of Contact

The principal Points of Contact for RDECOM and PARTNER are as set forth below.

RDECOM POC:

Name: (b) (6)
Title: Technology Transfer Program
Manager
Tel: (b) (6)
Em: (b) (6)

PARTNER POC:

Name: (b) (6)
Title: LM Government Affairs
Tel: (b) (6)
Em: (b) (6)

Article IV. Reports

4.1. Progress and Other Reports

The Parties shall prepare and exchange written reports in accordance with the JWS regarding their cooperative effort to include: results obtained, problems encountered, Government expenditure of funds, if applicable, and recommendations for further efforts. Any progress

report shall be prepared subject to the joint supervision of the Parties; each shall make their own independent judgment regarding the advancements.

Article V. Financial Obligation

5.1. RDECOM

RDECOM shall not provide any Federal funds to the PARTNER under this Agreement.

5.2. PARTNER

PARTNER shall fund all of its activities under this Agreement, and in addition, PARTNER agrees to reimburse RDECOM Lab/Center to the extent provided in any individual JWS and instructions included therein. It is anticipated that some JWSs will be performed by RDECOM at its own expense.

Article VI. Title to Property

6.1. Title to Preexisting or Acquired Tangible Property

Each Party shall retain title to all tangible property to which it had title prior to the effective date of this Agreement or to which it acquired or acquires title, by purchase or by fabrication, outside of the scope of this Agreement. Consumable property to be used pursuant to this Agreement shall remain the property of the original owning party until consumed.

6.2. Title to Developed Property

All tangible property fabricated or acquired under this Agreement with all components provided by one Party shall remain the property of that Party. Unless otherwise agreed in an individual JWS, tangible property having any component purchased or supplied by the Government shall be the property of the Government, unless such tangible Government components reasonably can be separated from non-Government components without damage to any of the individual components comprising the tangible property. After termination of this Agreement, the Parties may, by mutual consent, separate the tangible property into its components and the separated components shall remain the property of the Party that originally acquired or fabricated same.

6.3. Tangible Property Operational and Disposition Costs

Each Party shall be responsible for all costs of maintenance, removal, storage, repair, disposal and shipping of all tangible property to which it has title.

6.4. Disposal of Tangible Property

Unless otherwise agreed, each Party shall take possession of its respective tangible property within sixty (60) days of termination of this Agreement. Each Party shall cooperate with the other Party in the recovery or disposition of the other Party's property.

Article VII. Patents

7.1. Background Inventions

This Agreement does not grant any implied licenses for practicing Background Inventions in the performance of work outside of this Agreement. However, as to work performed under this Agreement in accordance with an individual JWS, each Party agrees to grant to the other party express or implied royalty-free, non-exclusive licenses to practice Background Inventions for the performance of work under this Agreement.

7.2. Reporting

7.2.1 Annual Report of Subject Inventions: Each Party shall provide to the other Party an annual report every twelve months from the effective date of each JWS, listing all Subject Inventions Made under the JWS during that period. The annual report shall also represent that all Subject Inventions have been reported or that there were no Subject Inventions for that period.

7.2.2 Detailed Disclosure of Subject Inventions: Each Party shall prepare a written disclosure of each Subject Invention Made by its employee(s), in sufficient detail to convey a clear understanding of the Subject Invention. Each Party shall provide a copy of the detailed disclosure to the other Party not more than two months after the Party's personnel responsible for patent matters receives a completed disclosure from its employee(s). In no case shall such detailed disclosure be provided to the other Party more than six months after the Party's personnel responsible for patent matters first becomes aware that a Subject Invention has been Made by its employee(s) or, when practicable, less than one hundred twenty (120) days before expiration of a statutory bar date, whichever occurs earlier. In the case of Joint, Subject Inventions, unless the Government agrees otherwise, it shall be the responsibility of the PARTNER to prepare and provide the detailed disclosure as described above, and the Government shall cooperate fully in the preparation of the detailed disclosure.

7.3. RDECOM Subject Inventions

RDECOM, on behalf of the Government, shall retain title to each Subject Invention Made exclusively by its employees. RDECOM has the first right to file patent applications on these Subject Inventions at its own expense. RDECOM grants to PARTNER a non-exclusive, paid-up, irrevocable license to practice or have practiced RDECOM-Made Subject Inventions throughout the world by or on behalf of the PARTNER. Such nonexclusive license shall be evidenced by a confirmatory document prepared by RDECOM in the form attached hereto as Appendix B. The grant of additional license rights by RDECOM to PARTNER is contemplated in Paragraph 7.9 below.

7.4. Partner Subject Inventions

PARTNER shall retain title to each Subject Invention Made exclusively by its employees. PARTNER has the first right to file patent applications on these Subject Inventions at PARTNER's own expense. In accordance with 15 U.S.C. 3710a(b)(2), the PARTNER grants to

the Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced throughout the world by or on behalf of the Government for research or other Government Purposes Subject Inventions Made under this Agreement by PARTNER and PARTNER's employees. Such nonexclusive license shall be evidenced by a confirmatory license agreement prepared by PARTNER in the form attached hereto as Appendix B.

Further, PARTNER agrees to secure for RDECOM the Government Rights in any Inventions Made by other entities in performing work called for by this CRADA for the benefit of PARTNER. The rights to be secured by PARTNER for the Government in such circumstance shall be the same rights which would inure to the Government if such Inventions were Subject Inventions under this Agreement. Such rights shall be evidenced by a confirmatory license agreement prepared by PARTNER in the form attached hereto as Appendix B.

7.5. Joint Subject Inventions

Title to Subject Inventions Made jointly by employees of RDECOM and employees of PARTNER ("Joint Subject Inventions") shall be held jointly by the Government and PARTNER, with each Party having the right to exploit those Inventions in any manner without accounting to the other Party except to the extent contemplated to the contrary in this Agreement. PARTNER shall have the initial option to file patent applications on Joint Subject Inventions at its own expense. If PARTNER declines to file or complete prosecution of such patent applications, PARTNER agrees to assign title to such Joint Subject Inventions to the Government, provided, however, the Government elects to file and prosecute a patent application at its expense. The assignment of the above rights to the Government shall be subject to the retention by the PARTNER of a paid-up, nonexclusive, irrevocable license to practice or have practiced the Subject Invention throughout the world by or on behalf of PARTNER.

7.6. Filing of Patent Applications

7.6.1 First Rights Party The Party having the right to retain title and/or file patent applications on a specific Subject Invention, hereinafter "First Rights Party," may elect to file patent applications thereon provided it so advises the other Party within sixty (60) days from the date it discloses the Subject Invention to the other Party. Any election NOT to file a patent application shall also be conveyed, in writing, by the same date. In the event that the First Rights Party fails to advise the other Party of its intent to file patent applications and in what countries it intends to file within ninety (90) days from the date it reports the Subject Invention, the other Party may elect to file patent applications on such Subject Invention in those countries for which an affirmative election has not been timely made.

