BY ORDER OF THE COMMANDER
UNITED STATES TRANSPORTATION COMMAND

USTRANSCOM INSTRUCTION 61-2
21 AUGUST 2008

Scientific/Research and Development

TECHNOLOGY TRANSFER AND COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS (CRADA)

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements policy, assigns responsibilities, and establishes procedures for planning, executing and overseeing Technology Transfer technology transfer activities including Cooperative Research and Development Agreements (CRADAs), licenses, assignments of intellectual property (IP) and other technology transfer mechanisms between the United States Transportation Command (USTRANSCOM) and the public and private sector, including industry, academia, state, and local governments.

1. Background

1.1. USTRANSCOM functions as a federal laboratory for purposes of federal technology transfer laws. Engineers and others at USTRANSCOM develop technology solutions to transportation and distribution process problems. Technology transfer laws permit USTRANSCOM to collaborate with industry and academia in solving its transportation and distribution process problems. These same laws allow us to share intellectual property rights with our collaborators as a way to encourage their participation. The most widely used mechanism for these types of collaboration is the CRADA. Collaborative efforts like these are generally managed by what are called Principal Investigators. Technology transfer laws call for the local Office of Research and Technology Applications (ORTA) to manage these agreements and other related matters. This instruction describes the agreements by which we collaborate and share intellectual property rights with others and the internal roles and processes we will use for completing these arrangements.

1.2. Applicability and Scope

1.2.1. This instruction applies to all USTRANSCOM Directorates and the Command Support Group.

2. Definitions

2.1. Terms used in this instruction are defined in Attachment 1.

3. Policy

3.1. It is USTRANSCOM policy to use technology transfer mechanisms such as CRADAs, licenses or assignments of intellectual property wherever practical to leverage the research and development capabilities of external technology providers to complement the USTRANSCOM federal laboratory role and to transfer technology developed jointly or independently to enhance both defense capabilities and the civilian economy, consistent with USTRANSCOM's mission.

4. Responsibilities

4.1. The Deputy Commander (TCDC) shall:

4.1.1. Serve as Laboratory Director for USTRANSCOM's technology transfer activities, including CRADAs, licenses, assignments of intellectual property, or other technology transfer mechanisms.

4.1.2. Exercise final approval and signature authority for entry into CRADAs, licenses, and assignments of intellectual property or other technology transfer mechanisms.

4.1.3. Provide Command guidance for technology transfer activities, including CRADAs, licenses, assignments of intellectual property or other technology transfer mechanisms.

4.1.4. Formerly appoint the ORTA Director.

4.2. The Chief of Staff (TCCS) shall:

4.2.1. Provide day-to-day oversight and supervision of the technology transfer process to ensure compliance with all applicable laws, regulations and policies, including the policies and procedures set forth in this instruction.

4.3. The Office of Research and Technology Applications (TCCS-ORTA) shall:

4.3.1. Be co-located with the TCJ5/4 Research, Development, Test, and Evaluation (RDT&E) Team and report directly to the USTRANSCOM Chief of Staff. This placement will permit TCCS-ORTA to liaison effectively with all of the Command's directorates while at the same time ensuring new collaborative opportunities are properly vetted against other Command innovation efforts, particularly those funded through RDT&E appropriations.

4.3.2. Coordinate, facilitate, and advocate technology transfer activities, including potential opportunities to negotiate and enter into CRADAs, licenses, assignments of intellectual property, or any other technology transfer mechanisms benefiting the Joint Deployment and Distribution Enterprise (JDDE).

4.3.2.1. Notify and inform potential partners on a regular basis that the Command welcomes collaborative suggestions and opportunities.

4.3.2.2. Establish web pages or other media to invite industry, academia and other laboratories to participate in USTRANSCOM's technology transfer program.

4.3.2.3. Establish and then publicize the process for partnering with USTRANSCOM on technology transfer.

4.3.3. Assist TCCS in monitoring the technology transfer process to ensure compliance with all applicable laws, regulations, and policies, including the policies and procedures set forth in this instruction.

4.3.4. Negotiate and/or assist USTRANSCOM organizations in drafting and maintaining CRADAs, licenses, and assignments of intellectual property or other technology transfer mechanisms as well as facilitate appropriate staff coordination of proposed activities across the Command.

4.3.5. Review all proposed technology transfer activities, obtain Command guidance on the proposed activity, coordinate proposals (e.g., CRADAs and experiment plans) with relevant parts of the Command.

4.3.6. Forward fully coordinated proposals through TCCS to TCDC for final approval and signature.

4.3.7. For all proposed technology transfer activities with foreign persons or industrial organizations that are directly or indirectly owned or controlled by a foreign company or government (FOCI), obtain review from the United States Trade Representative (USTR) and the USTRANSCOM Foreign Disclosure Office (TCJ2-P) prior to final USTRANSCOM approval and signature of such activities.

4.3.8. Maintain records of all technology transfer activities including CRADAs, licenses, assignments of intellectual property or other technology transfer mechanisms. Provide copies of agreements to the USTRANSCOM Doctrine and Command Agreements Branch (TCJ5/4-PD) for retention per USTRANSCOMI 90-8. Make required reports to the Department of Defense Director, Defense Research and Engineering's Office of Technology Transition (OTT).

4.3.9. In coordination with the Office of the Staff Judge Advocate (TCJA) and the Program Analysis & Financial Management Directorate (TCJ8) administer all patents, patent licenses, and licenses or assignments of intellectual property including establishment of procedures for receiving and disbursing royalties or other payments received under any technology transfer mechanism.

4.4. TCJA shall:

4.4.1. Prior to final Command approval and signature, review for legal sufficiency all proposed technology transfer activities including CRADA associated research or experiment plans, actual CRADAs, and licenses or assignments of intellectual property under CRADAs as well as any other technology transfer mechanism, to ensure compliance with all applicable statutes, regulations, Executive Orders, Directives, and Instructions.

4.4.1.1. Ensure that technology transfer efforts comply with all applicable security and foreign disclosure requirements; conflict of interest and ethics rules; policies governing militarily critical technologies; and export control laws and regulations.

4.4.1.2. Ensure that technology transfer involving humans or animals as the subjects of the research contain necessary provisions regarding required ethical standards and protection of human and animal subjects.

4.4.2. Assist TCCS-ORTA and USTRANSCOM organizations in negotiating CRADAs, licenses, and assignments of intellectual property under CRADAs.

4.4.3. Assist TCCS-ORTA and the Program Analysis & Financial Management Directorate (TCJ8) as required in administering all patents, patent licenses, and licenses or assignments of intellectual property under CRADAs, including receipt and disbursement of royalties or other payments received from CRADA partners.

4.4.4. Track and facilitate the payment of patent maintenance fees.

4.5. The Program Analysis & Financial Management Directorate (TCJ8) shall assist TCCS-ORTA and TCJA in administering all patents, patent licenses, and intellectual property licenses and assignments under technology transfer, including establishment of procedures for receiving and disbursing royalties or other payments received from technology transfer partners, and maintaining appropriate accounting and financial records.

4.6. The Foreign Disclosure Office (TCJ2-P) shall advise and assist TCCS-ORTA and USTRANSCOM organizations on foreign disclosure issues associated with technology transfer with FOCI.

