

Chemical and Biological Defense Realignment (MED-15)

This paper addresses the issues of realigning Naval Support Activity (NSA) Crane's Chemical Biological Defense (CBD) Development and Acquisition functions to Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD

In summary, the CBD realignment from Crane to Aberdeen seems to have little or, probably, negative value: 1) It doesn't materially increase Aberdeen's (or DOD's) development expertise or capacity; 2) it does increase risk by reducing the capability to responsively support the warfighter; 3) it doesn't have any significant cost benefits; and, 4) it does lower the effectiveness of a key homeland defense union.

First: Crane's CBD expertise and functions do not overlap, duplicate or match those at Aberdeen.

The Crane CBD organization is devoted to CBD sustainment. This effort includes:

- ▶ Acquisition of Navy legacy CBD systems
- ▶ Acquisition Engineering support for Navy CBD systems, which leverages extensive knowledge and experience with marine and shipboard environments. This is also co-located and draws on expertise gained from similar electro-optic Navy systems.
- ▶ Shipboard installation of CBD systems, which leverages Crane's extensive shipboard installation expertise in systems ranging from electro-optics to electronic warfare.
 - Maritime sensor installation requirements are significantly different due to shipboard chemical interferences and high radiation effect considerations.
- ▶ In-Service Engineering support of Navy CBD systems:
 - Direct fleet support of engineering, technical and logistics issues
 - Development, delivery and maintenance of Navy training plans and materials
 - Shipboard technical assistance
 - Product improvement plans, engineering change proposals and obsolescence studies of fielded Navy and CBD systems
- ▶ Integrated logistics support of Navy CBD systems
- ▶ Repair and maintenance of CBD systems

Crane has the Navy unique support structure required to execute the CBD sustainment function. This includes: Distance Support Capability, the virtual expert assistance given to the fleet world wide through interactive technology; Fleet collaborative reporting and tracking capability; and, co-located Navy supply system, a Fleet Industrial Supply Center (FISC).

Although Crane's engineering work was "binned" into the D&A category, that misrepresents the focus of the Crane CBD organization. Crane's focus is one of operational readiness and responsiveness as opposed to acquiring current and developing future capability and consists of efforts which are:

- ▶ In-service engineering, logistics support, and repair oriented
- ▶ Focused on legacy and fielded Navy systems, drawing on extensive knowledge of shipboard and marine environments
- ▶ Focused on new, joint systems as the Navy acquisition engineering agent, in-service engineering agent, installer, and repair depot

Crane has no significant CBD RDA workload!

Second: The realignment fractures synergistic expertise at Crane and increases risk to Navy CBD support.

- ▶ Crane uses the same technical expertise to support its repair and depot mission as well as acquisition and in-service engineering. In turn, the technical expertise gained from the hands on repair work significantly increases Crane's ability to perform its acquisition and in-service engineering role and enables rapid response to emergent problems encountered by users in the field. The separation of the technical and industrial functions degrades both capabilities, reduces efficiencies, and increases costs.
- ▶ Crane's CBD work and expertise also benefits from the extensive electronic component and system test and analysis laboratories used for in-depth construction and failure analysis.
- ▶ Crane's extensive expertise in electro-optics, batteries and other power source systems assist in giving a total CBD system capability including system and component level.
- ▶ Crane provides full life cycle support post development for Navy & CBD systems with each ingredient synergistic with all others.
- ▶ In addition, specialized maritime system engineering, logistics, and Fleet support expertise, established over many years, will be lost as a result of relocation. Currently there is a close working relationship between Edgewood and Crane as 40% of Crane's CBD workload comes from Edgewood Joint Program Offices for sustainment of CBD systems. The low risk alternative is to allow the current relationship to continue as is without relocation

While Crane's military value for RDA is not high; if computed, a composite sustainment military value with the ingredients of acquisition engineering, in-service engineering, integrated logistics, and maintenance and repair would no doubt show Crane to be at the top.

Third: There can be little or no cost savings by moving the technical CBD functions from Crane.

- ▶ Splitting the technical support required for repair from that required for acquisition and in-service engineering will cause duplication in the overall DOD.
- ▶ Locality pay is higher in Aberdeen than Crane therefore, like positions will cost more there.
- ▶ There is no redundancy in the work being performed at the two sites. Therefore, there will be no reduction of personnel required for the workload.
- ▶ Because of the synergies between the functional areas associated with the sustainment support and the industrial workload the Joint Program Executive Office for Chem-Bio Defense assigned Crane as the Joint Organic Depot for existing Industrial workload. These synergies and associated cost and operational efficiencies will be lost upon relocation.
- ▶ Crane CBD was supported by a 25,000 SF MILCON which became fully operational in 2001. The realignment recommendation will require a new MILCON.
- ▶ The Navy unique support structure for a sustainment function would have to be replicated at Aberdeen in order to continue cost effective, efficient performance of the sustainment function

No return on investment will result from this realignment and, surely from a DOD standpoint cost will increase for the same level of support to the warfighter.

Fourth: Moving the CBD technical resource from Crane degrades the State of Indiana's Homeland Defense capability and the synergy in CBD that DOD also gains from the Cooperative Research and Development Agreement between Crane and the State.

► Crane, the State of Indiana's Counter-Terrorism and Security Council, Purdue University's Homeland Security Institute and Indiana University's Center for Applied Cyber-security Research have signed a Cooperative Research and Development Agreement to leverage each institution's capability and form an extensive cooperative alliance to increase the State's and Navy's capability to combat and respond to terrorism including chemical and biological defense.

Removing a large part of Crane's technical CBD resource from this alliance significantly reduces its capability and the benefits to the Navy and DOD as well as the State.

NON-STANDARD

NAVY COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

BETWEEN

**CRANE DIVISION, NAVAL SURFACE WARFARE CENTER
AND
STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL
AND
PURDUE UNIVERSITY
AND
INDIANA UNIVERSITY**

AGREEMENT TITLE: Development of military and civilian technologies with anti-terrorism and small unit warfare applications.

AGREEMENT NUMBER: NCRADA- NSWCCD-04-047

AGREEMENT ADMINISTRATORS:

CRANE DIVISION, NAVAL SURFACE WARFARE CENTER

Technology Transfer Office: **Brian Bailey, Code 054, 812 854 2379**
Legal Counsel: **Pedro DeJesus, Code OC, 812 854 1130**
Principal Investigator: **Robert Karcher, Code 404, 812 854 5803**

STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL

Preferred Contact: **Earl S. Morgan, 317 232 8998, emorgan@ctasc.state.in.us**
Legal Counsel: **Micah Cox, 317 232 - 7609, mcox@cji.state.in.us**

PURDUE UNIVERSITY

Preferred Contact: **Rick Evans, 765 494 1059**
Principal Investigator: **Alok R. Chaturvedi, 765 494 9794**

INDIANA UNIVERSITY

Preferred Contact: **Steven Martin., 812 855 3963**
Principal Investigator: **Fred Cate, 812 855 1161**

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NAVY COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

BETWEEN

**CRANE DIVISION, NAVAL SURFACE WARFARE CENTER
AND
STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL
AND
PURDUE UNIVERSITY
AND
INDIANA UNIVERSITY**

PREAMBLE

Under authority of the U.S. Federal Technology Transfer Act of 1986 (Public Law 99-502, 20 October 1986, as amended), CRANE DIVISION, NAVAL SURFACE WARFARE CENTER, (NSWC Crane) located at 300 Highway 361, Crane, Indiana, 47522 and STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL (herein after "State of Indiana"), located at Indiana Government Center North, 100 North Senate Avenue, Rm 340, Indianapolis, IN 46204; and PURDUE UNIVERSITY (herein after "Purdue"), whose offices are located at 610 Purdue Mall, Hovde Hall, West Lafayette, IN 47907; and INDIANA UNIVERSITY (herein after "IU"), whose offices are located at Franklin Hall 116, Bloomington, IN 47405, enter into this Cooperative Research and Development Agreement (CRADA), which shall be binding upon the Collaborators and their assignees according to the clauses and conditions hereof and for the term and duration set forth.

The U.S. Federal Technology Transfer Act of 1986, as amended, provides for making the expertise, capabilities, and technologies of U.S. Federal laboratories accessible to other Federal agencies; units of State or local government; industrial organizations (including corporations, partnerships and limited partnerships, and industrial development organizations); public and private foundations; nonprofit organizations (including universities); or other persons in order to improve the economic, environmental, and social well-being of the United States by stimulating utilization of U.S. Federally funded technology developments and/or capabilities.

NSWC Crane has extensive expertise, capabilities, and information in Anti-Terrorism/ Force Protection, including physical security, night vision/electro-optics, chemical-biological detection, small arms, radar systems and expeditionary warfare., and, in accordance with the U.S. Federal Technology Transfer Act, desires to make this expertise and technology available for use in the public and private sectors.

The State of Indiana, Indiana Counter-Terrorism and Security Council, has the interest, resources, capabilities, and technical expertise to transition the results of Naval research and development for public use. The Indiana Counter-Terrorism and Security Council coordinates homeland security initiatives for the State of Indiana and seeks assistance in developing and evaluating technologies for use in homeland security and in providing training of military and security personnel.