7.6.2 Failure to File. The First Rights Party shall file within six months from the date it discloses the Subject Invention to the other Party, or before any statutory bar date, if same is earlier. If the First Rights Party fails to file within six months from the date it discloses the Subject Invention to the other Party, or at least one month before a statutory bar date, or fails to provide assurance of filing before the statutory bar date, the other Party may elect to file patent applications on such Subject Invention in those countries where a patent application has not been timely made or assured. For purposes of this paragraph, the filing of a U.S. Patent application qualifying as a priority document for filing of an International Patent Application under the

Patent Cooperation Treaty (PCT) shall be deemed a timely application filing in PCT signatory countries.

7.6.3 Written Notice. If the First Rights Party elects not to file a PCT application, elects not to designate all PCT countries, or elects not to enter the national phase in any PCT signatory country and elects not otherwise to pursue patent rights in all countries, the First Rights Party shall provide written notice to the other Party not less than ninety (90) days before the expiration of the applicable deadline for filing, designation, or entry of national phase. In such an event, the other Party may elect to file the application or continue the prosecution.

7.6.4 Other Party Rights. If the other Party elects to file patent applications under Section 7.6.1, 7.6.2 or 7.6.3 above, First Rights Party agrees to assign to the other Party its rights, title and interest in such patent rights and to cooperate with the other Party in the preparation and filing of patent applications. The assignment of the above rights to the other Party shall be subject to the retention by the First Rights Party of a paid-up, nonexclusive, irrevocable license to practice or have practiced the Subject Invention worldwide by or on behalf of that Party. Where both Parties will be filing or prosecuting an application in different countries, the assignment shall reflect this distinction of rights by jurisdiction.

7.6.5 U.S. Inventions To avoid potential deemed or actual export of information subject to the International Traffic in Arms Regulations or other export control laws, the Parties agree that any patent application for a Subject Invention first Made in the United States will be first filed in the United States as a U.S. domestic (not PCT) patent application.

7.7. Patent Expenses and Cooperation

The expense attendant to the filing of patent applications as specified above shall be borne by the Party filing the patent application. Each Party shall provide the other Party with copies of the U.S. patent applications (and subsequent prosecution documents) it files in the U.S. Patent and Trademark Office, along with the power to inspect and make copies of all documents retained in the official patent application files by the applicable patent offices. Copies so obtained will by their nature be unmarked. Such copies will be presumed protected until verified otherwise. The Party filing the patent application shall have the right to control the prosecution of the application. The Parties agree to cooperate with each other in preparing and prosecuting patent applications.

7.8. Maintenance Fees

At its option, the Party filing the patent application will pay all patent maintenance fees to the U.S. Patent and Trademark Office; or, if a foreign patent issues, to any foreign patent offices, respectively in order to maintain the patent's enforcement. If that Party decides not to pay maintenance fees, it shall notify the other Party, who may pay the maintenance fees if it desires to maintain the enforcement of the patent. The notification shall be given sixty (60) days or more prior to the maintenance fee due date. If the Party that holds title to the patent decides not to pay such maintenance fees, and the other Party elects to pay such maintenance fees, the Party that holds title to the patent will assign title to the patent to the other Party. The assignment of title to the other Party shall be subject to the retention by the assigning Party of a paid-up.

nonexclusive, irrevocable license to practice or have protected the patent in such country by or on behalf of the assigning Party.

7.9. Licensing of or Assignment of RDECOM-Made or Joint Subject Inventions and RDECOM Background Inventions

With respect to each JWS issued under this Agreement, in addition to the PARTNER license granted in Paragraph 7.3, the Parties may mutually agree to one of the following additional grants or assignment of rights to PARTNER under RDECOM-Made and/or Joint Subject Inventions Made in the performance of that JWS and when applicable RDECOM Background Inventions related thereto (Alternative A or Alternative B) or will mutually agree to select one of the additional grants or assignments at a later time specified in the JWS. In certain circumstances a given JWS may involve two or more widely disparate activities with each implicating a different alternative selected from Alternatives A and B below. The JWS will be written initially or amended subsequently, as the case may be, to reference the applicable Alternative A and/or B agreed to by the Parties for that JWS. Upon agreement between the Parties, applicable alternative(s) may be subsequently changed and the JWS shall be amended to reflect that change.

7.9.1 Alternative A

RDECOM agrees to enter into negotiations in good faith with PARTNER for an exclusive license to Partner within specified fields of use, at a reasonable royalty rate, and under other conventional terms and conditions (including without limitation the right of patent enforcement), under RDECOM-Made and Joint Subject Inventions. Such license agreement shall be subject to nonexclusive, nontransferable, irrevocable, paid-up license to practice the Subject Invention or have the Subject Invention practiced throughout the world for Government Purposes. Such license agreement may also be subject to various international agreement and treaty obligations of the United States Government such as described in DoD Instruction 2000.03. RDECOM reserves the right to ensure that such license is consistent with the Government's international treaty and agreement obligations. The specified fields of use and the royalty rate shall be agreed to between the Parties in good faith no later than 60 days after the filing of a patent application claiming the subject invention, or such other later time as mutually agreed. The royalty rate shall conform to industry standards and reflect the Parties' relative technical and financial contributions to the relevant activities under the JWS, and may be subject to a cap if the Parties so agree.

7.9.2 Alternative B

RDECOM assigns to PARTNER its entire right, title and interest in RDECOM-Made, and Joint Subject Inventions. The assignment may be with or without financial compensation paid by PARTNER to RDECOM, and any financial compensation may be in the form of a lump-sum payment or an earned royalty. Whether or not there is financial compensation for assignment and the form and amount of any such financial compensation shall be agreed to between the Parties in good faith no later than 60 days after the filing of a patent application claiming the subject invention, or such later time as mutually agreed. Any financial compensation shall reflect the Parties' relative anticipated technical and financial contributions to the relevant activities contemplated under the JWS, and may be subject to a cap if the Parties so agree. Such

assignment shall be subject to retention of non-exclusive, nontransferable, irrevocable, paid-up license to practice the Subject Invention or have the Subject Invention practiced throughout the world for Government Purposes.