4.7. Force Protection (TCJ3-FP) shall advise and assist TCCS-ORTA and USTRANSCOM organizations on security issues associated with technology transfer involving either classified military information or controlled unclassified information.

4.8. Directorates shall:

4.8.1. Provide the necessary resources to support each Command-approved technology transfer effort involving the resources of their Directorate.

4.8.2. Appoint a Principal Investigator (PI) for each technology transfer effort involving the resources of their Directorate.

4.8.3. Initiate technology transfer efforts in coordination with TCCS-ORTA and TCJA and in accordance with the guidance set forth in this instruction.

4.8.4. Participate in preliminary technical discussions, formal ORTA-conducted negotiations, and manage technology transfer execution with outside parties in coordination with the PI, TCCS-ORTA and TCJA and consistent with the guidance in this instruction.

4.8.5. Forward all proposed technology transfer agreements to TCCS-ORTA for cross-command coordination, preparation for negotiation, and final Command approval/signature prior to execution.

4.8.6. Upon obtaining final Command approval and signature, conduct and carry out technology transfer agreements on behalf of USTRANSCOM. Notify TCCS-ORTA of any subsequent proposals for significant modifications or changes to existing technology transfer agreements.

4.8.7. Maintain documentation and records of all research and development conducted pursuant to technology transfer agreements for their directorate, and provide information to TCCS-ORTA as required for reporting such activity to higher authority.

4.9. The Principal Investigator (PI) shall:

4.9.1. Utilize his or her scientific and/or engineering expertise to assist in drafting, developing, and negotiating technology transfer plans in coordination with TCCS-ORTA and TCJA, and in accordance with the guidance set forth in this instruction.

4.9.2. Ensure technology transfer plans are properly coordinated with appropriate senior leaders within USTRANSCOM to obtain necessary guidance and feedback.

4.9.3. Upon obtaining final Command approval and signature, assist in conducting and carrying out technology transfer agreements on behalf of USTRANSCOM. Notify TCCS-ORTA of any subsequent proposals for significant modifications or changes to existing technology transfer agreements.

4.9.4. Maintain documentation and records of all research and development conducted pursuant to technology transfer agreements. Provide quarterly, written reports to TCCS-ORTA, on the progress of efforts under the technology transfer agreements and the contribution(s) being made to USTRANSCOM's mission(s).

4.9.5. Serve as the organization's lead action officer and point of contact for the technology transfer effort. This includes, but is not limited to:

4.9.5.1. Identify "Anticipated Outcomes" from technology transfer collaborations;

4.9.5.2. Coordinate approval of technology transfer plans through his or her organization; and

4.9.5.3. Identify specific resources (both USTRANSCOM and Partner resources) that will be required to execute the technology transfer activities within his or her organization.

5. Procedures

5.1. Attachment 2 contains initial considerations for technology transfer agreement development and information on how to proceed when contractors at USTRANSCOM are involved in the technology transfer process.

5.2. Technology Transfer Signature Authority. Because technology transfer agreements at USTRANSCOM are to be conducted as Command-wide efforts that may involve participation by multiple USTRANSCOM organizations, TCDC is the approval and signature authority for these agreements, in accordance with the guidance set forth in this instruction.

5.3. Ethics and Conflicts of Interest. Participation by USTRANSCOM employees in the negotiation and execution of technology transfer agreements can raise ethics and conflicts of interest issues. In particular, federal law normally prohibits USTRANSCOM employees from participating personally and substantially in an official capacity in a matter in which the employee or the employee's family has a personal financial interest. Organizations

and individuals will ensure that technology transfer arrangements are accomplished without actual or apparent personal or organizational conflicts of interest or violations of Department of Defense (DOD) ethics regulations. Examples of potential conflicts of interest in negotiating and executing technology transfer agreements include a USTRANSCOM employee's participation in a technology transfer agreement involving a company in which the USTRANSCOM employee (or an immediate family member) owns stock; an employee's participation in a technology transfer agreement involving a company in which the USTRANSCOM employee (or an immediate family member) is employed or consulting (even if only part-time); and an employee's participation in a technology transfer agreement with a company that the USTRANSCOM employee (or an immediate family member) is negotiating for future employment opportunities. A USTRANSCOM employee may nonetheless participate in efforts to commercialize the employee's invention while in the employ of the federal government, assuming no other conflicts are raised. TCJA should be consulted regarding any potential ethics or conflicts of interest issues.

5.4. Resources.

5.4.1. USTRANSCOM organizations performing research or development under a CRADA may commit resources such as personnel, services, facilities, equipment, and intellectual property, but shall not provide funds to the CRADA partner.

5.4.2. Non-monetary resources provided by USTRANSCOM organizations may be on a reimbursable or non-reimbursable basis. If reimbursement is provided by the technology transfer partner, the funds may be credited to the fund account initially charged for the respective expenditure or the USTRANSCOM organization may use the funds in furtherance of the technology transfer agreement. Additionally, while USTRANSCOM organizations may permit the use of their facilities and equipment by technology transfer partners in furtherance of a technology transfer agreement, title to such property remains with USTRANSCOM.

5.4.3. CRADA partners may provide, and USTRANSCOM may accept, retain, and use in furtherance of research or development under a CRADA, resources such as funds, personnel, services, facilities, equipment, and intellectual property.

5.4.4. USTRANSCOM organizations receiving funds from technology transfer partners under a technology transfer agreement shall maintain separate and distinct accounts, records, and other evidence documenting expenditures under the technology transfer agreement. TCJ8 will assist TCCS-ORTA and TCJA in establishing procedures for receiving and disbursing funds received from technology transfer partners, including maintenance of appropriate accounting and financial records.

5.5. Use of Model CRADAs. Attachment 3 contains the content and template format for USTRANSCOM CRADAs. USTRANSCOM organizations shall review these materials when developing provisions for use in USTRANSCOM CRADAs. If discussions appear to involve a significant deviation from or modification to Attachment 3, TCCS-ORTA and TCJA must first be consulted.

5.6. Technology Transfer Agreements Coordination and Approval Process.

5.6.1. Domestic Technology Transfer Agreements. USTRANSCOM organizations may execute technology transfer agreements with domestic (i.e., U.S.) partners in accordance with the guidance set forth in this instruction.

5.6.1.1. USTRANSCOM organizations will notify TCCS-ORTA and TCJA of anticipated technology transfer arrangements prior to definitive discussions with any prospective domestic partner.

5.6.1.2. TCCS-ORTA and TCJA will lead USTRANSCOM organizations in discussions with any prospective domestic partner.

5.6.1.3. TCCS-ORTA will conduct cross-command coordination and obtain final USTRANSCOM approval/signature for all technology transfer agreements. TCJA will review all proposed technology transfer agreements for legal sufficiency prior to USTRANSCOM approval.

5.6.1.4. The TCCS-ORTA, accompanied by TCJA legal support, is the sole USTRANSCOM entity which may formally negotiate CRADAs or other technology transfer agreements.

5.6.1.5. USTRANSCOM organizations will notify TCCS-ORTA of any subsequent proposals for significant modifications or changes to technology transfer agreements.