Purdue is an internationally known research and educational institution and has the interest, resources, capabilities, and technical expertise to transition the results of Naval research and development for public use through the Purdue Homeland Security Institute.

IU is an internationally known research and educational institution and has the interest, resources, capabilities, and technical expertise to transition the results of Naval research and development for public use through their expertise in life sciences and the Center for Applied Cybersecurity Research.

NOW THEREFORE, the Collaborators agree as follows.

Article 1. DEFINITIONS

As used in this Agreement, the following terms shall have the meanings defined below, which are equally applicable to both the singular and plural forms of nouns or any tense of verbs.

1.1 “Agreement” means this Cooperative Research and Development Agreement (CRADA) with its Appendices.

1.2 “Classified Information” means all Data classified in accordance with the national security laws of the United States.

1.3 “Collaborator” means the Navy participant or the Non-Navy participant represented and bound by the signatories of this Agreement.

1.4 “Controlled Unclassified Information (CUI)” means Government Data, Information, or materials provided to or resulting from this Agreement that may be export controlled, sensitive, for official use only, or otherwise protected by law, executive order, or regulation.

1.5 “Cooperative Work” means research, development, engineering, or other tasks performed under this Agreement by NSWC Crane or State of Indiana, or Purdue, or IU working individually or together, pursuant to the Objectives (Article 2) and the Statement of Work (Appendix A).

1.6 “Data” means recorded information of any kind regardless of the form or method of the recording, including computer software.

1.7 “Effective Date” means the date of the last signature of the Collaborators executing this Agreement.

1.8 “Exclusive License” means the grant by the owner of Intellectual Property of the exclusive right to make, use, or sell a patented invention.

1.9 “Government” means the Government of the United States of America.

1.10 “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 or permit 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 Data for commercial purposes.

1.11 “Information” means all data, trade secrets, and commercial and financial information. (Chapter 5 Subsection II of Title 5 USC)

1.12 “Intellectual Property” means the property of ideas, examples of which include, but are not limited to, patents, trademarks, copyrights, and trade secrets.

1.13 “Invention” means any invention or discovery that is or may be patentable or otherwise protected under Title 35, United States Code, or any novel variety of plant that is or may be patentable under the Plant Variety Protection Act. (15 USC 3703(9))

1.14 “Invention Disclosure” means the document identifying and describing to organizational management the Making of an Invention.

1.15 “Made” when used in conjunction with any Invention means the conception or first actual reduction to practice of such Invention. (15 USC 3703(10))

1.16 “Militarily Critical Technologies (MCT)” means those technologies identified in the Militarily Critical Technologies List and under the Export Administration Act of 1979, as amended.

1.17 “Non-Subject Data” means any Data that are not Subject Data.

1.18 “Non-Subject Invention” means any Invention that is not a Subject Invention.

1.19 “Patent Application” means an application for patent protection for an Invention with any domestic or foreign patent-issuing authority.

1.20 “Principal Investigator (PI)” means that person having the responsibility for the performance of the Cooperative Work on behalf of a Collaborator.

1.21 “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:

is not known or available from other sources without obligations concerning its confidentiality;

has not been made available by the owners to others without obligation concerning its confidentiality;

is not already available to the Government without obligation concerning its confidentiality; and

has not been developed independently by persons who have had no access to the information. (FAR/DFARS Definition)

1.22 “Restricted Access Information” means Subject Data generated by NSWC Crane that would be Proprietary Information if the Information had been obtained from a non-Federal Collaborator participating in a CRADA (15 USC 3710a). Under 15 USC 3710a(c)(7)(B), the

Collaborators mutually may agree to provide appropriate protection to Subject Data generated by NSWC Crane (Restricted Access Information) 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 Information.

1.23 "Subject Data" means that Data first recorded in the performance of the Cooperative Work.

1.24 "Subject Invention" means any Invention Made in the performance of the Cooperative Work.

1.25 "Tangible Property" means personal or real property that can be physically touched or held.

1.26 "Unlimited Rights" means the right to use, modify, reproduce, release, disclose, perform, or display Data or Computer Programs in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so.

Article 2. OBJECTIVES

This Cooperative Research and Development Agreement will be the vehicle under which the Parties will collaborate with the Indiana Center for Military and Law Enforcement Technology, Tactics, and Training (hereafter referred to as "Center) in developing/applying various applications associated with both military, anti-terrorism and small unit warfare applications. The Center will provide a unique central focus unifying the creation of anti-terrorist technologies, their tactical implementation, and the training of military and security personnel. The Center will be important to the State's anti-terrorism efforts because it will facilitate the evolution of Indiana's growing "homeland security industry," by providing a central focus through which to interact with major federal funding sources and other stakeholders.

The parties will collaborate to improve the application of technology to homeland security by reviewing available technologies for reuse in homeland security including technologies created or manufactured in Indiana; and

Develop an evaluation system that enables non-technologically proficient personnel to understand the advantages and disadvantages of public safety technologies, to-wit a simple report that reduces technology jargon and explains advantages and disadvantages of deployment to public safety procurement agencies; and

Purdue will initiate through the Purdue Homeland Security Institute (hereafter referred to as "Institute"), efforts to increase the development of military and civilian technologies with anti-terrorism and small unit warfare applications. The Institute will provide a unique central focus, which unifies the creation of anti-terrorist technologies, their tactical implementation and the training of military and security personnel. The Institute will link Purdue University faculty with external resources at IU and the State of Indiana in these related fields; and

Purdue will create within the Purdue Homeland Security Institute, the Indiana Center for Military and Law Enforcement Technology, Tactics and Training. The Center will provide a focus which unifies the creation of anti-terrorist technologies, their tactical implementation and the training of military and security personnel. The Director of the Center will report to the Director of the Institute and its operations will be consistent with other operations of the Institute; and

IU's Center for Applied Cybersecurity Research (hereafter referred to as "CACR") has as its mission the enhancement of the security and integrity of information systems, technologies, and content by facilitating research and education informed by, and integrated with, the practice of information assurance. The CACR will serve as a meeting ground for cybersecurity scholars, teachers, and practitioners and provide a clearinghouse for information on cybersecurity research, teaching, and practice. The CACR will also link IU faculty and staff with external resources at Purdue and the State of Indiana in cybersecurity and related fields. Ultimately, it will improve the practice of information assurance by drawing on the results of research in cybersecurity and related fields; and partner with federal and state governments, business, and other education institutions to improve the quality of information assurance practice, research, and teaching; and

IU will work with Collaborator's to identify and coordinate the participation of researchers within its faculty ranks that are leading experts in the life sciences that may be needed for research and training initiatives identified through the collaboration outlined in this agreement; and

Purdue and IU's faculty and graduate students will both contribute to and benefit from research in advanced homeland security and cybersecurity technologies and techniques. This partnership recognizes the extensive and growing interactions of university researchers with each other and public and private sector entities throughout the State; and

Identify public policy barriers to public safety technology advancement, on the local and state level, and make recommendations for lifting those barriers, including modification of rules, regulations, policies and law to allow for test-beds and to enhance proliferation and use of such technologies.

The synergies among the parties promises to broaden the interactions and importance to the State's technology-based economic development efforts as well as the State's anti-terrorism planning, and increases military effectiveness by creating a dynamic and multidisciplinary research environment.

Article 3. RESPONSIBILITIES

The Collaborators shall provide personnel, facilities, and equipment necessary for, and shall perform, the Cooperative Work.

3.1 NSWCR Crane Personnel and Facilities

The Cooperative Work done by NSWCR Crane will be performed under the program guidance of Robert Karcher, Defense Security Systems Division, Code 404, who has the responsibility for the scientific and technical conduct of the Cooperative Work performed within the facilities of NSWCR Crane or done on behalf of NSWCR Crane by third parties in support of this Agreement.

State of Indiana personnel who perform Cooperative Work at NSWCR Crane facilities will be supervised by the State of Indiana PI.

Purdue personnel who perform Cooperative Work at NSWCR Crane facilities will be supervised by the Purdue PI.

IU personnel who perform Cooperative Work at NSWCR Crane facilities will be supervised by the IU PI.

3.2 State of Indiana, Purdue, IU Personnel and Facilities

For State of Indiana:

The Cooperative Work done by the State of Indiana will be performed under the program guidance of Earl S. Morgan, State of Indiana, PI, who has the responsibility for the scientific and technical conduct of the Cooperative Work performed at facilities of the State of Indiana, or done on behalf of State of Indiana, by third parties in support of this Agreement.

NSWC Crane personnel who perform Cooperative Work at State of Indiana facilities will be supervised by the NSWC Crane PI.

For Purdue:

The Cooperative Work done by Purdue will be performed under the program guidance of Dr. Alok R. Chaturvedi, Purdue PI, who has the responsibility for the scientific and technical conduct of the Cooperative Work performed within the facilities of Purdue, or done on behalf of Purdue, by third parties in support of this Agreement.

NSWC Crane personnel who perform Cooperative Work at Purdue facilities will be supervised by the NSWC Crane PI.