7.9.3 RDECOM Background Inventions

Regardless of the Alternative selected, RDECOM agrees to enter into negotiations in good faith with PARTNER for an exclusive or non-exclusive (as applicable) license to Partner within specified fields of use, at a reasonable royalty rate, and under other conventional terms and conditions (including without limitation the right of patent enforcement), under RDECOM-Background Inventions related to the RDECOM-Made, and Joint Subject Inventions in accordance with the requirements of 37 C.F.R. Part 404. Such license agreement shall be subject to nonexclusive, nontransferable, irrevocable, paid-up license to practice the Subject Invention or have the Background Invention practiced throughout the world for Government Purposes. Such license agreement may also be subject to various international agreement and treaty obligations of the United States Government such as described in DoD Instruction 2000.03. RDECOM reserves the right to ensure that such license is consistent with the Government's international treaty and agreement obligations. Any exclusive license shall further provide PARTNER with the option to elect to convert it to a non-exclusive, paid-up, irrevocable license to practice or have practiced RDECOM-Background Inventions related thereto if licensed, throughout the world by or on behalf of PARTNER in the specified fields of use.

7.10. Assignment and Transfer

PARTNER agrees that any license granted to PARTNER by the Government pursuant to this Article may not be assigned, sublicensed, or otherwise disposed of without prior notification to the Government and receipt of Government approval unless specifically stated otherwise in the licensing agreement. Each license of RDECOM-Made Inventions, Joint Subject Inventions or Background Inventions, shall address sublicensing of such inventions to third parties.

7.11. Government Retained Rights

The Parties acknowledge the rights of the Government in any Subject Invention which has been assigned or exclusively licensed to PARTNER under 15 U.S.C. §3710a(b)(1)(B) and (C).

Article VIII. Copyrights

8.1. Works Created Solely by Partner

PARTNER retains all ownership to copyrights for original works of authorship created solely by PARTNER's employees (or for hire by PARTNER) in the course of performance of work under this Agreement. PARTNER grants to the Government a royalty-free, nonexclusive, irrevocable license to use, modify, prepare derivative works, reproduce, distribute, perform, and display worldwide such copyrighted works for Government Purposes.

8.2. Jointly Created Works

Ownership to copyrights for original works of authorship created jointly by RDECOM employees and PARTNER's employees (or for hire by PARTNER) in the course of performance of work under this Agreement will be held by PARTNER. PARTNER grants to the Government a royalty-free, nonexclusive, irrevocable license to use, modify, prepare derivative works, reproduce, distribute, perform, sell or resell, and display worldwide such copyrighted works for Government Purposes.

8.3. Works Created Solely by RDECOM

Pursuant to 17 U.S.C. § 105, copyright protection is not available in the United States for works of the Government.

8.4. Copyright Statement

PARTNER shall include the following statement on any text, drawing, mask work or other work of authorship, that may be copyrighted under 17 USC, that is created in the performance of this Agreement:

"The U.S. Government has a copyright license in this work pursuant to a Cooperative Research and Development Agreement with Lockheed Martin Corporation.

Article IX. RESERVED

Article X. Exchange of Technical Data and Software

10.1. Exchange of Subject Data

Unless prohibited by law or regulation, the Parties agree to exchange all Subject Data relevant to the performance of this Agreement. Absent actual knowledge to the contrary, Data that is not marked as being protected in accordance with the terms of this Agreement, shall be presumed to be unprotected and releasable. See Article VII, Paragraph 7.7, for an exception.

10.2. Subject Data - Software

To the extent not otherwise governed by the Articles on Patents and Copyrights, the developing Party will provide the other Party with the executable code, and minimum support documentation needed by a competent user to use Software created in performance of work under this Agreement for the sole purpose of performing this Agreement.

Article XI. Protected Information

11.1. Exchange of Data

Either Party may make any use of any Subject Data of the other Party as it requires for purposes of fulfilling its responsibilities under the Agreement, subject to export control requirements and the Government's right to designate materials as Proprietary and may otherwise use and disclose Subject Data without restriction except to the extent contemplated to the contrary in this Article

XI. Where the Government wishes to make a non-public disclosure to a third party of Data designated as Proprietary Information, the Government will first require the proposed third party recipient to execute a Non-Disclosure Agreement limiting the recipient's use to be only for purposes of fulfilling its responsibilities under this Agreement. Absent actual knowledge to the contrary, Data that is not marked as being protected in accordance with the terms of this Agreement, shall be presumed to be unprotected and releasable to which the Government will have Unlimited Rights. Notwithstanding the foregoing, the Government shall not disclose proprietary Lockheed Martin Corporation Non-Subject Data or Proprietary Information without the prior written authorization of Lockheed Martin Corporation.

11.2. Protected Data

11.2.1 Form. Lockheed Martin Corporation shall place a proper proprietary marking on each medium used for recording Data that Lockheed Martin Corporation delivers to RDECOM under this Agreement that Lockheed Martin Corporation asserts is Proprietary Information. Subject Data generated by RDECOM and, after written request from Lockheed Martin Corporation, determined by both Parties to be Restricted Access Information shall be marked as such by RDECOM. The Parties together shall confer to determine if such marking is appropriate, with reference to the definitions in Article II entitled "Definitions."

Proprietary Information may be disclosed to the other Party orally, electronically, visually, in writing, or in any other tangible or intangible form. If the Proprietary Information is initially disclosed in a non-fixed media, then the Party disclosing the information shall furnish the other Party with the information in a fixed medium marked appropriately and within thirty (30) days of its initial disclosure. Failure to furnish the fixed medium within thirty (30) days, or to prominently mark the information as proprietary or otherwise protected, will not automatically result in the loss of the information's protected status. However, such action will excuse any Party's unauthorized disclosure or use of the information caused by the failure to meet the thirty (30) day period to properly mark the information.

11.2.2 Lockheed Martin Corporation Non-Subject Data. Lockheed Martin Corporation shall place a proprietary marking on all Non-Subject Data it asserts as Proprietary Information that is furnished to RDECOM. The markings shall prominently and explicitly identify which Non-Subject Data is Proprietary Information and which Non-Subject Data is not Proprietary Information. For each individual JWS, the Parties shall negotiate, from the alternatives below, which proprietary marking legend applies to the JWS, which shall be indicated in the terms and conditions of the JWS. For Non-Subject Data that are Proprietary Information, the marking shall read:

(Alt. 1) "PROPRIETARY INFORMATION OF Lockheed Martin Corporation – [U.S. ARMY] MAY ONLY USE FOR PURPOSE OF FULFILLING ITS RESPONSIBILITIES UNDER RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER."

(Alt. 2) "PROPRIETARY INFORMATION OF Lockheed Martin Corporation – [U.S. ARMY or GOVERNMENT] MAY ONLY USE FOR PURPOSE OF [INSERT PURPOSE] UNDER RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER."

(Alt. 3) "PROPRIETARY INFORMATION OF Lockheed Martin Corporation – [U.S. ARMY or GOVERNMENT] HAS GOVERNMENT PURPOSE RIGHTS AND WILL PROTECT IN ACCORDANCE WITH RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER."