5.6.2. Attachment 2 includes a section on Foreign Technology Transfer Agreements.

5.7. Administration of Patents, Patent Licenses, and Licenses and Assignments of Intellectual Property. TCCS-ORTA, in coordination with TCJA and TCJ8, will administer all patents; patent licenses; and licenses and assignments of intellectual property, including receiving royalties or other payments from technology transfer partners and disbursing such royalties or other payments. TCJ8 and TCJA will assist TCCS-ORTA in establishing procedures for receiving and disbursing royalties or other payments received from technology transfer partners, including the maintenance of appropriate accounting and financial records.

5.8. Attachment 2 describes funding issues and how to distribute royalty income generated from technology transfer activities at USTRANSCOM.

6. Effective Date

6.1. This instruction is effective immediately.

RONALD J. RODGERS
Colonel, USAF
Staff Judge Advocate

Attachments:
1. Glossary of References, Abbreviations, Acronyms, and Terms
2. Considerations for Technology Transfer Agreements
3. Model CRADA

Attachment 1

GLOSSARY OF REFERENCES, ABBREVIATIONS, ACRONYMS, AND TERMS

Section A – References

Air Force Research Laboratory, "Air Force Technology Transfer Handbook,"

Army Regulation 40-33/Secretary of the Navy Instruction 3900.38C/Air Force Manual 40-401(I)/Defense Advanced Research Projects Agency Instruction 18, "The Care and Use of Laboratory Animals in DOD Programs,"

CJCS Instruction 2110.01C, "International Transfer of US Defense-Related Technology and Munitions,"

DOD Directive 2040.2, "International Transfers of Technology, Goods, Services and Munitions,"

DOD Directive 3216.1, "Use of Laboratory Animals in DOD Programs,"

DOD Directive 3216.2, "Protection of Human Subjects and Adherence to Ethical Standards in DOD-Supported Research,"

DOD Directive 5534.3, "DOD Domestic Technology Transfer Program,"

DOD Instruction 5534.8, "DOD Technology Transfer Program,"

DOD Regulation 5200.1-R, "Information Security Program,"

DOD Regulation 5500.7-R, "DOD Joint Ethics Regulation,"

Executive Order 12591, "Facilitating Access to Science and Technology," 52 Federal Register 13414

Export Administration Regulations, 15 Code of Federal Regulations Parts 730-740

Federal Laboratory Consortium, "Technology Transfer Desk Reference," 2005

International Traffic in Arms Regulations (ITAR), 22 Code of Federal Regulations Parts 120-130

Office of Naval Research, "Navy Standard Cooperative Research and Development Agreement (NSCRADA) Handbook," 5th Edition, Revision 1

Protection of Human Subjects, 32 Code of Federal Regulations Part 219

Section 1905 of title 18, United States Code

Section 271 of title 35, United States Code

Section 4505 of title 5, United States Code

Section 552(b)(4) of title 5, United States Code

Section 980 of title 10, United States Code

Sections 105 and 201(a) of title 17, United States Code

Sections 3710a and 3710c of Chapter 63 of Title 15, United States Code

USTRANSCOM Instruction 31-8, "Information Security Program,"

Section B - Abbreviations and Acronyms

CRADA – Cooperative Research and Development Agreement
DOD – Department of Defense
FOCI – Foreign Person or Industrial Organization Directly or Indirectly Owned or Controlled by a Foreign Ownership, Control or Influence
MCT – Militarily Critical Technology
OTT – Office of Technology Transition
PI – Principle Investigator
R&D – Research and Development
RDT&E – Research, Development, Testing and Evaluation

SIR – Statutory Invention Registration
TECHNOLOGY TRANSFER – Technology Transfer
TCCC – USTRANSCOM Component Commander
TCCS – USTRANSCOM Chief of Staff
TCCS-ORTA – USTRANSCOM – Office of Research and Technology Applications
TCDC – USTRANSCOM Deputy Commander
TCJ2-P – USTRANSCOM Foreign Disclosure Officer
TCJ3-FP – USTRANSCOM Force Protection
TCJ5/4 – USTRANSCOM Strategy, Policy, Programs, and Logistics Directorate
TCJ5/4-PD – USTRANSCOM Doctrine and Command Agreements Branch
TCJ8 – USTRANSCOM Program Analysis & Financial Management Directorate
TCJA – USTRANSCOM Office of the Staff Judge Advocate
TCAQ – USTRANSCOM Command Acquisition
TRL – Technology Readiness Level
USTR – United States Trade Representative
USTRANSCOM – United States Transportation Command
USTANSCOMI – United States Transportation Command Instruction

Section C - Terms

Co-inventor. While an invention may be the product of only one mind, it is quite possible for an invention to be the product of several (if not many) minds. (Translation: Frequently inventions are made jointly by several co-inventors.) Each individual who contributes to the *conception* of an invention is an inventor. Merely contributing to the reduction to practice of an invention doesn't count. Everyone who contributes to the conception of the invention in its *final form* is entitled to inventor status. Conception may occur during reduction to practice. All joint inventors do not have to make an equal contribution to an invention. Among several joint inventors, it is not necessary to be able to define exactly which part of the conception was contributed by each individual. (The invention may be the result of a brain-storming session in which ideas contributed by several different individuals "fed" the development of the final concept.) Face-to-face contact is not required for collaboration between joint inventors. It is not necessary for joint inventors to arrive at the inventive concept simultaneously. Different components may be contributed by different individuals at different times, and that is okay so long as each individual's contribution relates to the entire invention in some manner.

Cooperative Research and Development Agreement (CRADA). The Cooperative Research and Development Agreement (CRADA) is one of the principal mechanisms used by federal laboratories to engage in collaborative efforts with non-federal partners to achieve the goals of technology transfer. The CRADA, which is not an acquisition or procurement vehicle, is designed to be a relatively easy mechanism to implement, requiring less time and effort to initiate than previous methods for working with non-government organizations. The CRADA is also intended to take into account the needs and desires of private industry when commercializing a product. Because each agency and laboratory is free to develop its own CRADA model, technology transfer personnel must ensure that they utilize their agency's specific wording and format for CRADAs.

Foreign Person or Industrial Organization Directly or Indirectly Owned or Controlled by a Foreign Ownership, Control or Influence (FOCI). For purposes of this instruction, the following FOCI definitions apply:

Individuals. A FOCI "person" is a non-U.S. citizen. Resident aliens should also be considered as FOCI for CRADA purposes.

Industrial Organizations. A FOCI industrial organization includes sole proprietorships, partnerships, and corporations (including the divisions and subsidiaries of corporations) where more than 50 percent of the controlling (voting) stock is foreign owned, or the parent organization is incorporated or otherwise chartered in a foreign country. A division or subsidiary of a corporation that is located and incorporated in the United States is still considered FOCI if the parent corporation is a FOCI. A FOCI industrial organization is presumed to exist where foreign persons own 25 percent or more of the outstanding voting securities if no U.S. persons control and equal or larger percentage.

Academic and Non-Profit Organizations. A FOCI university, college, or non-profit organization is one that is chartered, incorporated, or otherwise called into being in a foreign country.