For IU:

The Cooperative Work done by IU will be performed under the program guidance of Fred Cate, IU PI, who has the responsibility for the scientific and technical conduct of the Cooperative Work performed within the facilities of IU or done on behalf of IU by third parties in support of this Agreement.

NSWC Crane personnel who perform Cooperative Work at IU facilities will be supervised by the NSWC Crane PI.

3.3 Security Regulations and Directives

Each Collaborator will abide by the safety and security regulations and directives of the host facility in which the Cooperative Work is being performed.

Article 4. REPRESENTATIONS AND WARRANTIES

4.1 NSWC Crane's Representations and Warranties

NSWC Crane hereby warrants and represents to State of Indiana, Purdue, IU as follows:

4.1.1 NSWC Crane is a Federal laboratory of the U.S. Department of the Navy (Navy) as defined by 15 USC 3710a(d)(2)(A) and Department of Defense Instruction 5535.8, dated May 14, 1999.

4.1.2 The performance of the activities specified by this Agreement is consistent with the Defense Security Systems and technology transfer missions of NSWC Crane

(15 USC 3710a).

4.1.3 The Department of the Navy official executing this Agreement for NSWC Crane has the requisite power and authority to enter into this Agreement and to bind NSWC Crane to perform according to the terms of this Agreement.

4.2.a State of Indiana's Representations and Warranties

State of Indiana hereby warrants and represents to NSWC Crane as follows:

4.2.1.a The State of Indiana is not directly or indirectly controlled by a foreign company or government (Executive Order 12591, Section 4 (a)). The State of Indiana, as of the Effective Date of this Agreement, is a State government duly organized, validly existing, and in good standing under the Constitution laws of the State of Indiana.

4.2.2.a The official executing this Agreement for the State of Indiana has the requisite power and authority to enter into this Agreement and to bind the State of Indiana to perform according to the terms of this Agreement.

4.2.3.a The government officials of the State of Indiana have taken all actions required by law in the State of Indiana to authorize the execution and delivery of agreements, such as this Agreement.

4.2.4.a The execution and delivery of this Agreement does not contravene any material provision of, or constitute a material default under, any agreement binding on the State of Indiana. Furthermore, the execution and delivery of this Agreement does not contravene any material provision of, or constitute a material default under, any valid order of any court, or any regulatory agency or other body having authority to which the State of Indiana is subject.

4.2.5.a The State of Indiana is not presently subject to debarment or suspension by any agency of the Government. Should the State of Indiana be debarred or suspended during the term of this Agreement or thereafter, the State of Indiana will notify NSWC Crane within thirty (30) days of receipt of a final notice. NSWC Crane may then elect to terminate this Agreement and any licenses and options granted under this Agreement.

4.2.6.a The State of Indiana is not a small business as defined in 15 USC 632 and implementing regulations (13 CFR 121.101 et seq.) of the Administrator of the Small Business Administration.

4.2.b Purdue's Representations and Warranties

Purdue hereby warrants and represents to NSWC Crane as follows:

4.2.1.b Purdue is not directly or indirectly controlled by a foreign company or government (Executive Order 12591, Section 4 (a)). Purdue, as of the Effective Date of this Agreement, is a university duly organized, validly existing, and in good standing under the laws of Indiana.

4.2.2.b The official executing this Agreement for the Purdue has the requisite power and authority to enter into this Agreement and to bind Purdue to perform according to the terms of this Agreement.

4.2.3.b The Board of Regents or equivalent of Purdue have taken all actions required by law to authorize the execution and delivery of agreements, such as this Agreement.

4.2.4.b The execution and delivery of this Agreement does not contravene any material provision of, or constitute a material default under, any agreement binding on Purdue. Furthermore, the execution and delivery of this Agreement does not contravene any material provision of, or constitute a material default under, any valid order of any court, or any regulatory agency or other body having authority to which Purdue is subject.

4.2.5.b Purdue is not presently subject to debarment or suspension by any agency of the Government. Should Purdue be debarred or suspended during the term of this Agreement or thereafter, Purdue will notify NSWC Crane within thirty (30) days of receipt of a final notice. NSWC Crane may then elect to terminate this Agreement and any licenses and options granted under this Agreement.

4.2.6.b Purdue is not a small business as defined in 15 USC 632 and implementing regulations (13 CFR 121.101 et seq.) of the Administrator of the Small Business Administration.

4.2.c IU's Representations and Warranties

IU hereby warrants and represents to NSWC Crane as follows:

4.2.1.c IU is not directly or indirectly controlled by a foreign company or government (Executive Order 12591, Section 4 (a)). IU, as of the Effective Date of this Agreement, is a university duly organized, validly existing, and in good standing under the laws of Indiana.

4.2.2.c The official executing this Agreement for the IU has the requisite power and authority to enter into this Agreement and to bind IU to perform according to the terms of this Agreement.

4.2.3.c The Board of Regents or equivalent of IU have taken all actions required by law to authorize the execution and delivery of agreements, such as this Agreement.

4.2.4.c The execution and delivery of this Agreement does not contravene any material provision of, or constitute a material default under, any agreement binding on IU. Furthermore, the execution and delivery of this Agreement does not contravene any material provision of, or constitute a material default under, any valid order of any court, or any regulatory agency or other body having authority to which IU is subject.

4.2.5.c IU is not presently subject to debarment or suspension by any agency of the Government. Should IU be debarred or suspended during the term of this Agreement or thereafter, IU will notify NSWC Crane within thirty (30) days of receipt of a final notice. NSWC Crane may then elect to terminate this Agreement and any licenses and options granted under this Agreement.

4.2.6.c IU is not a small business as defined in 15 USC 632 and implementing regulations (13 CFR 121.101 et seq.) of the Administrator of the Small Business Administration.

4.3 Joint Representations

The Collaborators make the following representations.

4.3.1 There is no express or implied warranty as to any research, Invention, or product, whether tangible or intangible. In particular, the Collaborators make no express or implied warranty as to the merchantability or fitness for a particular purpose of any research, Invention, or product, whether tangible or intangible. Likewise, the Collaborators make no express or implied warranty as to any Cooperative Work, Subject Invention, Subject Data, or other product resulting from the Cooperative Work.

4.3.2 The use and dissemination of Information and materials exchanged under this Agreement will be in accordance with all U.S. laws and regulations, including those pertaining to national security and export control. Nothing in this Agreement shall be construed as a license to export Information or to permit any disclosure in violation of law, regulation, or Department of Defense policy. Each exporting Collaborator is responsible for obtaining any export licenses that may be required by U.S. Federal law.

Article 5. FUNDING

Each Collaborator will fund the majority of its own efforts. However, funding for some tasking may be appropriate and necessary. Should funding be agreed to for the utilization of NSWC Crane facilities it is not expected to exceed \$50,000.00 per year of the three (3) year agreement. If such requests are made tasking documents will be provided containing task descriptions, schedule and cost information.

Checks will be payable to:

NSWC Crane, Defense Security Systems Division, Code 404

Each check and its cover correspondence shall refer to Navy CRADA number "NCRADA- NSWCCD-04-047."

Checks will be mailed to:

Commanding Officer
Code 054, Bldg. 1, P. Ingram
NAVSURFWARCENDIV
300 HWY 361
Crane, IN 47522

5.2 Insufficient and Excess Funds

NSWC Crane may discontinue performance under this Agreement if the funds provided by State of Indiana, and/or Purdue, and/or IU for performance by NSWC Crane are

insufficient or are not provided as specified in Article 5.1. In the event State of Indiana, and/or Purdue, and/or IU fails to tender the Government the required payment within fifteen (15) days after its respective due date, State of Indiana, and/or Purdue, and/or IU shall be in default under this Agreement for failure to make payments. If State of Indiana, and/or Purdue, and/or IU is in default for this reason, NSWC Crane shall notify State of Indiana, and/or Purdue, and/or IU. If State of Indiana, and/or Purdue, and/or IU does not cure the default within fifteen (15) days of mailing date of notice, NSWC Crane may proceed to terminate the Agreement in accordance with Article 11.2.2, may cancel any option for an Exclusive License to a Subject Invention, and may terminate any Exclusive License granted pursuant to this Agreement.

Funds that State of Indiana, and/or Purdue, and/or IU paid under Article 5.1 and that NSWC Crane has not obligated or expended at the time of completion, expiration, or termination of this Agreement shall be returned to State of Indiana, and/or Purdue, and/or IU after NSWC Crane's submission of a final fiscal report to State of Indiana, and/or Purdue, and/or IU.

5.3 No New Commitments

NSWC Crane shall make no new commitments concerning this Agreement after receipt of a written termination notice from State of Indiana, and/or Purdue, and/or IU in accordance with Article 11.2 and shall, to the extent practicable, cancel all outstanding commitments by the termination date. Should such cancellation result in any costs incurred by NSWC Crane, State of Indiana, and/or Purdue, and/or IU agrees that such costs shall be chargeable against any funding that it provided to NSWC Crane.

5.4 Accounting Records

NSWC Crane shall maintain current accounts, records, and other evidence supporting all its expenditures against funding provided by State of Indiana, and/or Purdue, and/or IU under this Agreement and shall retain such records for at three (3) years after the completion, expiration, or termination of this Agreement. NSWC Crane shall provide State of Indiana, and/or Purdue, and/or IU a financial report within four (4) months after completion, expiration, or termination of this Agreement.