(Alt. 4) "PROPRIETARY INFORMATION OF Lockheed Martin Corporation – [U.S. ARMY or GOVERNMENT] HAS GOVERNMENT PURPOSE RIGHTS AND WILL PROTECT IN ACCORDANCE WITH RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER UNTIL [INSERT DATE] AND THEREAFTER SHALL HAVE UNLIMITED RIGHTS."

11.2.3 Lockheed Martin Corporation Subject Data. Lockheed Martin Corporation shall place a proprietary marking on all Subject Data it asserts as Proprietary Information that is furnished to RDECOM. The markings shall prominently and explicitly identify which Subject Data is Proprietary Information which Subject Data is not Proprietary Information. For each individual JWS, the Parties shall negotiate from the alternatives below, which proprietary marking legend applies to the JWS, which shall be indicated in the terms and conditions of the JWS. For Subject Data that are Proprietary Information the marking shall read:

(Alt. 1) "PROPRIETARY INFORMATION OF Lockheed Martin Corporation – [U.S. ARMY] MAY ONLY USE FOR PURPOSE OF FULFILLING ITS RESPONSIBILITIES UNDER RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER."

(Alt. 2) "PROPRIETARY INFORMATION OF Lockheed Martin Corporation – [U.S. ARMY or GOVERNMENT] MAY ONLY USE FOR PURPOSE OF [INSERT PURPOSE] UNDER RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER."

(Alt. 3) "PROPRIETARY INFORMATION OF Lockheed Martin Corporation - [GOVERNMENT] HAS GOVERNMENT PURPOSE RIGHTS AND WILL PROTECT IN ACCORDANCE WITH RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER."

(Alt. 4) "PROPRIETARY INFORMATION OF Lockheed Martin Corporation - [GOVERNMENT] HAS GOVERNMENT PURPOSE RIGHTS AND WILL PROTECT IN ACCORDANCE WITH RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER UNTIL [INSERT DATE] AND THEREAFTER SHALL HAVE UNLIMITED RIGHTS."

11.2.4 Government Non-Subject Data and Protectable Invention Information. RDECOM shall place a nondisclosure marking on all Non-Subject Data that is Proprietary Information or Protectable Invention Information and furnished to Lockheed Martin Corporation. Such marked Data, as long as it remains protected, shall not be disclosed or otherwise made available by Lockheed Martin Corporation outside the Parties without the written consent of RDECOM.

"DATA PROTECTED FROM RELEASE OR DISCLOSURE UNDER 35 U.S.C. 205 AND/OR 5 U.S.C. CHAPTER 5, SUBCHAPTER II IN ACCORDANCE WITH RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER."

11.2.5 Government Subject Data. RDECOM shall place a nondisclosure marking on all Subject Data agreed to by the Parties to be protected as "Restricted Access Information." For Government Subject Data that are Restricted Access Information the marking shall read:

(Alt. 1) "RESTRICTED ACCESS INFORMATION – GOVERNMENT HAS THE RIGHT TO USE ONLY FOR PURPOSES OF FULFILLING ITS RESPONSIBILITIES UNDER RDECOM CRADA NUMBER [] AND WILL PROTECT IN ACCORDANCE WITH RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER UNTIL [5 YEARS AFTER THE INFORMATION HAS BEEN DEVELOPED] AND THEREAFTER SHALL HAVE UNLIMITED RIGHTS."

(Alt. 2) "RESTRICTED ACCESS INFORMATION – GOVERNMENT HAS GOVERNMENT PURPOSE RIGHTS AND WILL PROTECT IN ACCORDANCE WITH RDECOM CRADA NUMBER [XXXXX] AND JWS NUMBER [] THEREUNDER UNTIL [5 YEARS AFTER THE INFORMATION HAS BEEN DEVELOPED] AND THEREAFTER SHALL HAVE UNLIMITED RIGHTS."

11.2.6 Standard of Care. Each Party is obligated to use not less than reasonable care in the protection of properly marked data.

11.2.7 Disputes. Disagreements between the Parties regarding the appropriate marking for Data shall be resolved in accordance with Article XVI Disputes. Resolution of such disagreements shall give priority to implementing all the rights and licenses contained within this Agreement.

Article XII. Publications

12. Each Party desiring to publish information or press releases pertaining to work performed under this Agreement shall submit to the other Party any proposed written or oral publications not less than thirty (30) days prior to submission for publication. If they have any objection to the publication, the Party receiving the proposed publication shall, provide a written response within thirty (30) days. A proposed publication that contains information marked protected by either Party requires an affirmative consent by both Parties in order to release the publication. Such consent will not be unreasonably withheld or delayed.

Article XIII. Export Control

13.1 Compliance with Export Control. This Agreement is subject to United States laws and regulation controlling the export of technical data; computer software, laboratory prototypes and all other export controlled commodities. These laws include, but are not limited to the Arms Export Control Act and Export Administration Act as they may be amended. All rights granted by this Agreement are contingent upon compliance with these laws and regulations. PARTNER shall not, directly or indirectly, export any export controlled commodities, which are subject to this Agreement, unless the required authorization and/or license is obtained from the required Government agency(ies) prior to export. PARTNER shall notify RDECOM in writing 30 days

prior to of its intent to obtain an export license for technologies and/or equipment resulting under this Agreement. By granting rights in this Agreement, RDECOM does not represent that export authorization or an export license will not be necessary or that such authorization or export license will be granted.

13.2 Classified Data: The work performed under this Agreement may cover classified national security information and unclassified Military Critical Technology (MCT). All personnel, government and non-government, working with classified material must have an appropriate security clearance and need to know. Any exchange of classified data with industry shall comply with the National Industrial Security Program Operating Manual, DoD 5200.22-M (February 2006) and the DD-254, DoD Contract Security Classification Specification provided as a separate removable attachment to this Agreement. If required, the PARTNER must also be certified by the Joint Certification Program (JCP) to receive MCT and technical data governed by DoD Directive 5230.25. This data must be controlled in accordance with the International Trade in Arms Regulations (ITAR).

Article XIV. Competitiveness

14.1 Recognizing the Government's preference to enter into Cooperative Research and Development Agreements with businesses that will enhance U.S. competitiveness, as promulgated in 15 U.S.C. 3710a (c)(4), PARTNER agrees to use its best efforts to ensure that any products embodying Subject Inventions Made under this Agreement or produced through the use of such Subject Inventions shall be manufactured substantially in the United States.

14.2 The Parties understand and agree that this Agreement shall not preclude Lockheed Martin Corporation from competing for future Government contracts associated with any work performed under this Agreement or any individual JWS issued under this Agreement.