Incentive Awards. Federal technology transfer legislation contains provisions for awards to government employees who actively participate in technology transfer, e.g., through the creation of intellectual property that can be used by the private sector. The government recognizes that the requirements to cooperate with the private sector and provide help to nonfederal agencies represent a change in culture for most federal R&D activities. To facilitate this change, many agencies provide invention awards for accomplishments in domestic technology transfer and technical assistance. These are often cash incentive awards that are granted in recognition of an employee's invention that resulted in the filing of a patent application, the grant of a U.S. patent, or the licensing of a patent application or patent.

Intellectual Property (IP). Intellectual, or intangible, assets include any products of the human intellect—such as inventions, discoveries, technologies, creations, developments, or other forms of expressing an idea—whether or not the subject matter is protectable under the laws governing the different forms of intellectual property. Intellectual property is that subset of intellectual assets that can be legally protected, and includes patents, plant variety protection certificates, copyrights, trademarks and trade secrets. Just as our legal system provides rights and protection for owners of real property such as real estate, it also provides rights and protection to owners of intellectual property (intangible property). The intangible right to intellectual property can be bought, sold, leased, rented, or otherwise transferred between parties. The transfer of intellectual property rights can affect the marketability of a product, as well as the selection of a producer or manufacturer of a product; therefore, the right to intellectual property often involves considerable discussion among the parties in a technology transfer endeavor.

Inventor. In order to be an inventor, you must have made an invention. There are two separate parts to the making of an invention--conception and reduction to practice--and an invention is deemed to have been made only when both of those parts have been completed. The conception of an invention consists of the formulation, even if only in the inventor's mind, of the means of achieving a desired result. It is not sufficient for an inventor to merely recognize that a problem exists or that a particular result would be desirable. Rather, the inventor must have figured out a *complete* and *operative* means of accomplishing that result, such that no more than routine skill will be necessary to put the invention to use (i.e., to reduce it to practice). Reduction to practice of an invention (described in the above quote as the "physical part" or the "guilty act") can be either "actual" or "constructive." Remember that there is no invention without reduction to practice, but either *type* of reduction to practice will serve equally well to satisfy that requirement. "Actual" reduction to practice is the successful physical use or carrying out of the invention to achieve the intended result. It usually (but not always) involves the construction and successful testing of a prototype. "Constructive" reduction to practice is the filing (with the U.S. Patent and Trademark Office) of a patent application that discloses the invention completely enough for a person "skilled in the art" to put it into practice. Even though "reduction to practice" is generally thought of as the *physical* part of the inventive process, constructive reduction to practice requires no physical act other than preparation and filing of the appropriate paperwork. Thus, the actual construction and testing of an invention is not required in order to have a valid patent.

Laboratory. The Stevenson-Wydler Technology Innovation Act (15 USC 3710a) defines "laboratory" very broadly as "a facility . . . owned . . . by a Federal agency, a substantial purpose of which is the performance of research, development, or engineering by employees of the Federal Government."

Office of Research and Technology Applications (ORTA). The Stevenson-Wydler Technology Innovation Act of 1980 called for the establishment of an ORTA in each major federal laboratory. As specified in 15 USC 3710, each federal laboratory with 200 or more scientific, engineering, and related technical positions must have an ORTA staffed by at least one full-time person. ORTA staff members are highly competent technical managers who are full participants in the technology transfer process.

According to 15 USC 3710, the specific functions of each ORTA office are to:

- Prepare assessments for selected research and development projects in which the laboratory is engaged which, in the opinion of the laboratory, may have commercial potential.
- Provide and disseminate information on federally owned or originated products, processes, and services with

potential application to state and local governments and private industry.
- Cooperate with the National Technical Information Services (NTIS), the FLC, and other organizations that link the research and development resources of the laboratory to potential users in state and local governments and private industry.
- Provide technical assistance to state and local governments.
- Participate, where feasible, in local, regional and state programs designed to facilitate or stimulate the transfer of technology.

At many laboratories, the function of the ORTA includes technology assessment; marketing of laboratory resources; the establishment, negotiation and management of cooperative R&D under CRADAs; and the negotiation of licenses for intellectual property. An ORTA is similar to a "high-tech marketing department" that focuses on two types of marketing efforts: technology transfer services and, in conjunction with the technology developer, specific applications to potential collaborators or adopters. The ORTA is the laboratory's focal point for implementing technology transfer and performs the role of a technology "broker," connecting the people and organizations inside and outside the laboratory that are essential to effective technology transfer.

Patent. A patent for an invention is a grant of a property right by the government to the inventor, who may assign his or her rights to others. It gives the owner of the patent the right, among other things, to exclude anyone else from making, using, or selling the invention for the life of the patent. Patents are issued by the United States Patent and Trademark Office (USPTO) and are valid throughout the United States. If patent protection is desired in other countries, applications must be filed in those countries, where laws and regulations governing the patent application process may differ from those in the U.S.

As written documents, patents have a distinctive style. The first part contains the title, a list of any related application data, and a list of references (usually other patents). The text of the patent may be divided into sections describing the technical field, background art (i.e., the relevant technology that is previously known), a summary, a detailed description, claims, abstract, and drawings, where applicable. The "claims" constitute the heart of the patent. The claims consist of a numbered list of items, written in legal style, that constitute what is covered by the patent.

The level of detail required in a patent is such that someone "skilled in the art" must be able to make and use the invention. This means that anyone who is technically proficient in the technology area represented by the invention must be able to understand from the patent exactly how the invention works and how it is to be constructed.

Principle Investigator. A Principal Investigator has Command-level responsibility for the overall conduct of a sponsored project, including all technical, programmatic, financial, compliance and administrative aspects. The Principal Investigator is responsible for controlling the technical direction and quality of the project, and will ensure that a sponsored project is carried out in compliance with the terms and conditions of any applicable agreement and the policies of USTRANSCOM.

Royalties. Licensing fees or royalties are determined based on the type of license awarded and its value to the development of the commercial product. They represent compensation for the use of intellectual property.
In arriving at a reasonable compensation figure, criteria to consider include the type of license being granted, the investment of the government and the licensee, the associated risks, the markets to be exploited, and the value of the potential products. Licensing fees can include upfront fees, maintenance fees, milestone payments, royalties, or any combination of these. Upfront fees represent one-time earnest money and reimbursement for the expenses involved in consummating the license. Royalties are payments based upon sales or turnover of licensed products that may or may not include an annual minimum amount. Royalty rates are generally established by negotiation between the federal laboratory and the private sector licensee, and they vary considerably depending on the invention that is being licensed. Royalties can be based upon net sales of licensed products, the number of units of licensed products sold, or any other basis that is appropriate for a particular invention and that is acceptable to both parties. The specific royalty rate is most often based upon the projected market value of the licensed products. Historical studies of royalty rates have shown that there are normal ranges for each industry sector and that these ranges correlate well with the expected gross profit margin of similar products sold in a specific industry sector.