Article 6. REPORTS AND PUBLICATIONS

6.1 Interim Reports

The State of Indiana shall submit semi-annual written reports to NSWC Crane, Purdue and IU on the progress of the Cooperative Work as mutually agreed.

Purdue shall submit semi-annual written reports to NSWC Crane, the State of Indiana and IU on the progress of the Cooperative Work as mutually agreed.

IU shall submit semi-annual written reports to NSWC Crane, Purdue and the State of Indiana on the progress of the Cooperative Work as mutually agreed.

NSWC Crane shall submit semi-annual written reports to the State of Indiana, Purdue and IU on the progress of the Cooperative Work as mutually agreed.

6.2 Final Reports

The State of Indiana shall submit a final report to NSWCrane, Purdue and IU within four (4) months of the completion, termination, or expiration of this Agreement that includes the results obtained and a list of all Subject Inventions Made.

Purdue shall submit a final report to NSWCrane, the State of Indiana and IU within four (4) months of the completion, termination, or expiration of this Agreement that includes the results obtained and a list of all Subject Inventions Made.

IU shall submit a final report to NSWCrane, Purdue and the State of Indiana within four (4) months of the completion, termination, or expiration of this Agreement that includes the results obtained and a list of all Subject Inventions Made.

NSWCrane shall submit a final report to the State of Indiana, Purdue and IU within four (4) months of the completion, termination, or expiration of this Agreement that includes the results obtained and a list of all Subject Inventions Made.

6.3 Agreement to Confer Prior to Publication or Public Disclosure

The Collaborators agree to confer and consult prior to any publication or public disclosure of Subject Data to ensure that no Proprietary Information, Restricted Access Information, Government Classified Information, CUI, or MCT Information is released and that patent rights are not compromised. Prior to any such publication or public disclosure of Subject Data, each Collaborator shall be offered a period not less than fifteen (15) days and not to exceed thirty (30) days, unless otherwise mutually agreed in writing by the Collaborators, to review any proposed abstract, publication, presentation, or other document for public disclosure that contains Subject Data. For the purposes of this Article, the term "disclosure" shall include, but not be limited to, submission of any manuscript for peer review prior to publication. It is the responsibility of the Collaborator intending to make public disclosure of Subject Data to notify the other Collaborator of such intent.

If a Collaborator objects to a proposed public disclosure, that Collaborator must so notify the other Collaborator within thirty (30) days of the date of notice of intent to disclose publicly. If no objection is received by the Collaborator intending to make public disclosure, concurrence is assumed. If a Collaborator objects on the grounds that patent rights may be compromised, a Patent Application must be filed by the responsible Collaborator within ninety (90) days of the date of notification of intent to make public disclosure, or by another date mutually agreed to by the Collaborators. If a Collaborator objects to the release of Information on the grounds that the Information is Proprietary Information, Restricted Access Information, or Information whose dissemination is restricted by U.S. security laws or regulations, the disclosure shall be postponed until the Information no longer meets the definitions of Proprietary Information, Restricted Access Information, or is no longer covered by U.S. security laws or regulations.

6.4 Classified Information

Any presentation that includes Subject Data that are Classified Information or otherwise restricted Data must have prior review and approval by NSWCrane pursuant to the pertinent security laws, regulations, and directives. For the purposes of this Cooperative

Research and Development Agreement this clause is only applicable to NSWC Crane and the State of Indiana.

Article 7. INTELLECTUAL PROPERTY

7.1 Data

7.1.1 General Provisions Applying to All Data

7.1.1.1 Ownership

Each Collaborator shall have title to all Data generated by that Collaborator.

7.1.1.2 No Implied License

Unless otherwise specifically provided, the Collaborators agree that the exchange of Data of any kind does not confer a license to any Invention claimed in any patent or Patent Application or to the subject matter of any copyright, trademark/service mark, or other form of Intellectual Property protection.

7.1.1.3 Marking of Data

7.1.1.3.1 Data Provided With Less Than Unlimited Rights

Each Collaborator shall mark all Data that it provides with less than Unlimited Rights with a marking that clearly identifies the limited rights.

7.1.1.3.2 State of Indiana, Purdue, IU Data That are Proprietary Information or Restricted Access Information

State of Indiana shall place a proper proprietary marking on each medium used for recording Data that State of Indiana delivers to NSWC Crane under this Agreement that State of Indiana asserts is Proprietary Information. State of Indiana shall request in writing if it wishes Subject Data generated by NSWC Crane to be marked as Restricted Access Information. The Collaborators together shall confer to determine if such marking is appropriate, with reference to the Definitions of Article 1. If the Collaborators mutually agree to the marking then:

(a) For Non-Subject Data that are Proprietary Information, the marking shall read:

“PROPRIETARY INFORMATION OF STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL – CRANE DIVISION, NAVAL SURFACE WARFARE CENTER AND PURDUE UNIVERSITY AND INDIANA UNIVERSITY MAY USE ONLY FOR PURPOSE OF CRADA NUMBER “NCRADA- NSWCCD-04-047”;

(b) For Subject Data that are State of Indiana Proprietary Information, the marking shall read:

“PROPRIETARY INFORMATION OF STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL – GOVERNMENT HAS GOVERNMENT PURPOSE RIGHTS AND PURDUE UNIVERSITY AND INDIANA UNIVERSITY HAVE UNLIMITED RIGHTS UNDER CRADA NUMBER “NCRADA- NSWCCD-04-047”;

(c) For Data that are Restricted Access Information, the marking shall read:

“RESTRICTED ACCESS INFORMATION – PROTECT IN ACCORDANCE WITH CRADA NUMBER “NCRADA-NSWCCD-04-047” UNTIL FIVE (5) YEARS FROM THE GENERATION OF A RESTRICTED ACCESS INFORMATION DOCUMENT]”.

(d) All Collaborators together shall confer to determine if such marking is appropriate, with reference to the Definition of Proprietary Information in Article 1.

Purdue shall place a proper proprietary marking on each medium used for recording Data that Purdue delivers to NSWC Crane under this Agreement that Purdue asserts is Proprietary Information. Purdue shall request in writing if it wishes Subject Data generated by NSWC Crane to be marked as Restricted Access Information. The Collaborators together shall confer to determine if such marking is appropriate, with reference to the Definitions of Article 1. If the Collaborators mutually agree to the marking then:

(a) For Non-Subject Data that are Proprietary Information, the marking shall read:

“PROPRIETARY INFORMATION OF PURDUE UNIVERSITY – CRANE DIVISION, NAVAL SURFACE WARFARE CENTER AND STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL AND INDIANA UNIVERSITY MAY USE ONLY FOR PURPOSE OF CRADA NUMBER “NCRADA- NSWCCD-04-047”;

(b) For Subject Data that are Purdue Proprietary Information, the marking shall read:

“PROPRIETARY INFORMATION OF PURDUE UNIVERSITY – GOVERNMENT HAS GOVERNMENT PURPOSE RIGHTS AND STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL AND INDIANA UNIVERSITY HAVE UNLIMITED RIGHTS UNDER CRADA NUMBER “NCRADA- NSWCCD-04-047”;

(c) For Data that are Restricted Access Information, the marking shall read:

“RESTRICTED ACCESS INFORMATION – PROTECT IN ACCORDANCE WITH CRADA NUMBER “NCRADA-NSWCCD-04-047” UNTIL FIVE (5) YEARS FROM THE GENERATION OF A RESTRICTED ACCESS INFORMATION DOCUMENT]”.

(d) All Collaborators together shall confer to determine if such marking is appropriate, with reference to the Definition of Proprietary Information in Article 1.

IU shall place a proper proprietary marking on each medium used for recording Data that IU delivers to NSWC Crane under this Agreement that IU asserts is Proprietary Information. IU shall request in writing if it wishes Subject Data generated by NSWC Crane to be marked as Restricted Access Information. The Collaborators together shall confer to determine if such marking is appropriate, with reference to the Definitions of Article 1. If the Collaborators mutually agree to the marking then:

(a) For Non-Subject Data that are Proprietary Information, the marking shall read:

“PROPRIETARY INFORMATION OF INDIANA UNIVERSITY – CRANE DIVISION, NAVAL SURFACE WARFARE CENTER AND PURDUE UNIVERSITY AND STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL MAY USE ONLY FOR PURPOSE OF CRADA NUMBER “NCRADA- NSWCCD-04-047”;

(b) For Subject Data that are Indiana University Proprietary Information, the marking shall read:

“PROPRIETARY INFORMATION OF INDIANA UNIVERSITY– GOVERNMENT HAS GOVERNMENT PURPOSE RIGHTS AND PURDUE UNIVERSITY AND STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL HAVE UNLIMITED RIGHTS UNDER CRADA NUMBER “NCRADA- NSWCCD-04-047”;

(c) For Data that are Restricted Access Information, the marking shall read:

“RESTRICTED ACCESS INFORMATION – PROTECT IN ACCORDANCE WITH CRADA NUMBER “NCRADA-NSWCCD-04-047” UNTIL FIVE (5) YEARS FROM THE GENERATION OF A RESTRICTED ACCESS INFORMATION DOCUMENT]”.