Article XV. Termination

15.1. Mutual Consent

PARTNER and RDECOM may terminate this Agreement, or any individual JWS issued under this Agreement, at any time by mutual consent. Termination of the entire Agreement will cause termination of all JWSs on the same date as the termination of the entire Agreement, while termination of an individual JWS will not affect this Agreement or other JWSs.

15.2. Unilateral Action

Either Party may unilaterally terminate this Agreement, or any individual JWS issued under this Agreement, by giving the other Party written notice, not less than thirty (30) days prior to the desired termination date. Termination of the entire Agreement will cause termination of all JWSs on the same date as the termination of the entire Agreement but will not affect any license

granted under Sections 7 or 8, while termination of an individual JWS will not affect this Agreement or other JWSs. Pending termination pursuant to this Article, the Parties agree that performance of work under this Agreement shall continue diligently in accordance with each JWS issued hereunder.

15.3. Termination Costs

Unless otherwise explicitly provided in this Agreement, each Party shall be solely responsible for all of the costs it has incurred under this Agreement through the effective date of termination as well as any costs it incurs after the effective date of termination.

15.4. Disposition

Upon termination, the Parties shall specify the disposition of tangible property, Subject Inventions, and other results of work accomplished or in progress, under this Agreement, if such disposition is not otherwise specified.

Article XVI. Disputes

16.1 Settlement

Any disputes arising under this Agreement that are not disposed of by agreement of the Parties, shall be submitted jointly to the signatories of this Agreement. A joint decision of the signatories or their designees shall be the disposition of such disputes. The Parties may use alternative disputes resolution (ADR) techniques to resolve disputes brought to their attention; however, nothing in this Agreement precludes either party from pursuing resolution of a dispute by other means.

16.2 Continuation of Work

Pending dispute resolution pursuant to this Article, the Parties agree that performance of work under this Agreement shall continue diligently to the extent reasonably practicable in accordance with the JWS.

Article XVII. Liability

17.1. No Warranty.

The Parties make no express or implied warranty as to the conditions of the research, inventions, technical data, or products exchanged, made, or developed under this Agreement, or the ownership, merchantability, or fitness for a particular purpose, technical feasibility, or freedom from infringement of intellectual property rights of the research, inventions, technical data, or products. Neither Party shall be liable for lost profits, lost savings, special, consequential, incidental, or other indirect damages, even if such Party is made aware of the possibility thereof.

17.2. Products Liability.

To the extent not specifically prohibited by applicable State or local law, PARTNER agrees to indemnify and hold harmless the Government for any loss, claim, damage, expense, or liability of any kind to the extent occurring as a result of the making, using, or selling of a product, process, or service by or on behalf of the PARTNER, its assignees and licensees, which was derived from work performed under this Agreement. In respect to this provision, the Government shall not be considered an assignee or licensee of the PARTNER as a result of reserved Government rights under this CRADA. The Government's liability for losses, claims, damages, or expenses of the PARTNER occurring as a result of the making, using, or selling of a product, process, or service by or on behalf of the Government shall be governed by the provisions of the Federal Tort Claims Act.

17.3. Parties' Employees.

To the extent not specifically prohibited by applicable State or local law, the PARTNER shall indemnify and hold harmless the Government for any loss, claim, damage, expense, or liability of any kind involving an employee of the PARTNER to the extent arising in connection with the performance of work under this Agreement, except to the extent that such loss, claim, damage, or liability arises from the negligence of the RDECOM or its employees. The Government's liability for the loss of property, personal injury or death, or otherwise arising out of any negligent act or omission of its employees in connection with the performance of work under this Agreement shall be governed solely by the Federal Tort Claims Act.

17.4. Notice and Assistance.

The indemnification provisions of this Article shall apply only if the Federal Laboratory upon which the claim or lawsuit is asserted (i) gives the PARTNER prompt notice of the claim or lawsuit, (ii) provides reasonable assistance in the defense of such claim or lawsuit, and (iii) allows the PARTNER to participate in the defense/adjudication of the claim or lawsuit as is permitted by applicable laws and Government regulations.

17.5. Force Majeure Events.

Neither Party shall be liable for any unforeseen 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. Such unforeseen events include, but are not limited to, fire, storm, flood, earthquake, or other natural catastrophes, accidents, acts of civil disturbance or disobedience, war, acts of terrorism, rebellion, insurrection, labor strikes or disputes, compliance with any laws, requirements, rules, regulations, or orders of any governmental authority or instrumentality thereof, sabotage, invasion, quarantine, and embargoes.

Article XVIII. Enforcement

18.1. Governing Law

The laws applicable to the Federal Government of the United States of America shall govern the construction, validity, performance, and effect of this Agreement for all purposes. PARTNER

will be subject to any Federal, State, or Local laws governing their activities under this Agreement.

18.2. Headings

Titles of the Articles and Sub-articles of this Agreement are for convenience and reference only, and shall in no way affect the interpretation thereof.

18.3. Waivers

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

18.4. Provisions Contrary to Law

Any Agreement provision that is prohibited by law is void and shall not impair, affect, or invalidate the other provisions of this Agreement.

Article XIX. Modification

19.1. Entire Agreement

This Agreement constitutes the entire Agreement between the Parties concerning the subject matter hereof and supersedes all prior representations or agreements relating hereto, which have been merged into this document and are superseded in totality by this Agreement. This Agreement shall not be used to alter or interpret the provisions or clauses of any other contract or agreement.

19.2. Agreement Modification

If either Party desires to modify this Agreement or any JWS issued hereunder, and upon giving reasonable notice of the proposed modification by the Party desiring the modification, the Parties shall confer in good faith to determine the desirability of such modification. Such modification shall take effect upon a written amendment being signed by all the Parties hereto by their duly authorized representatives.

Article XX. Assignment

Neither this Agreement nor any rights or obligations of any Party hereunder may be assigned or transferred without the prior written consent of the other Party. Such consent shall not be unreasonably withheld.

Article XXI. Notices

All notices pertaining to this Agreement shall be in writing and shall be signed by an authorized representative of the party giving notice. Notices relevant to this Agreement shall be given to its

signatories and Notices relevant to individual JWSs shall be given to the JWS signatories and to the JWS POCs. Notices shall be sent by certified mail, return receipt requested, with postage prepaid, and addressed in accordance with the JWS.

Article XXII. Endorsement

Neither RDECOM nor the Government directly or indirectly endorse any product or service provided, or to be provided by the PARTNER, its successors, assignees, or licensee. The PARTNER shall not in any way imply that this Agreement is an endorsement by the Government of any such product or service.

Article XXIII. Duration of Agreement

23.1. Duration

The Parties mutually recognize that the Agreement objective cannot be rigidly defined in advance and that projected milestones are subject to adjustment. In no case will this Agreement extend five (5) years beyond its effective date, unless revised in accordance with Article XIX, Paragraph 19.2 of this Agreement.