The government policy on royalty rate negotiation basically involves arriving at a reasonable compensation that will best accomplish the success of the transferred product or process in the marketplace, using the best commercial licensing practice. If the rate is too high, it will serve as a disincentive for the private sector licensee to make the investments necessary for product development and technology transfer. On the other hand, the intellectual property owner is entitled to fair market value for the rights granted, especially if the license is exclusive or partially exclusive. As with other business transactions, fair market value is ordinarily determined as the result of negotiations between a willing buyer and willing seller.

In addition to the projected gross profit margin, many other factors may be weighed by the participants in royalty rate negotiations, including the value of the invention (e.g., is the invention a major breakthrough that will confer substantial marketplace advantages), the costs to bring the invention to the marketplace, the market potential of the invention, alternative methods that could be employed without using the invention, the need for post-sales support of the product, whether or not a long-term market exists, and the perceived effects of the terms and conditions of the license. In some cases, royalty rates may be difficult to establish because of the nature of the invention, and fixed fees or payments may be more appropriate. For example, if the invention is a process or method, or is used internally by a licensee, there may be no direct link between the sales price of individual items and the invention. In these cases, it may be possible to negotiate a fixed amount to be paid, regardless of sales volume or any other variable measure. As required by federal technology transfer legislation, specific incentives are in place to encourage government employees to participate in the technology transfer process. Specifically, government employees who invent are entitled to a share of license revenues received by the federal agency from licensing their invention.

According to 15 USC 3710c, a federal agency must pay the first $2,000 per year in license income and a minimum of 15 percent of the yearly income thereafter from all inventions to the inventors, and within this guideline each agency is permitted to enact its own sharing scheme. However, the maximum that a single inventor can receive per year is $150,000. Any residual funds are usually distributed to the activity where the intellectual property was developed. A laboratory or R&D center that receives income from technology transfer activities must use it to further research or technology transfer.

Technology Transfer. Technology Transfer is the process by which technology or knowledge developed in one place or for one purpose is applied and used in another. This broad definition covers a wide variety of procedures or mechanisms that can be used to transfer technology and is not necessarily restricted to federal activities.

ATTACHMENT 2

CONSIDERATIONS FOR TECHNOLOGY TRANSFER AGREEMENTS

A2.1. Purposes of Technology Transfer Agreements. Technology transfer agreements allow USTRANSCOM to conduct, with one or more parties, specified research and development efforts or other projects that are related to and consistent with USTRANSCOM's mission(s). Therefore, in considering whether to enter into a technology transfer agreement, Command representatives shall take into account USTRANSCOM mission(s) as well as the present or planned work of USTRANSCOM's organizations. USTRANSCOM organizations will also consider these factors in determining whether to recommend USTRANSCOM enter into a technology transfer agreement. Technology transfer mechanisms may be used anywhere along the technology readiness level (TRL) spectrum from basic research through actual application of a technology in its final form and under mission conditions.

A2.1.1. Technology transfer mechanisms should not be used to avoid proper procurement practices. For example, it would be inappropriate to use a CRADA to meet our entire requirement for a technology under the guise of testing the technology under mission conditions (TRL 9).

A2.1.2. The ORTA will ensure that sponsoring USTRANSCOM organizations have coordinated proposed technology transfer efforts with the Directorate of Acquisition (TCAQ) and with the USTRANSCOM RDT&E Team at a minimum to avoid duplication of effort and ensure proper transition of technology to the warfighter.

A2.2. Types of technology transfer mechanisms. The following are examples of technology transfer mechanisms:

A2.2.1. CRADAs.

A2.2.2. Education Partnership Agreements (EPAs).

A2.2.3. Grants.

A2.2.4. Personnel exchanges.

A2.2.5. Cooperative Agreements and Other Transactions.

A2.2.6. Licensing.

A2.2.7. Patents.

A2.2.8. Test Services Agreements.

A2.2.9. Small Business Innovation Research/Small Business Technology Transfer.

A2.2.10. Alliances.

A2.2.11. Use of facilities/Equipment loans.

A2.2.12. Mentor-Protégé arrangements.

A2.3. Command-Wide Efforts. All technology transfer agreements at USTRANSCOM will be conducted as Command-wide efforts that support USTRANSCOM's mission(s). Therefore, while the PI on any individual technology transfer agreement may work for a particular USTRANSCOM activity, all proposed technology transfer agreements shall be coordinated across the Command, and PIs shall conduct and carry out the work under an approved technology transfer agreement as representatives of the entire Command. USTRANSCOM organizations shall ensure that proposed technology transfer agreements are drafted to allow participation by any other

USTRANSCOM organization that wishes to contribute to the effort, and PIs shall be prepared to support and coordinate with their teams to carry out the collaborative effort under a technology transfer agreement.

A2.4. Collaborating Parties. USTRANSCOM may enter into most types of technology transfer agreements with:

A2.4.1. Other Federal Agencies in conjunction with other non-Federal parties.

A2.4.2. Units of state or local government.

A2.4.3. Industrial organizations (for example, consortia, corporations, partnerships, limited partnerships and industrial development organizations).

A2.4.4. Public and private foundations.

A2.4.5. Nonprofit organizations (including universities).

A2.4.6. Other persons (including licensees of inventions owned by USTRANSCOM).

A2.5. Considerations in Selecting Technology Transfer Partners. In determining whether to enter into or to recommend entry into a technology transfer agreement, the Command leadership and USTRANSCOM organizations shall:

A2.5.1. Exercise sound judgment in selecting prospective technology transfer partners. Competitive procedures normally associated with the award of Government procurement contracts do not apply to most technology transfer agreements. However, basic principles of fairness shall be applied. USTRANSCOM will consider all reasonable requests to participate in technology transfer agreements, and USTRANSCOM organizations should recommend for approval those efforts most likely to support technology transfer policy as stated in this instruction.

A2.5.2. Give special consideration to small businesses or consortia involving small businesses.

A2.5.3. Give preference to businesses located in the United States or those that agree that products embodying inventions made under a technology transfer agreement or produced through the use of such inventions will be substantially manufactured in the United States.

A2.5.4. Additional Considerations--Selecting Foreign Technology Transfer Partners. In determining whether to enter into or to recommend entry into a technology transfer agreement with a FOCI, Command leadership and USTRANSCOM organizations shall consider:

A2.5.4.1. Whether collaboration with a foreign entity is the best option for achieving their objectives and whether such foreign participation is consistent with U.S. and DOD policy.

A2.5.4.2. Whether the foreign government permits and encourages U.S. agencies, organizations or persons to enter into technology transfer arrangements on a comparable basis.

A2.5.4.3. Whether the foreign government has laws and/or policies in place to protect U.S. intellectual property rights.

A2.5.4.4. Where cooperative effort will involve data, technologies, or products subject to national security export controls under U.S. law, whether the foreign government has adopted adequate measures to prevent the transfer of strategic technology to destinations prohibited under U.S. national security export control laws and regulations.

A2.5.4.5. Whether the technology to be transferred to a foreign entity under a technology transfer arrangement requires an export license or is otherwise required to be controlled.