(d) All Collaborators together shall confer to determine if such marking is appropriate, with reference to the Definition of Proprietary Information in Article 1.

7.1.1.3.3 Data That are Subject to 35 USC 205

NSWC Crane shall mark Data it provides under this Agreement that disclose one or more Inventions in which the Government owns or may own a right, title or interest, and that are subject to confidentiality under 35 USC 205. Such Data shall be marked:

“CRANE DIVISION, NAVAL SURFACE WARFARE CENTER DATA PROTECTED FROM RELEASE OR DISCLOSURE UNDER 35 USC 205.”

7.1.1.3.4 Data That are Classified Information, CUI, MCT, or Otherwise Restricted

Each Collaborator shall mark all Data that are Classified Information, CUI, MCT, or otherwise restricted by U.S. security or export control laws or regulations that it provides under this Agreement.

7.1.1.4 Protection of Data

Except for the rights granted in Article 7.1.2.2, Data shall be protected in accordance with the proper markings of its owner and as provided by, at a minimum, the requirements of 15 USC 3710a. Proprietary Information will be protected only if it is properly marked as such. Information provided in intangible form that is Proprietary Information must be designated Proprietary Information at the time it is delivered, followed within fifteen (15) days by a writing summarizing the exact Information to be protected. The Collaborator receiving Information in an intangible form that is designated as Proprietary Information shall be responsible for protecting the Information as Proprietary Information during the fifteen (15) day notification period. After the fifteen (15) day period, if no written summary has been received, the receiving Collaborator need not continue to protect the Information received in intangible form.

Restricted Access Information shall be protected from public dissemination for up to five (5) years, as mutually agreed.

Classified Information, CUI, MCT, or otherwise restricted Information shall be protected in accordance with the security laws of the United States.

7.1.1.5 Shared Data

For performance of the Cooperative Work of this Agreement, Data Supplied by any Collaborator to another Collaborator may be disclosed to all Collaborators of the Agreement without notification to the supplying Collaborator. All Collaborators may discuss among each other any shared Data.

7.1.1.6 Release of Data Under the Freedom of Information Act

Data in the possession of NSWC Crane that are not marked CUI, Proprietary Information of a Non-Navy Collaborator or Restricted Access Information must be released by NSWC Crane where such release is required pursuant to a request under the Freedom of Information Act (FOIA) (5 USC 552). NSWC Crane shall protect Data that are properly marked CUI, Proprietary Information of Non-Navy Collaborator or Restricted Access Information from release under the FOIA for as long as the marked Data meet the definition of CUI, Proprietary Information or Restricted Access Information.

Except as provided in Article 7.1.1.5, prior to release of any Non-Navy Collaborator Data by NSWC Crane, NSWC Crane shall promptly notify the Non-Navy Collaborator of any request for Data of the Non-Navy Collaborator regardless of whether the requested Data are marked Proprietary Information.

7.1.2 Subject Data

7.1.2.1 Delivery of Requested Subject Data

Each Collaborator shall have the right to review and receive delivery of all Subject Data generated by the other Collaborator. Requested Subject Data shall be delivered to the requesting Collaborator within fifteen (15) days of the request.

7.1.2.2 Rights in Subject Data

Except as represented in Article 4.3.2, the Collaborators shall have Unlimited Rights in all Subject Data that are not Proprietary Information or Restricted Access Information.

Notwithstanding 15 USC 3710a, State of Indiana grants Government Purpose Rights in any Subject Data furnished by State of Indiana to NSWC Crane under this Agreement that are properly marked as Proprietary Information. The Government has Government Purpose Rights in Subject Data that are Restricted Access Information.

Notwithstanding 15 USC 3710a, Purdue grants Government Purpose Rights in any Subject Data furnished by Purdue to NSWC Crane under this Agreement that are properly marked as Proprietary Information. The Government has Government Purpose Rights in Subject Data that are Restricted Access Information.

Notwithstanding 15 USC 3710a, IU grants Government Purpose Rights in any Subject Data furnished by IU to NSWC Crane under this Agreement that are properly marked as Proprietary Information. The Government has Government Purpose Rights in Subject Data that are Restricted Access Information.

The Government has Government Purpose Rights in Subject Data that are Restricted Access Information.

7.1.3 Rights in Non-Subject Data

The Collaborators shall have Unlimited Rights in any Non-Subject Data delivered under this Agreement that are not Proprietary Information.

Each Collaborator has a limited right to use, reproduce, and disclose only to Government employees for use in support of the Cooperative Work any Non-Subject Data that are marked as Proprietary Information in accordance with Article 7.1.1.3 and are provided by State of Indiana, and/or Purdue, and/or IU under this Agreement. Such Proprietary Information can be used only for the purpose of performing the Cooperative Work unless consent to other use or disclosure is obtained from the Collaborator providing the marking.

State of Indiana, Purdue, IU shall have a limited right to use, reproduce, or disclose Non-Subject Data that may describe one or more Inventions in which the Government owns or may own a right, title or interest, if such Non-Subject Data are provided by NSWC Crane under this Agreement. In accordance with 35 USC 205, such Non-Subject Data are to be held in confidence. Such Non-Subject Data shall be properly marked by NSWC Crane and the limited rights of each Non-Navy Collaborator shall be defined by a separate non-disclosure agreement.

7.2 Copyrights

7.2.1 Copyright by State of Indiana, Purdue, IU

State of Indiana, Purdue, and IU may copyright works of authorship prepared pursuant to this Agreement if eligible for copyright protection under Title 17 USC.

7.2.2 Copyright License to the Government

State of Indiana, Purdue, and IU grants to the Government and all other Non-Navy Collaborators of this Agreement, a nonexclusive, irrevocable, paid-up license in copyrighted works of authorship, including software (17 USC 106) prepared pursuant to this Agreement for any purpose, consistent with the rights in Data described in Article 7.1.

7.2.3 Copyright Statement

A Non-Navy Collaborator 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 by it in the performance of this Agreement:

“The U.S. Government and the State of Indiana Counter-Terrorism and Security Council, and Purdue University, and Indiana University have a copyright license in this work pursuant to a Cooperative Research and Development Agreement with Crane Division, Naval Surface Warfare Center.”

7.3 Trademarks and Service Marks

7.3.1 Ownership of Trademarks and Service Marks

The Collaborator first establishing a trademark or service mark for goods or services with which the mark is used shall be considered the owner of the mark.

7.3.2 Obligation of Employees to Report Trademarks and Service Marks

Employees of both Collaborators shall report the adoption of a trademark or service mark associated with the Cooperative Work to their employer within thirty (30) days of the first use of the mark. Use includes internal use of any product or service of the Cooperative Work.

7.3.3 Obligation of Collaborators to Notify Each Other

Each Collaborator shall notify the other Collaborator within thirty (30) days of their employee's report of the first use of a trademark or service mark.

7.3.4 Responsibility for Filing an Application for Trademark or Service Mark

The Collaborator owning a trademark or service mark shall establish the use of the mark in intra- and interstate commerce and shall be responsible for filing all applications for trademark or service mark registration as appropriate.

7.3.5 License to Use Trademark or Service Mark

The Collaborator owning the trademark or service mark as defined in Article 7.3.1, shall grant a paid-up, irrevocable, nonexclusive license to the other Collaborator for use of the trademark or service mark on the goods or services for which the mark is intended to be used.

7.4 Subject Inventions

7.4.1 Obligation to Report Subject Inventions

7.4.1.1 Collaborators' Instructions to Employees

Each Collaborator shall instruct its employees to submit an Invention Disclosure to that Collaborator for all innovations, solutions to technical problems, or unique increases to the general body of knowledge resulting from the Cooperative Work. For the purposes of this Article, these innovations, solutions, and increases to knowledge shall be deemed Inventions.

7.4.1.2 Timely Invention Disclosure by Inventors

Within ninety (90) days of Making an Invention resulting from the Cooperative Work, unless a shorter time period is required by circumstances, the inventor(s) shall submit an Invention Disclosure to their employer.

In the case of an Invention Made jointly by inventors from both Collaborators, the inventors shall submit an Invention Disclosure with their respective employer.

7.4.1.3 Obligation to Provide Invention Disclosures to the Other Collaborator

Each Collaborator shall provide the other Collaborator with a copy of each Invention Disclosure reporting a Subject Invention within sixty (60) days of receiving the Invention Disclosure from its inventor(s).

7.4.2 Determination of Subject Inventions

The Collaborators shall review each Invention Disclosure resulting from the Cooperative Work and shall confer and consult to determine whether an Invention Disclosure represents a Subject Invention.

7.4.3 Title to and Ownership of Subject Inventions

Each Collaborator shall be entitled to own the Subject Inventions of its employees. Each Collaborator shall cooperate with the other Collaborator to obtain inventor signatures on Patent Applications, assignments or other documents required to secure Intellectual Property protection. For any Invention Made jointly by employees of more than one Collaborator, each inventing Collaborator shall have ownership of the Subject Invention in the form of an undivided interest.