23.2. Effective Date

The effective date of this Agreement shall be the date of the last signature subject to Article I, Paragraph 1.2.

23.3. Continuing Obligation

All Agreement obligations and rights specified in Articles VI, VII, VIII, X, XI, XII, and XVII shall survive the termination or expiration of this Agreement.

Article XXIV. Acceptance

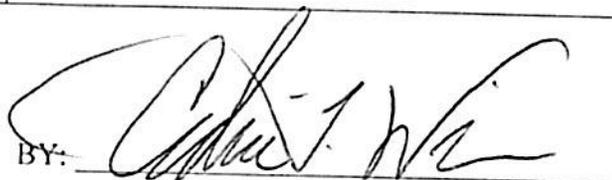
IN WITNESS THEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives.

Lockheed Martin Corporation	Research, Development and Engineering Command
-----------------------------	---

BY: 

Vice President, Technology Strategy & Innovation

Lockheed Martin Corporation

BY: 

Cedric T. Wins

Major General, US Army

Commanding General

US Army Research, Development and Engineering Command

Date: 12 Oct 2016

Date: 12 Oct 2016

**APPENDIX A Joint
Work Statement
Sample**

GENERAL

Scope

Background (optional)

OBJECTIVE

PARTNER Benefit:

RDECOM Benefit:

REQUIREMENTS

Specific Capabilities (optional)

Security Requirements (optional)

TASKS

PARTNER will:

RDECOM Lab/Center will:

The "Team" will:

PARTNER BACKGROUND INTELLECTUAL PROPERTY:

PARTNER will use or deliver the following pre-existing intellectual property under this JWS:

RIGHTS OF THE PARTIES IN ANY NON-MINOR MODIFICATIONS TO PRE-EXISTING SOFTWARE (IN APPLICABLE) SHALL BE AS FOLLOWS:

Article XXV. APPENDIX B

CONFIRMATORY LICENSE AGREEMENT	1. APPLICATION FOR (Title of Invention)
2. INVENTOR(S) AND AFFILIATION	
3. PATENT APPLICATION SERIAL NO.	4. PATENT APPLICATION FILING DATE
5. RDECOM ACTIVITY (Name, address, point of contact)	6. NON-RDECOM ACTIVITY (Name, address, point of contact)
7. CRADA AGREEMENT NO.	8. DATE OF THIS AGREEMENT
9. The Invention identified above is a "Subject Invention" under Article VII Patents included with the CRADA identified in Box 7 between the RDECOM and Non-RDECOM Activity identified in Box 6.	

This document is confirmatory of the nonexclusive, irrevocable, paid-up license to practice the identified Subject Invention or have that Subject Invention practiced throughout the world by or on behalf of the receiving party, and of all other rights acquired by the receiving party by the referenced clause.

This license is granted to

_____ the Government and is for research and other Government Purposes only

(Select one)

_____ Non-RDECOM Activity identified in Box 6 and is limited to the purposes identified in Article 7.3

under this CRADA in the identified Invention, Patent Application and any resulting patent.

The licensee is hereby granted an irrevocable power to inspect and make copies of the above-identified Patent Application.

_____ ACTIVITY NAME OF LICENSOR

_____ SIGNATURE

_____ NAME (Typed or Printed)

_____ TITLE

_____ BUSINESS TELEPHONE

APPENDIX A – JOINT WORK STATEMENT

TITLE: (b)(3) (b)(4)

1.0 BACKGROUND: The U.S. Army Combat Capabilities Development Command Chemical Biological Center (CCDC), located at Aberdeen Proving Ground, Maryland, is the nation's principal research and development center for non-medical chemical and biological defense. The CCDC Chemical Biological Center (CBC) is one of eight science and technology domains within the command, which has the mission to ensure decisive overmatch for unified land operations to empower the Army, the joint warfighter and the nation. The center develops technology in the areas of detection, protection, and decontamination and provides support over the entire lifecycle -- from basic research through technology development, engineering design, equipment evaluation, product support, sustainment, field operations and disposal. The CCDC CBC develops technologies such as protective masks and respiratory systems; chemical and biological agent detectors and warning devices; and decontamination systems to protect both Soldiers on the battlefield and civilians here at home.

Lockheed Martin Corporate (LM), headquartered in Bethesda, Maryland, is a global security and aerospace company that employs approximately 105,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. As a global security and aerospace company, the majority of Lockheed Martin's business is with the U.S. Department of Defense and U.S. federal government agencies. In addition, Sikorsky (a Lockheed Martin Company) provides military and rotary-wing aircraft to all five branches of the U.S. armed forces along with military services and commercial operators in 40 nations. The remaining portion of Lockheed Martin's business is comprised of international government and commercial sales of products, services and platforms.

(b)(3) (b)(4)

2.0 OBJECTIVE: (b)(3) (b)(4)

3.0 APPROACH/TASKS: (b)(3) (b)(4)

(b)(3) (b)(4)

3.1 (b)(3) (b)(4)

3.2 (b)(3) (b)(4)

3.3

(b)(3) (b)(4)

3.4

(b)(3) (b)(4)

(b)(3) (b)(4)

3.5

(b)(3) (b)(4)

(b)(3) (b)(4)

3.6 The Parties will maintain a weekly status on each respective task.

3.7 The Parties will collaborate on activities, including input for monthly and final reports, as well as the product, if feasible.

4.0 **SCHEDULE:** This effort is expected to commence on or about 1 Nov 2019 and be completed by 30 Nov 2024.

5.0 **COST ESTIMATION:** Both CCDC CBC and LM will bear their own costs for this collaboration. LM will provide **PARAGRAPH** IAW the overarching CRADA between LM and CCDC (then RDECOM) in 2016. Page 8, Article V, section 5.2 stipulates that partner (LM) will fund as stipulated under the JWS.

6.0 **ENVIRONMENTAL & SAFETY CONCERNS:** This work is routine to CCDC CBC. Environmental and/or safety concerns are addressed in the following Standing Operating Procedures (SOP) listed below (list SOPs after this paragraph). Personnel working at CCDC CBC will complete the necessary training classes for waste and hazardous materials management, and participate in any testing, screening, and risk assessment required to conform to APG and CCDC CBC protocols. Any equipment that has been possibly exposed to agents will be either retained for future use or decontaminated and disposed by CCDC CBC. LM will identify to CCDC CBC any potential operational or material hazards associated with the use, storage or disposal of the provided material.