A2.6. Security Considerations. If the collaborative technology transfer effort will involve unclassified militarily critical technology (MCT), any non-Federal partner must be certified to handle MCT data. MCT data must be

controlled. MCT certification is established using the DD Form 2345, "Military Critical Technical Data Agreement". If the technology transfer arrangement will involve classified information, a security clearance must be put in place for the non-Federal partner's facilities and personnel using a DD Form 254, "DOD Contract Security Classification Specification", completed through the appropriate USTRANSCOM Security Office. USTRANSCOM organizations will ensure that non-Federal partners are properly cleared, that non-Federal partners are provided all appropriate USTRANSCOM and DOD security guidelines, and that all classified and controlled unclassified information is properly safeguarded.

A2.7. Guidelines for Negotiating Technology Transfer Agreements.

A2.7.1. Once an appropriate collaborating party or parties have been identified, USTRANSCOM organizations must determine whether a viable technology transfer arrangement should be negotiated. The TCCS-ORTA is the sole formal negotiation agent in USTRANSCOM although technical discussion before and after negotiation, by subject matter experts and intended principal investigators, is necessary and highly encouraged. Although technology transfer agreements like Cooperative Research and Development Agreements (CRADAs) are not procurement contracts, they are legally binding agreements; therefore, care must be exercised in their negotiation. Technology transfer agreements should clearly define the rights and obligations of each party in order to avoid misunderstandings or disputes that may otherwise arise during performance. All technology transfer agreements must be reviewed by TCJA for legal sufficiency prior to USTRANSCOM approval.

A2.7.2. Work Plan. The work plan (sometimes called the "statement of objectives") is the heart of every technology transfer agreement. It defines the scope of the activities that each party will conduct, as well as those tasks to be performed jointly, if applicable. The work plan must be specific enough so that each party clearly understands its obligations, but flexible enough to adapt to the realities of the type of work envisioned. It should also set forth the resources that each party intends to contribute, as well as the expectations of the parties regarding objectives and anticipated results of the collaborative effort. Work plans will be coordinated across the USTRANSCOM staff to ensure that all USTRANSCOM organizations are aware of the proposed collaborative efforts, and will be written to allow participation by all USTRANSCOM organizations that wish to contribute to the contemplated efforts.

A2.7.3. Conduct of the Technology Transfer Effort. A technology transfer agreement must define the organizational and procedural framework for managing the efforts of the parties. It must identify the PIs for each party and describe how any joint research teams will be managed and controlled. The technology transfer agreement must also specify the reports that each party will prepare describing the technical progress of the collaborative effort and results achieved.

A2.7.4. Intellectual Property. One of the most important issues that must be addressed in technology transfer agreements is the treatment of intellectual property. TCJA will ensure the federal government's interests in intellectual property generated by the agreement are adequately protected.

A2.7.5. Resolution of Disputes. Technology transfer agreements must contain provisions for resolving disputes that may arise between the parties during execution. Parties should make every effort to resolve disputes at the working level; however, if resolution is not successful at the working level, the dispute should be submitted to the respective PIs for resolution. PIs will submit disputes that they cannot resolve to TCCS-ORTA; if the dispute cannot be settled at that level, it will be forwarded for final resolution by the Laboratory Director.

A2.7.6. Duration of Agreement. All USTRANSCOM technology transfer agreements will be for a specified duration, which is normally no more than five years from the effective date of the agreement. Technology transfer agreements will expire at the end of the specified term, unless the parties mutually agree in writing to extend them further. Certain rights and obligations incurred during execution may survive the expiration of the technology transfer agreement, such as rights in intellectual property and the obligation to protect trade secrets and other proprietary information.

A2.7.7. Termination of Agreement. Technology transfer agreements must contain provisions allowing for termination of the agreement at any time by mutual consent of the parties, and for unilateral termination upon written notice to the other party.

A2.8. Consult with TCJA early in the process of development of any agreement that might involve use of human or animal subjects.

A2.9. Foreign Technology Transfer Agreements. Before exchanging data/technical information or negotiating a technology transfer agreement or technology transfer work plan with a FOCI, USTRANSCOM must make a determination of foreign interest and must request authorization from the Commander, USTRANSCOM (TCCC) via TCCS-ORTA to negotiate a technology transfer agreement with a FOCI.

A2.9.1. Determination of Foreign Interest. USTRANSCOM must first determine if the potential technology transfer partner is a FOCI.

A2.9.2. USTRANSCOM agreement participants (i.e., ORTA, PI, and TCJA) should ask questions of potential partners to assist in determining whether they are FOCI. Section N of the Air Force Research Laboratory, "Air Force Technology Transfer Handbook," dated January 17, 2002 lists sample questions that may be submitted to a potential partner to assist in making this determination. If the potential partner is determined to be a FOCI, USTRANSCOM shall request authorization from TCCC via TCCS-ORTA to negotiate. Requests to negotiate with a FOCI will contain the following information:

A2.9.2.1. The identity of the foreign company or organization by name.

A2.9.2.2. The country of origin of the foreign company or organization.

A2.9.2.3. The name of the technology involved.

A2.9.2.4. An explanation of why the proposed FOCI partner is the best choice over potential domestic U.S. partners.

A2.9.2.5. An explanation of the purpose and benefits of the proposed technology transfer agreement.

A2.9.2.6. Level of classification of the information involved.

A2.9.2.7. Whether the technology is export controlled (if yes, provide details). Attachment N1 of the Air Force Research Laboratory, "Air Force Technology Transfer Handbook," dated January 17, 2002 contains web sites to assist in determining the eligibility of a company or person to access export controlled technology. Section II of the Office of Naval Research, "Navy Standard Cooperative Research and Development Agreement (NSCRADA) Handbook," 5th Edition, Revision 1, May 1, 2002 also contains a list of export control reference tools.

A2.9.3. Upon receiving a request to negotiate with a FOCI, TCCS-ORTA will coordinate the request with the TCJ5/4, who will conduct policy coordination with the Joint Staff and the Office of the Secretary of Defense to ensure that the proposed foreign technology transfer agreement is consistent with United States and Department of Defense policy. The TCCS-ORTA will also ensure the request is coordinated with TCJ2-P to determine whether there are any foreign disclosure limitations on providing information to the country of origin of the potential foreign partner. Additionally, TCCS-ORTA will consult with the USTR regarding the potential foreign technology transfer agreement. In particular, USTR advice is required on whether the foreign country provides U.S. organizations comparable opportunities to enter into technology transfer agreements, whether the foreign country has laws/policies in place to protect U.S. intellectual property, and whether the foreign country complies with U.S. security concerns regarding prevention of the transfer of strategic technology to prohibited destinations. The USTR point of contact is the Director of Investment Negotiations, 600 17th Street NW, Washington, DC 20508 (telephone 202-395-9580).

A2.9.4. TCCS-ORTA will forward requests for authorization to negotiate foreign technology transfer agreements, along with inputs received from coordination with TCJ5/4, TCJ2-P, and the USTR, to TCCC via TCCS and TCDC

for approval. TCJA will review all such requests for legal sufficiency prior to TCCC granting approval to negotiate foreign technology transfer agreements.

A2.9.5. TCCS-ORTA will relay USTRANSCOM approval to negotiate foreign technology transfer agreements to the USTRANSCOM organization, who will then negotiate the proposed work plan with the FOCI partner. The USTRANSCOM organization will then follow the coordination and approval process set forth in this instruction to obtain TCCC's approval of the proposed work plan and PI nomination. The USTRANSCOM organization will also follow the coordination and approval process set forth in this instruction to obtain TCCC's final approval and signature on the proposed foreign technology transfer agreement, and for execution of the foreign technology transfer agreement after obtaining final USTRANSCOM approval and signature.