7.4.4 Filing of Patent Applications

7.4.4.1 Filing of Patent Applications on Solely Made Inventions

Each Collaborator has primary responsibility for filing Patent Applications on the Subject Inventions of its employee(s).

Notwithstanding such primary responsibility, by mutual agreement, the Collaborators may identify which Collaborator shall file a Patent Application on any Subject Invention.

7.4.4.2 Filing of Patent Applications on Jointly Made Inventions

In the case of an Invention jointly Made by employees of more than one Collaborator, the inventing Collaborators shall confer and agree as to which Collaborator will file any Patent Application. Officers of the non-filing Collaborator shall cooperate with the filing Collaborator to obtain signatures on documents that are needed to file a Patent Application.

7.4.4.3 Preserving Intellectual Property Rights

The Collaborator responsible for filing of a Patent Application on any Subject Invention shall file such Patent Application at least sixty (60) days prior to any bar date or one year from the date the Invention Disclosure was received, whichever comes first. If no Patent Application is filed within the specified time period, any other Collaborator may assume control of filing the Patent Application and take title to the Subject Invention on ten (10) days written notification. Any Collaborators that relinquished the responsibility to file shall retain a nonexclusive, irrevocable, paid-up license to practice the Subject Invention or have the Subject Invention practiced throughout the world by or on its behalf.

7.4.4.4. Filing Deadlines

The Collaborator responsible for filing any Patent Application for a Subject Invention shall notify the other Collaborator of all filing deadlines for prosecution of any Patent Application and maintenance of any patents on the Subject Invention. Notwithstanding the primary responsibility defined in Article 7.4.4.1, sixty (60) days prior to any filing deadline, the Collaborators shall confer to determine if the filing Collaborator intends to respond to the filing deadline. The non-filing Collaborator will be permitted to take action if the filing Collaborator declines.

7.4.4.5 Copies and Inspection

7.4.4.5.1 Copies of Prosecution Papers

Each Collaborator filing a Patent Application on a Subject Invention shall provide the other Collaborator with a copy of any communication relating to prosecution of said Patent Application within thirty (30) days of receipt of such communication.

7.4.4.5.2 Access to Patent Application File and Right to Make Copies

Upon written request, the filing Collaborator shall give the other Collaborator an Associate Power of Attorney, with authorization to access the Patent Application, make copies, and, in the event the filing Collaborator fails or declines to take action, do all that is necessary to secure Intellectual Property protection for the Subject Invention.

7.4.4.6 Rights of Inventors if the Collaborators Decline to File a Patent Application

In the event all Collaborators decline to file a Patent Application on a Subject Invention, the Government will renounce its entitlement and leave its rights to the inventor(s) who may retain ownership of the Invention, subject to the retention by each Collaborator of a nonexclusive, irrevocable, paid-up license to practice the Subject Invention or have the Invention practiced throughout the world by or on its behalf.

In the event all Collaborators decline to file a Patent Application on a Subject Invention, a Non-Navy Collaborator may, at its sole discretion, renounce its entitlement and leave its rights to the inventor(s) who may retain ownership of the Invention, subject to the retention by each Collaborator of a nonexclusive, irrevocable, paid-up license to practice the Subject Invention or have the Invention practiced throughout the world by or on its behalf.

7.4.5 Nonexclusive License to Subject Inventions

7.4.5.1 Nonexclusive License Grant

Each Collaborator grants to the other Collaborator a nonexclusive, irrevocable, paid-up license to practice a Subject Invention Made by employees of the granting Collaborator or have the Subject Invention practiced throughout the world by or on behalf of the other Collaborator. No nonexclusive license granted under this Agreement shall permit licensee to grant sublicenses.

7.4.5.2 Confirmatory Nonexclusive License Agreement

Each Collaborator has the obligation to provide a Confirmatory License Agreement (Appendix B) to the other Collaborator for each nonexclusive license within ninety (90) days of the date of filing.

7.4.6 Option for Exclusive License to Subject Inventions

N/A

7.4.7 Limitation on Assignment of Licenses Granted Under This Agreement

No license granted to a Non-Navy Collaborator under this Agreement shall be assigned, licensed or otherwise disposed of except to the successor in interest of that part of that Non-Navy Collaborator's business to which such license pertains.

7.4.8 Termination of License Granted and Cancellation of Exclusive License Option to Subject Inventions

7.4.8.1 Exclusive Licenses and Exclusive License Option

NSWC Crane may terminate any Exclusive License or cancel any option for an Exclusive License to a Subject Invention granted to the State of Indiana under this Agreement in the event that:

(a) State of Indiana is in default for failure to make payment as agreed in Article 5; or

- (b) The Agreement is terminated unilaterally by State of Indiana; or
- (c) State of Indiana fails to perform according to the Statement of Work (Appendix A); or
- (d) State of Indiana becomes a foreign owned, controlled, or influenced (FOCI) organization that does not qualify under the requirements of Executive Order 12591, Section 4(a).

NSWC Crane may terminate any Exclusive License or cancel any option for an Exclusive License to a Subject Invention granted to Purdue University under this Agreement in the event that:

- (b) Purdue is in default for failure to make payment as agreed in Article 5; or
- (b) The Agreement is terminated unilaterally by Purdue; or
- (c) Purdue fails to perform according to the Statement of Work (Appendix A); or
- (d) Purdue becomes a foreign owned, controlled, or influenced (FOCI) organization that does not qualify under the requirements of Executive Order 12591, Section 4(a).

NSWC Crane may terminate any Exclusive License or cancel any option for an Exclusive License to a Subject Invention granted to Indiana University under this Agreement in the event that:

- (c) IU is in default for failure to make payment as agreed in Article 5; or
- (b) The Agreement is terminated unilaterally by IU; or
- (c) IU fails to perform according to the Statement of Work (Appendix A); or
- (d) IU becomes a foreign owned, controlled, or influenced (FOCI) organization that does not qualify under the requirements of Executive Order 12591, Section 4(a).

7.4.8.2 Nonexclusive Licenses

NSWC Crane shall terminate any nonexclusive license to a Subject Invention granted to the State of Indiana under this Agreement if the State of Indiana becomes a FOCI organization that does not qualify under the requirements of Executive Order 12591, Section 4(a).

NSWC Crane shall terminate any nonexclusive license to a Subject Invention granted to Purdue under this Agreement if Purdue becomes a FOCI organization that does not qualify under the requirements of Executive Order 12591, Section 4(a).

NSWC Crane shall terminate any nonexclusive license to a Subject Invention granted to IU under this Agreement if IU becomes a FOCI organization that does not qualify under the requirements of Executive Order 12591, Section 4(a).

7.5 Non-Subject Inventions

7.5.1 Ownership of Non-Subject Inventions

Each Collaborator owns its Non-Subject Inventions.

7.5.2 Rights Under Other Agreements

Nothing in this Agreement is intended to change the rights in Intellectual Property acquired by the Collaborators in any other contract or agreement between the State of Indiana and the Government.

Nothing in this Agreement is intended to change the rights in Intellectual Property acquired by the Collaborators in any other contract or agreement between Purdue and the Government.

Nothing in this Agreement is intended to change the rights in Intellectual Property acquired by the Collaborators in any other contract or agreement between IU and the Government.

7.5.3 No License to Non-Subject Inventions

This Agreement does not grant any Collaborator a license, express or implied, to any Non-Subject Invention.

7.6 Research License

Each Collaborator shall allow the other Collaborators to practice any of its Non-Subject Inventions for the purpose of performing the Cooperative Work.

No license, express or implied, for commercial application(s) is granted to either Collaborator in Non-Subject Inventions by performing the Cooperative Work.

For commercial application(s) of Non-Subject Inventions, a license must be obtained from the owner.

Article 8. TANGIBLE PROPERTY

8.1 Title to Preexisting Tangible Property

Each Collaborator shall retain title to all Tangible Property to which it had title prior to the Effective Date of this Agreement.

8.2 Tangible Property Purchased by Collaborators to Perform the Cooperative Work

Each Collaborator shall retain title to all Tangible Property that it purchases during the period of this Agreement. A Non-Navy Collaborator cannot take title to any Government Tangible Property under this Agreement. Collaborator consumables to be used in the Cooperative Work of this Agreement are the property of the purchasing Collaborator until consumed.

8.3 Title to Developed Tangible Property

All Tangible Property developed under this Agreement with all components purchased by one Collaborator shall be the property of that Collaborator. Tangible Property having any component purchased by NSWCC Crane shall be the property of the Government, unless such Tangible Property can reasonably be separated without damage to the other individual components. After this Agreement is completed, expired, or terminated, if separation of components can be made without damage, the Collaborators may, by mutual agreement, separate the Tangible Property into its components and the separated components shall remain the property of the Collaborator that purchased them.

8.4 Tangible Property Operational and Disposition Costs

During the period of and upon completion, expiration, or termination of this Agreement, each Collaborator shall be responsible for all costs of maintenance, removal, storage, repair, disposal, and shipping of all Tangible Property to which it has title.

8.5 Disposal of Tangible Property

Disposal of Tangible Property shall be in accordance with applicable U.S. Federal, State, and local property disposal laws, environmental laws, and regulations.