SOPs: RSC 441 " High Vacuum Chamber for Aerosol Particle Interactions with Reactive Surfaces"
RSC 444 " Cavity Ring Down Spectroscopy Equipped Rotating Drum for Spectral
Characterization of Aerosolized Agent Physical and Chemical Properties"

7.0 ACCESS AND GENERAL PROTECTION/SECURITY POLICY AND PROCEDURES: All LM personnel who may perform any work under this CRADA on site at CCDC CBC shall comply with applicable installation, facility, and area commander installation/facility access and local security policies and procedures, which will be provided by the CCDC CBC Principal Investigator. LM shall also provide all information required for background checks to meet installation access requirements to be accomplished by installation Provost Marshal Office, Director of Emergency Services, or CCDC CBC Security Office. LM personnel must comply with all personal identity verification requirements as directed by DoD, HQDA, and/or local policy. Any foreign nationals must be approved by the CCDC CBC Security Office before initiating work under this project. Only U.S. citizens are permitted area access without Foreign Disclosure approval. Dual citizens are considered foreign nationals.

In addition to the changes otherwise authorized by Article 19 of this CRADA, should the Force Protection Condition (FPCON) at any individual facility or installation change, the Government may require changes in LM security matters or processes.

8.0 REPORTS:

8.1 Progress Reports: Throughout the conduct of this project, CCDC CBC and LM will informally share all data collected and the analysis results of that data.

8.2 Final Reports: LM will prepare and deliver to CCDC CBC a final report. The final report will be provided to the POC listed below within 120 days after completion of specific mutually agreed projects under this CRADA or this CRADA.

9.0 PRINCIPAL INVESTIGATORS: The Principal Investigators for this project are as follows. All notices required by this CRADA will be sent to the respective Principal Investigators or their successors.

9.1 CCDC CBC:

Name: (b) (6)
Address: 8510 Ricketts Point Road, Building E3400, Aberdeen Proving Ground, MD 21010
Phone: (b) (6)
E-mail: (b) (6)

9.2 Lockheed Martin Corporate (LM):

Name: (b) (6)
Address: 199 Borton Landing Road, Mailstop 101-125, Moorestown, NJ 08057
Phone: (b) (6)
E-mail: (b) (6)

10.0 TERM OF PERFORMANCE: The duration of this CRADA is 5 years, unless terminated earlier IAW Article XIX of this CRADA.

11.0 SECURITY: This CRADA may require access to SECRET information and materials. As required, project (Government and MTEQ) personnel will be cleared to the appropriate clearances. Facilities will also be cleared to the SECRET level. A DD Form 254 (Department of Defense Contract

Security Classification Specification) will be enclosed prior to classified information/material being handled and coordinated through CCDC CBC's POC and Security Office.

12.0 INVENTION RIGHTS: The parties to this effort may desire to protect their respective Inventions via means other than patents. Specifically, trade secret protection may be the preferred option.

12.1 A First Rights Party may elect to not file a patent application based on a specific Subject Invention, in which case the First Rights Party will notify the other Party within the sixty-day (60-day) period specified in Article 7.6.1 of this CRADA.

12.2 The failure to file provision of Article 7.6.2 of this CRADA shall not apply in the case where a First Rights Party has given notice of its intent to protect their Invention via means other than a patent.

12.3 The written notice requirement of Article 7.6.3 of this CRADA shall not apply in the case where a First Rights Party has given notice of its intent to protect their Invention via means other than a patent.

12.4 The other Party rights provision of Article 7.6.4 of this CRADA shall not apply in the case where a First Rights Party has given notice of its intent to protect their Invention via means other than a patent.

12.5 Should Partner elect to protect its Subject Invention through trade secret protection, the Government would still have the right to practice or "have practiced" the Invention for Government Purposes, provided the Government and any of its contractors exercise reasonable precautions to avoid public disclosure of the Subject Invention (e.g., via a non-disclosure agreement).

12.6 With respect to Joint Inventions, both Parties must agree to use trade secret protection in lieu of patent protection; otherwise patent protection will be sought.

(b) (6)

RMS Program Manager, Technical Transition

10/30/2019

Date

(b) (6)

Program Management Subcontract Manager

30 Oct 2019

Date

(b) (6)

RMS Contracts Negotiator Staff

31 Oct. 2019

Date

Eric L. Moore

Eric L. Moore
Director
Combat Capabilities Development Command
Chemical Biological Center

31 Oct 2019

Date

**COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT
FOR
DOMESTIC TECHNOLOGY TRANSFER
BETWEEN
U.S. ARMY NATICK SOLDIER RESEARCH, DEVELOPMENT AND
ENGINEERING CENTER
AND
LOCKHEED MARTIN CORPORATION**

Joint Work Statement NSRDEC No. 1

I. GENERAL

Background: The Warfighter faces challenges directly attributable to the burden of load, including weight burden, as well as barriers to movement and mobility with weight other than the Warfighter's body and clothing. Through the U.S. Army Natick Soldier Research, Development and Engineering Center's ("NSRDEC's") evaluation of various human augmentation systems aimed at unburdening the Warfighter and small units, NSRDEC subject matter experts currently believe that utilization of exoskeletons may be a preferred system for maximizing Warfighter mobility, with the end goal of improved preparation for battle.

NSRDEC first became aware of Lockheed Martin Corporation's ("PARTNER's") passive human assist load carriage device in 2006. Since that time, many advances have contributed to the development of several other devices by PARTNER, including but not limited to the HULC[®] ("HULC") and FORTIS[®] ("FORTIS") systems (including without limitation FORTIS-KSRD), which have raised the interest of many organizations including the Program Executive Office ("PEO") Soldier Rapid Equipping Force and the U.S. Special Operations Command ("SOCOM") TALOS Program. To this end, NSRDEC believes that the stated capabilities and high technology readiness of PARTNER's FORTIS-KSRD and other human augmentation systems warrant investigation into the data and analysis generated by or on behalf of PARTNER showing various performance measures. This data and related analyses will allow NSRDEC to better understand the potential for direct benefit to the Warfighter.

On 12 October 2016, PARTNER and the U.S. Army Research, Development and Engineering Command ("RDECOM") entered into a Cooperative Research and Development Agreement for Domestic Technology Transfer ("Master CRADA"), to encourage collaborative research and development among PARTNER and RDECOM's subordinate research, development and engineering centers. NSRDEC and PARTNER desire to implement a Joint Work Statement ("JWS") under the Master CRADA to share information for the purposes described above.

Scope: The purpose of this JWS is to provide a collaborative mechanism for NSRDEC and PARTNER to share knowledge, data and expertise pertaining to the safety, use, fit and performance of PARTNER's exoskeleton devices, with the goal of such information exchange to reduce evaluation time, increase knowledge and provide insight into the system architecture, control scheme, technical data, metabolics and other related matters.

II. OBJECTIVE

PARTNER Benefit: The potential benefit to PARTNER includes the knowledge, insight and recommendations gained from the sharing of data, information and experiences with NSRDEC under this JWS.