A2.10. Funding.

A2.10.1. Use of Royalty Income. USTRANSCOM may accept, retain and use royalties or other income received from technology transfer partners for the licensing or assignment of inventions or other intellectual property under certain technology transfer agreements. Technology transfer partners should be instructed to send royalty or other payment checks to TCJ8 as the central point for receipt, disbursement, and transfer of royalty and other payments made pursuant to any technology transfer agreement. Upon receipt of royalty or other payment checks from technology transfer partners, TCJ8 will notify TCCS-ORTA and TCJA. TCJA will advise TCJ8 regarding proper distribution of the royalties or other payments.

A2.10.2. The authorized USTRANSCOM employee-inventor or each USTRANSCOM employee co-inventor shall be paid each year the first $2,000 plus equal shares of at least 20 percent of the remainder of the royalties or other payments if their inventor's or co-inventor's rights are assigned to USTRANSCOM. Absent extrinsic evidence that co-inventors made unequal contributions to the invention, and subject to review and approval by TCJA, it shall be presumed that the co-inventors made equal contributions to the invention, and are entitled to equal shares of the 20 percent of the royalties or other payments. If the royalties or other payments received in any given year are less than or equal to $2000, or in the case of co-inventors, less than or equal to $2000 times the number of inventors, the entire amount is paid to the inventor, or in the case of co-inventors, the entire amount is divided equally among the co-inventors.

A2.10.3. The inventor or co-inventors shall receive their prescribed share of any royalties or other payments as received by USTRANSCOM on an annualized basis. Royalties or other payments from inventions to any one person shall not exceed $150,000 per year without Presidential approval. Any inventor whose whereabouts cannot be established within one year from mailing of the first correspondence concerning a royalty payment to his or her last known address shall be presumed to be unknown. Any payments due to an unknown inventor will be retained by TCJ8 until the inventor can be found, or until the end of the second fiscal year succeeding the fiscal year in which the payment is received, whichever occurs first. Payments not disbursed by the end of the second fiscal year succeeding the fiscal year in which they were received due to the fact that the inventor is unknown, shall be transferred to the Treasury of the United States.

A2.10.4. USTRANSCOM may provide employees appropriate incentives from royalties or other payments to USTRANSCOM. Recipients may include employees who are not inventors or co-inventors of inventions but who substantially increase the technical value of such inventions. When the incentive is in the form of a monetary payment, such payments may be at any level subject to the approval of TCCS, but such payments shall not exceed the limits established above. Payments may be on a one-time or annual basis, and they shall cease when the employee is no longer employed by USTRANSCOM.

A2.10.5. After payment of royalties, and other payments to inventors or co-inventors as described above, any remaining income will be disbursed to the USTRANSCOM organization where the invention occurred, and the funds so disbursed must be obligated and expended by the end of the second fiscal year succeeding the fiscal year in which the royalties and other payments were received. USTRANSCOM may use such funds for the following:

A2.10.5.1. Payment of expenses for administration and licensing of inventions and other intellectual property.

A2.10.5.2. Other activities of the USTRANSCOM organization that increase the licensing potential for transfer of DOD technology.

A2.10.5.3. Scientific research and development within the mission and objectives of USTRANSCOM.

A2.10.5.4. Rewarding scientific, engineering, and technical employees.

A2.10.5.5. Promotion of scientific exchange among other USTRANSCOM and DOD activities.

A2.10.5.6. Education and training of employees consistent with the research and development mission and objectives of the DOD.

A2.10.6. Incentive Awards. USTRANSCOM may use a portion of the royalties to reward USTRANSCOM employees who develop valuable inventions that cannot be commercialized for national security reasons or because they are useful only within DOD's mission. USTRANSCOM may present these awards annually or more often, based upon written recommendations submitted to TCCS via TCCS-ORTA by USTRANSCOM organizations. Recommendations must include written justification supporting the award, such as:

A2.10.6.1. A patent, a notice of allowability under the Patent Secrecy Act, or a Statutory Invention Registration (SIR).

A2.10.6.2. A description of the invention's economic benefits to USTRANSCOM or DOD or an assessment of its market potential.

A2.10.7. Any royalties and other payments not obligated and expended by the end of the second fiscal year succeeding the fiscal year in which they are received shall be returned to TCJ8 for transfer to the Treasury of the United States.

A2.10.8. Any payment a USTRANSCOM employee receives under this instruction is in addition to the employee's regular pay, or any other awards the employee receives. The payment does not affect the employee's entitlement to regular pay, annuity, or awards to which he or she is otherwise entitled or eligible, or limit any such amount of pay, annuity, or award.

A2.10.9. Royalties and other payments shall continue after the inventor leaves USTRANSCOM, and shall also continue after the inventor is deceased. Payments after the inventor is deceased shall be made to the inventor's estate, if known (paragraph 5.8.3. above applies).

A2.11. USTRANSCOM contractors. USTRANSCOM accomplishes many of its tasks using contractors, many of whom have employees assigned for duty at locations throughout USTRANSCOM's organizational structure. When the command collaborates with industry, academia or other laboratories on technology transfer, it must consider the impact of USTRANSCOM contractors on the collaborative effort. There are several considerations:

A2.11.1. The Bayh-Dole Act of 1980 (35 USC §§ 200-212). The Bayh-Dole Act reversed the presumption of title to intellectual property. Prior to 1980, the funding organization, i.e., the federal government, maintained title to intellectual property created with its funds. Bayh-Dole changed that presumption to permit a university, small business, or non-profit institution to elect to pursue ownership of an invention before the government. These rights, which our USTRANSCOM contractors bring with them when they join our team, may conflict with the intellectual property rights scheme proposed in a technology transfer mechanism such as a CRADA. Indeed, Bayh-Dole rights may make a collaborative effort unattractive for a potential partner whose primary interest may be in the intellectual property prospects of an effort involving USTRANSCOM contractors. Collaborative efforts with outside parties that will likely involve USTRANSCOM contractors must be closely coordinated with TCJA early in the process to ensure a proper balance is struck between the rights of the various parties involved.

A2.11.2. Conflicts of interest. Employees of government contractors are not subject to all the rules and regulations that govern the conduct of government employees. Government contractors must conduct themselves with the highest degree of integrity and honesty (see Defense Federal Acquisition Regulation 203.70), and as a result, they

should have a written code of business ethics and conduct and an ethics training program for all employees. Nevertheless, criminal laws, like those prohibiting bribery, kickbacks and other graft still apply to government contractors. Likewise, laws prohibiting false statements and false claims apply. Statutes such as the Procurement Integrity Act and the Trade Secrets Act also apply. USTRANSCOM organizations engaged in technology transfer should discuss with TCJA any perceived conflicts of interest resulting from such activities.

A2.11.3. Non-disclosure agreements. Our technology transfer partners may require employees of USTRANSCOM government contractors to sign non-disclosure agreements prior to engaging in a collaborative effort. Government contractors should seek advice and counsel from their employers regarding such requests. TCJA cannot provide legal advice to government contractors.