Article 9. LIABILITY

9.1 Extent of Government Liability

The Government shall be solely liable for the negligent or wrongful acts of its officers and employees to the extent provided for in the Federal Tort Claims Act (28 USC 2671 et. seq.) and in other applicable laws and regulations of the United States that specifically waive sovereign immunity. Nothing in this Agreement shall be construed as a waiver of the sovereign immunity of the United States.

9.2 Extent of Non-Navy Collaborators Liability

The State of Indiana is solely responsible for its actions and the actions of those acting for the State of Indiana in the performance of this Agreement and for any damages that may arise from any suit, action, or claim, and for any costs from or incidental to any suit, action, or claim, including but not limited to settlement and defense costs. Further, the State of Indiana agrees that in any suit, action or claim brought by anyone not a party to this Agreement based on actions of the State of Indiana, the State of Indiana shall not pursue any actions to enter the Government as a party in such suit, action or claim unless the Government has some liability under the Federal Tort Claims Act.

Purdue is solely responsible for its actions and the actions of those acting for Purdue in the performance of this Agreement and for any damages that may arise from any suit, action, or claim, and for any costs from or incidental to any suit, action, or claim, including but not limited to settlement and defense costs. Further, Purdue agrees that in any suit, action or claim brought by anyone not a party to this Agreement based on actions of Purdue, Purdue shall not pursue any actions to enter the Government as a party in such suit, action or claim unless the Government has some liability under the Federal Tort Claims Act.

IU is solely responsible for its actions and the actions of those acting for IU in the performance of this Agreement and for any damages that may arise from any suit, action, or claim, and for any costs from or incidental to any suit, action, or claim, including but not limited to settlement and defense costs. Further, IU agrees that in any suit, action or claim brought by anyone not a party to this Agreement based on actions of IU, IU shall not pursue any actions to enter the Government as a party in such suit, action or claim unless the Government has some liability under the Federal Tort Claims Act.

9.3 *Force Majeure*

No Collaborator shall be liable for the consequences of any *force majeure* that (1) is beyond its reasonable control; (2) is not caused by the fault or negligence of such Collaborator; (3) causes such Collaborator to be unable to perform its obligations under this Agreement; and (4) cannot be overcome by the exercise of due diligence. In the event of the occurrence of a *force majeure*, the Collaborator unable to perform shall promptly notify the other Collaborators. The remaining Collaborators may choose to continue performance without the non-performing Collaborator or they may choose to suspend performance only for such period of time as is necessary for the non-performing Collaborator to overcome the result(s) of the *force majeure* and shall use their best efforts to resume performance as quickly as possible.

Article 10. GENERAL PROVISIONS

10.1 Characteristics of the Agreement

10.1.1 Entire Agreement

This Agreement constitutes the entire agreement between the Collaborators concerning the Cooperative Work and supersedes any prior understanding or written or oral agreement relative to the Cooperative Work.

10.1.2 Severability

The illegality or invalidity of any Article of this Agreement shall not impair, affect, or invalidate any other Article of this Agreement.

10.1.3 Interpretation of Headings

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

10.2 Agreements Between Collaborators

10.2.1 Governing Laws

United States Federal Laws shall govern this Agreement for all purposes.

10.2.2 Independent Parties/Entities

The relationship of the Collaborators to this Agreement is that of independent parties and not as agents of each other, partners, or participants in a joint venture. Each Collaborator shall maintain sole and exclusive control over its personnel and operations.

10.2.3 Assignment/Subcontracting

10.2.3.1 No Collaborator may allow third parties to perform any part of the Cooperative Work under this Agreement without express written consent of the other Collaborator. If consent is obtained, the Collaborator requesting such consent shall remain fully responsible for the portion of the Cooperative Work to be accomplished under a third-party agreement, and the third party is not a Collaborator of this Agreement. Any third-party agreement to perform a portion of the Cooperative Work shall contain terms consistent with this Agreement.

10.2.3.2 This Agreement shall not be assigned or otherwise transferred by any Collaborator without the prior written consent of the other Collaborators, except to the successor of that part of a Non-Navy Collaborator's business to which this Agreement pertains.

10.2.3.3 If any Non-Navy Collaborator or its successor or assignee is a U.S. company, and becomes, during the term of this Agreement or thereafter, directly or indirectly owned, controlled, or influenced by a foreign company or government (FOCI), then that Non-Navy Collaborator or its successor or assignee shall promptly notify NSWC Crane to that effect.

10.2.4 Disputes

10.2.4.1 Settlement and Resolution

NSWC Crane and each Non-Navy Collaborator agree to use reasonable efforts to reach a fair settlement of any dispute. If such efforts are unsuccessful, remaining issues in dispute will be referred to the signatories of this Agreement or their successors for resolution. If a dispute continues, the remaining issues may be submitted to the Chief of Naval Research (CNR), or the CNR designee, for resolution. This Agreement does not prevent any Collaborator from pursuing disputes in a U.S. Federal court of competent jurisdiction. No Collaborator will pursue litigation in a U.S. Federal court until after the CNR, or the CNR designee, decides the dispute, or until sixty (60) days after the dispute was first submitted to the CNR, or the CNR designee, whichever comes first.

10.2.4.2 Continuation of Cooperative Work

If payments or installment payments are to be made as stated under Article 5, NSWC Crane will not start or continue cooperative work until payments or installment payments are received.

10.2.5 Waivers

None of the provisions of this Agreement shall be considered waived by either Collaborator unless such waiver is given in writing to the other Collaborator, signed by the executing official of this Agreement or the official's successor having the authority to bind the Collaborator making the waiver. The failure of any Collaborator to insist upon strict performance of any of the terms and conditions herein, or failure or delay to exercise any rights provided herein or by law shall not be deemed a waiver of any right of any Collaborator under this Agreement.

10.2.6 Use of Name or Endorsements

Except as provided for in Article 7.2.3, no Collaborator shall use the name of another Collaborator or any other Government entity on any product or service that is directly or indirectly related to either this Agreement or any patent license or assignment associated with this Agreement without the prior approval of THE OTHER COLLABORATOR OR GOVERNMENT ENTITY. By entering into this Agreement, NSWC Crane does not directly or indirectly endorse any product or service provided, or to be provided, by any Non-Navy Collaborator, its successors, assignees, or licensees. A Non-Navy Collaborator shall not in any way imply that the Department of the Navy endorses any such product or service.

10.3 Environment, Safety, and Health

Each Collaborator shall be responsible for the handling, control, and disposition of any and all hazardous substances or waste in its custody during the course of this Agreement. At the conclusion of this Agreement, each Collaborator shall be responsible for the handling, control, and disposition of any and all hazardous substances or waste still in its possession. Each Collaborator shall obtain at its own expense all necessary permits and licenses as required by U.S. Federal, State, and local law and shall conduct such handling, control, and disposition in a lawful and environmentally responsible manner. Each Collaborator is responsible for all required environmental, safety, and health compliance, notice, and monitoring related to its facility in accordance with U.S. Federal, State, and local law and regulations. Collaborators shall abide by the environmental, safety, and health directives of the host facility in which the Cooperative Work is being performed, and any U.S. Federal, State, or local laws and regulations pertaining to environment, safety, and health that are applicable to the host facility.

10.4 U.S. Competitiveness

All Non-Navy Collaborators agree that any product, process, or service using Intellectual Property arising from the performance of this Agreement shall be manufactured substantially in the United States.

10.5 Public Release of This Agreement

This Agreement, without funding information (Article 5) and Appendices, may be released to the public.

Article 11. MODIFICATIONS AND NOTICES

11.1 Amendments

If a Collaborator wishes to modify this Agreement, the Collaborators shall confer in good faith to determine the desirability of such modification. Such modification shall not be effective until a written amendment is signed by all executing officials of the Collaborators of this Agreement or their successors.

11.2 Termination

11.2.1 Termination by Mutual Consent

The Collaborators may elect to terminate this Agreement at any time by mutual consent of all Collaborators. Such termination shall not be effective until a written termination agreement is signed by the executing officials of all Collaborators of this Agreement or their successors.

11.2.2 Unilateral Termination

NSWC Crane may unilaterally terminate this entire Agreement at any time by giving the other Collaborator written notice signed by the executing official of this Agreement or his/her successor, not less than thirty (30) days prior to the desired termination date. A Non-Navy Collaborator may unilaterally terminate its involvement in this Agreement at any time by giving the other Collaborators written notice signed by its executing official of this Agreement or his/her successor, not less than thirty (30) days prior to the desired termination date. If any Non-Navy Collaborator unilaterally terminates its involvement this Agreement, any option for an Exclusive License to a Subject Invention and any Exclusive License to a Subject Invention granted by or pursuant to this Agreement shall simultaneously be terminated.

If the remaining Non-Navy Collaborators and NSWC Crane also wish to terminate this Agreement, they may do so in accordance with Article 11.2.1. If the remaining Non-Navy Collaborators and NSWC Crane wish to continue this Agreement, an amendment in accordance with Article 11.1 will be written to modify the Agreement to accommodate this change and the withdrawal of the exiting Non-Navy Collaborator(s). This amendment will be signed after the termination date of the unilaterally terminating Collaborator(s).