NSRDEC Benefit: The potential benefit to NSRDEC includes the knowledge, experience and data gathered during PARTNER's internal and third-party evaluation and analysis of its HULC and FORTIS systems (including without limitation its FORTIS-KSRD system) and subsystems and related products designed to improve Soldiers' load carriage abilities and/or reduce muscular and/or skeleton fatigue. Execution of this JWS will provide NSRDEC with continued exposure and knowledge of systems and subsystems pertaining to advanced exoskeleton technology, which may have a benefit to the Warfighter.

III. TASKS

NSRDEC and PARTNER agree to provide labor and materials, as described herein, in furtherance of the tasks outlined in this JWS.

NSRDEC will:

A. Promptly share certain expertise and non-proprietary information (at the election of NSRDEC) with PARTNER concerning the following topics: (1) Soldier-worn power and energy technologies; (2) Soldier safety and equipment; (3) Soldier systems integration; (4) modeling and simulation data for (i) Soldier-borne loads and (ii) range of motion; and (5) Soldier operational considerations by military occupational specialty. The quantity of information shared by NSRDEC under this Article III will approximate the quantity of information shared by PARTNER under this Article III, as adjudged through the written reporting requirement set forth in Article IV of the Master CRADA.

B. Prepare and deliver a minimum of two (2) briefings within the first year of this JWS, and a minimum of one (1) briefing for each year of the JWS thereafter, focused on the topics identified in subsection (A) above, as such topics pertain to the information provided by PARTNER under this JWS and PARTNER's FORTIS-KSRD system.

C. Provide to PARTNER written reports in accordance with Article IV and Section 7.2.1 of the Master CRADA. NSRDEC's identification of a Subject Invention in a report described in this subsection (C) shall satisfy NSRDEC's reporting requirement specified in Section 7.2.1 of the Master CRADA.

PARTNER will:

A. Promptly share information with NSRDEC related to PARTNER's FORTIS-KSRD system and its other human augmentation systems, including without limitation (1) system data, including without limitation (i) system architecture, (ii) control schema, (iii) technical data related to power, sensing, control and actuation, (iv) designs and drawings, and (v) development roadmaps; and (2) system test data, including without limitation (i) metabolic performance data (raw and analyzed), (ii) kinematic data, (iii) motion capture data, and (iv) modeling and simulation data. The foregoing information will be actively provided by PARTNER upon execution of this JWS and throughout its duration, as well as provided on an as requested basis by NSRDEC in order to advance NSRDEC's understanding of PARTNER's human augmentation systems and its technology, and appraise technology readiness and capability. The quantity of information shared by PARTNER under this Article III will approximate the quantity of information shared by NSRDEC under this Article III, as adjudged through the written reporting requirement set forth in Article IV of the Master CRADA.

B. Prepare and deliver a minimum of two (2) briefings within the first year of this JWS, and a minimum of one (1) briefing for each year of the JWS thereafter, focused on the topics identified in subsection (A) above, as such topics pertain to the information provided by NSRDEC under this JWS.

C. Provide to NSRDEC written reports in accordance with Article IV and Section 7.2.1 of the Master CRADA.

IV. PARTNER BACKGROUND INTELLECTUAL PROPERTY

PARTNER will use or deliver the following pre-existing intellectual property under this JWS:

[NONE]

V. RIGHTS OF THE PARTIES IN ANY NON-MINOR MODIFICATIONS TO PRE-EXISTING SOFTWARE (IF APPLICABLE) SHALL BE AS FOLLOWS:

Not applicable

VI. POINTS OF CONTACT

A. Administrative point of contact ("POC") for NSRDEC:

(b) (6)

Office of Research and Technology Applications
Natick Soldier Research, Development and Engineering Center
10 General Greene Avenue
ATTN: RDNS-COS-OB (R134)
Natick, MA 01760-5018

Phone: (b) (6) Email: (b) (6)

B. Technical POC for NSRDEC:

(b) (6)
Team Leader, Advanced Soldier & Small unit Equipment Team
Natick Soldier Research, Development and Engineering Center
10 General Greene Avenue
ATTN: RDNS-SEO-MA
Natick, MA 01760-5018
Phone: (b) (6) Email: (b) (6)

As required under Section 3.3 of the Master CRADA, members of the Team from NSRDEC shall be one (1) or more representatives from the Advanced Soldier & Small unit Equipment Team, Soldier Performance Optimization Directorate.

C. Administrative POC for PARTNER:

(b) (6)
Lockheed Martin Corporation
5600 Sand Lake Road
Orlando, FL 32819
Phone: (b) (6) Email: (b) (6)

D. Technical POC for PARTNER:

(b) (6)
Lockheed Martin Corporation
5600 Sand Lake Road
Orlando, FL 32819
Phone: (b) (6) Email: (b) (6)

As required under Section 3.3 of the Master CRADA, members of the Team from PARTNER shall be Keith Maxwell and Gaven Barnes

VII. OTHER AGREEMENTS

A. FUNDS. No funds shall be provided by PARTNER to NSRDEC under this JWS.

B. LICENSING. PARTNER and NSRDEC agree that the following alternative will apply to Subject Inventions Made in the performance of this JWS in which NSRDEC has an ownership interest: Section 7.9.1 (Alternative A).

C. PROPRIETARY MARKINGS. PARTNER and NSRDEC agree that the following marking alternatives will apply to certain Proprietary Information exchanged under this JWS: Section 11.2.2 (Alternative 3); Section 11.2.3 (Alternative 3); and Section 11.2.5 (Alternative 2).

D. PERIOD OF PERFORMANCE. This JWS will extend until the first to occur of (i) the expiration or termination of the Master CRADA or (ii) five (5) years from the effective date of this JWS, unless it is revised in accordance with Section 19.2 of the Master CRADA. This JWS will be effective as of the date of signature of the last signatory hereto.

E. MASTER CRADA. All research to be performed under this JWS is to be performed under the auspices of, and will be governed by, the Master CRADA. To the extent of any conflict between this JWS and the Master CRADA, this JWS supersedes the Master CRADA solely to the extent of such conflict. All terms not defined in this JWS shall have the meanings ascribed to such terms in the Master CRADA.

In WITNESS THEREOF, the parties hereto have caused this JWS to be executed by their duly authorized representatives.

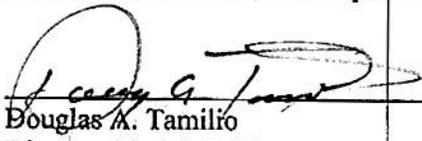
For Lockheed Martin Corporation:



Contracts Chief, LMMFC Advanced Programs

Date: 2 January 2018

For the U.S. Army Natick Soldier Research, Development and Engineering Center:



Douglas A. Tamiró
Director, Natick Soldier Research,
Development and Engineering Center

Date: 17 JAN 18