11.3 Notices

All notices pertaining to or required by Articles of this Agreement, except those pertaining solely to the prosecution of any patent, trademark, or service mark, shall be in writing and shall be signed by an authorized representative of the Technology Transfer Office for NSWC Crane or the preferred contact for each of the Non-Navy Collaborators, and all such notices shall be delivered by hand, sent by courier with proper registration, or sent by certified mail, return receipt requested, with postage prepaid, addressed as follows:

If to NSWC Crane:
Commanding Officer
Code 054, Bldg. 1, B. Bailey
NAVSURFWARCENDIV
300 HWY 361
Crane, IN 47522

If to State of Indiana:
Mr. Earl S. Morgan, Sr.
Indiana Government Center North
100 North Senate Avenue, Rm 340
Indianapolis, IN 46204

If to Purdue:
Rick Evans
Senior Contracts Manager
Purdue University
610 Purdue Mall, Hovde Hall
West Lafayette, IN 47907

If to IU:
Steven Martin
Assistant Vice President for Research
Indiana University
Carmichael Center, L-03
530 E. Kirkwood Ave
Bloomington, IN 47408

A Collaborator shall notify the other Collaborators of a change of address in the manner set forth above.

Notices pertaining solely to the prosecution of any patent, trademark, or service mark related to this Agreement shall be in writing and shall be signed by and sent to the Collaborator's legal counsel for Intellectual Property. Legal counsel for Intellectual Property for each Collaborator shall send a copy of any such notice to the Technology Transfer Office for NSWC Crane. If any Collaborator fails to identify such counsel upon request, then such notices shall be sent to the points of contact specified above.

Article 12. SURVIVING PROVISIONS

The Articles covering Definitions, Representations and Warranties, Funding, Reports and Publications, Intellectual Property, Tangible Property, Liability, General Provisions, Modifications and Notices, and Surviving Provisions shall survive the completion, termination, or expiration of this Agreement.

Article 13. DURATION

This Agreement expires three (3) years after its Effective Date, unless otherwise extended in writing according to the provisions of Article 11.

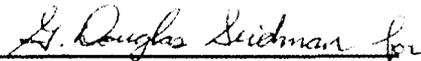
Article 14.

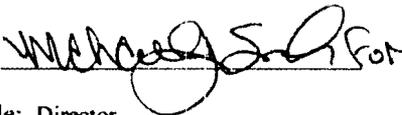
SIGNATURES

For **THE STATE OF INDIANA**: We the undersigned, are duly authorized to bind the **State of Indiana** to this Agreement and do so by affixing our signatures hereto.

Entered into this 22nd day of Nov, 2004.

By: 
Title: Director
State of Indiana
Counter-Terrorism and Security Council

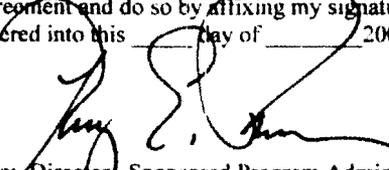
By: 
Title: Commissioner
Department of Administration

By: 
Title: Director
General
State Budget Agency

By: 
Title: Attorney
Office of the Attorney General

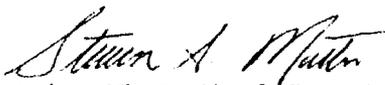
For **PURDUE UNIVERSITY**: I, the undersigned, am duly authorized to bind **Purdue** to this Agreement and do so by affixing my signature hereto.

Entered into this _____ day of _____, 2004.

By: 
Title: Director Sponsored Program Administration and Purchasing Services

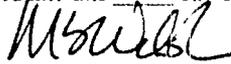
For **INDIANA UNIVERSITY**: I, the undersigned, am duly authorized to bind **IU** to this Agreement and do so by affixing my signature hereto.

Entered into this 30 day of November, 2004.

By: 
Title: Assistant Vice President for Research

For the **DEPARTMENT OF THE NAVY**: I, the undersigned, by 15 USC 3710a and Navy regulations, am duly authorized to bind the U.S. Navy to this Agreement and do so by affixing my signature hereto.

Entered into this 13th day of Dec, 2004.

By: 
M. S. Welsh
COMMANDING OFFICER
CRANE DIVISION
NAVAL SURFACE WARFARE CENTER

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APPENDIX A
STATEMENT OF WORK
BETWEEN
CRANE DIVISION, NAVAL SURFACE WARFARE CENTER
AND
STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL
AND
PURDUE UNIVERSITY
AND
INDIANA UNIVERSITY

The Collaborators agree to the following:

1. To identify and exploit synergies among the collaborators to broaden Crane's interactions with the State's technology-based economic development efforts as well as the State's anti-terrorism planning, and increase Crane's military effectiveness by creating a dynamic and multidisciplinary research environment.
2. To develop an evaluation system that enables non-technologically proficient personnel to understand the advantages and disadvantages of public safety technologies to-wit a simple report that reduces technology jargon and explains advantages and disadvantages of deployment to public safety procurement agencies.
3. To identify public policy barriers to public safety technology advancement, on the local and state level, and make recommendations for lifting those barriers, including modification of rules, regulations, policies and law to allow for test-beds and to enhance proliferation and use of such technologies.
4. To name a representative to serve on a planning committee that will be responsible for identifying collaborative project opportunities in the realm of anti-terrorism and homeland security. Each representative to this committee shall facilitate the identification of relevant individuals or other resources of their respective institutions that could contribute to such collaborative opportunities.
5. Purdue University's and Indiana University's faculty and graduate students will both contribute to and benefit from collaborative research with the State and NSWC Crane in advanced homeland security technologies and techniques. This partnership recognizes the extensive and growing interactions of university researchers with each other and public and private sector entities throughout the State.
6. To collaborate to improve the application of technology to homeland security by reviewing available technologies for reuse in homeland security including technologies created or manufactured in Indiana.
7. Purdue will initiate through the Purdue Homeland Security Institute (hereafter referred to as "Institute"), efforts to increase the development of military and civilian technologies with anti-terrorism and small unit warfare applications. The Institute will provide a unique central focus, which unifies the creation of anti-terrorist technologies, their tactical implementation and the training of military and security

personnel. The Institute will link Purdue University faculty with external resources at IU, NSWC Crane, and the State of Indiana in these related fields.

8. Purdue will create within the Institute the Indiana Center for Military and Law Enforcement Technology, Tactics and Training. This center will provide a focus, which unifies the creation of anti-terrorist technologies, their tactical implementation and the training of military and security personnel. The Director for this center will report to the Director of the Institute and its operations will be consistent with other operations of the Institute.

9. IU's Center for Applied Cybersecurity Research (hereafter referred to as "CACR") has as its mission the enhancement of the security and integrity of information systems, technologies, and content by facilitating research and education informed by, and integrated with, the practice of information assurance. The CACR will serve as a meeting ground for cybersecurity scholars, teachers, and practitioners and provide a clearinghouse for information on cybersecurity research, teaching, and practice. The CACR will also link IU faculty and staff with external resources at Purdue and the State of Indiana in cybersecurity and related fields. Ultimately, it will improve the practice of information assurance by drawing on the results of research in cybersecurity and related fields; and partner with federal and state governments, business, and other education institutions to improve the quality of information assurance practice, research, and teaching.

10. IU will work with Collaborator's to identify and coordinate the participation of researchers within its faculty ranks that are leading experts in the life sciences that may be needed for research and training initiatives identified through the collaboration outlined in this agreement.

11. To collaborate in such a manor as to simultaneously enhance Crane's military value and facilitate the evolution of Indiana's growing "homeland security industry" by providing a central focus through with to interact with major federal funding sources and other stakeholders.

APPENDIX B

CONFIRMATORY LICENSE AGREEMENT	<i>1. APPLICATION FOR (Title of Invention)</i>
<i>2. INVENTOR(S) AND AFFILIATION</i>	
<i>3. PATENT APPLICATION SERIAL NO.</i>	<i>4. PATENT APPLICATION FILING DATE</i>
<i>5. NAVY ACTIVITY (Name, address, point of contact)</i>	<i>6. NON-NAVY ACTIVITY (Name, address, point of contact)</i>
<i>7. CRADA AGREEMENT NO.</i>	<i>8. DATE OF THIS AGREEMENT</i>
<p><i>9. The Invention identified above is a "Subject Invention" under Article 7 Intellectual Property included with the CRADA identified in Box 7 between the Department of the Navy and Non-Navy Activity identified in Box 6.</i></p> <p><i>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.</i></p> <p><i>This license is granted to</i></p> <p>_____ <i>the Government</i> <i>(Select one)</i></p> <p>_____ <i>Non-Navy Activity identified in Box 6</i></p> <p><i>under this CRADA in the identified Invention, Patent Application and any resulting patent.</i></p> <p><i>The licensee is hereby granted an irrevocable power to inspect and make copies of the above-identified Patent Application.</i></p> <p>_____ <i>ACTIVITY NAME OF LICENSOR</i></p> <p>_____ <i>SIGNATURE</i></p> <p>_____ <i>NAME (Typed or Printed)</i></p> <p>_____ <i>TITLE</i></p> <p>_____ <i>BUSINESS TELEPHONE</i></p>	