Attachment 3

MODEL COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

The following is USTRANSCOM's Model CRADA to be used by the Command when planning, drafting and building a CRADA proposal for review. Appendix A within this template is the format and guide for developing the Work Plan. Any deviation from the text must be reviewed by TCJA.

USTRANSCOM CRADA NUMBER: CR-(TBD)

COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

Between

THE UNITED STATES TRANSPORTATION COMMAND
(USTRANSCOM)

and

Company Name

(Note for boilerplate - All paragraphs and sub-paragraphs containing text are mandatory. as written, unless changes are specifically agreed to by USTRANSCOM authorizing officials)

Article 1. Preamble

1.1 This Cooperative Research and Development Agreement (AGREEMENT) for performing the work described in the Work Plan attached hereto as Appendix A is entered into pursuant to 15 U.S.C. § 3710a (as amended) by and between Company Name, (hereinafter referred to as "COLLABORATOR") and the United States of America as represented by the United States Transportation Command (USTRANSCOM) (hereinafter referred to as "UNIT"), located at Scott AFB, IL. The terms and conditions of this AGREEMENT are set forth as follows.

Article 2. Definitions

2.1 As used in this AGREEMENT, the following terms shall have the following meanings and such meanings shall be applicable to both the singular and plural forms of the terms:

2.1.1 "CREATED" in relation to any copyrightable work means when the work is fixed in any tangible medium of expression for the first time, as provided for at 17 U.S.C. § 101.

2.1.2 "EFFECTIVE DATE": The date when this document is signed by the REVIEWING OFFICIAL.

2.1.3 "GOVERNMENT" means the Government of the United States of America.

2.1.4 "GOVERNMENT PURPOSE LICENSE" or "GPL" means a license to the GOVERNMENT conveying a nonexclusive, irrevocable, worldwide, royalty free license to practice and have practiced an INVENTION for or on behalf of the GOVERNMENT for government purposes and conveying the right to use, duplicate or disclose copyrighted works or PROPRIETARY INFORMATION in whole or in part and in any manner, and to have or permit others to do so, for government purposes. Government purposes include competitive procurement, but do not include the right to have or permit others to practice an INVENTION or use, duplicate or disclose copyrighted works or PROPRIETARY INFORMATION for commercial purposes.

2.1.5 "INVENTION" means any invention or discovery which is or may be patentable or otherwise protected under Title 35 of the United States Code 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.).

2.1.6 "MADE" in relation to any INVENTION means the conception or first actual reduction to practice of such INVENTION.

2.1.7 "PROPRIETARY INFORMATION" means information which embodies trade secrets or which is confidential technical, business or financial information provided that such information:

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

2.1.8 "REVIEWING OFFICIAL" means the authorized representative of the Department of Defense who is identified on the signature page of this AGREEMENT.

2.1.9 "UNDER" as used in the phrase "UNDER this AGREEMENT" means within the scope of work performed under this AGREEMENT.

Article 3. Work Plan

3.1 The nature and scope of the work performed UNDER this AGREEMENT, including any equipment, maintenance and other support, and any associated reporting requirements are set forth in Appendix A.

3.2 COLLABORATOR may inspect GOVERNMENT property identified in Appendix A prior to use. Such property may be repaired or modified at COLLABORATOR's expense only after obtaining the written approval of UNIT. Any repair or modification of the property shall not affect the title of the GOVERNMENT. Unless UNIT hereafter otherwise agrees, COLLABORATOR shall, at no expense to UNIT, return all GOVERNMENT property after termination or expiration of this AGREEMENT in the condition in which it was received, normal wear and tear excepted.

3.3 The parties agree to confer and consult with each other prior to publication or other public disclosure of the results of work UNDER this AGREEMENT to ensure that no PROPRIETARY INFORMATION or military critical technology or other controlled information is released. Prior to submitting a manuscript for publication or before any other public disclosure, each party will offer the other party ample opportunity to review such proposed publication or disclosure, to submit objections, and to file applications for letters patent in a timely manner. No publication or disclosure shall be made in connection with or under this Agreement without the express consent of the other party, unless authorized by any provision herein.

Article 4. Financial Obligations

4.1 Any payments for expendable items, engineering services and other charges associated with specific elements under the Work Plan (Appendix A), shall be agreed to by COLLABORATOR and UNIT prior to commencement of any work associated with each element of the plan. Payment shall be made by the COLLABORATOR before work begins or within 30 days of the UNIT billing date (as shown on the bill) to the COLLABORATOR, as directed by USTRANSCOM for the specific service/items required.

4.2 Payments from copyrights shall be payable by COLLABORATOR to UNIT in accordance with the provisions of Article 6.

4.3 Except as provided for in paragraph 4.4, payments by COLLABORATOR to UNIT under this Article shall

be made payable to UNIT and mailed to the following address:

USTRANSCOM TBD
508 Scott Drive
Scott AFB, IL 62225

4.4 Royalty or other income from patents shall be payable in accordance with any patent license under Article 5.

4.5 Except as stipulated in paragraphs 4.1, 4.2 and 4.4, UNIT and COLLABORATOR activities conducted under this Agreement will be self-funded.

Article 5. Patents

5.1 Disclosure of INVENTIONS. Each party shall report to the other party, in writing, each INVENTION MADE UNDER this AGREEMENT, promptly after the existence of each such INVENTION, in the exercise of reasonable diligence, becomes known.

5.2 Rights in INVENTIONS. Each party shall separately own any INVENTION MADE solely by its respective employees UNDER this AGREEMENT. INVENTIONS MADE jointly by UNIT and COLLABORATOR employees shall be jointly owned by both parties. COLLABORATOR shall have an option under 15 U.S.C. 3710a(b)(2) to obtain an exclusive or non exclusive license at a reasonable royalty rate, subject to the retention of a GPL by the GOVERNMENT, in any INVENTION MADE by UNIT employees UNDER this AGREEMENT. COLLABORATOR shall exercise the option to obtain a license by giving written notice thereof to UNIT six (6) months after disclosure of the INVENTION under paragraph 5.1. The royalty rate and other terms and conditions of the license shall be set forth in a separate license agreement and shall be negotiated promptly after notice is given. COLLABORATOR hereby grants to the GOVERNMENT, in advance, a GPL in any INVENTION MADE by COLLABORATOR employees UNDER this AGREEMENT.

5.3 Filing Patent Applications. COLLABORATOR shall have the first option to file a patent application on any INVENTION MADE UNDER this AGREEMENT, which option shall be exercised by giving notice in writing to UNIT within six (6) months after disclosure of the INVENTION under paragraph 5.1, and by filing a patent application in the U.S. Patent and Trademark Office within six (6) months after written notice is given. If COLLABORATOR elects not to file or not to continue prosecution of a patent application on any such INVENTION in any country or countries, COLLABORATOR shall notify UNIT thereof at least three (3) months prior to the expiration of any applicable filing or response deadline, priority period or statutory bar date. In any country in which COLLABORATOR does not file, or does not continue prosecution of, or make any required payment on, an application on any such INVENTION, UNIT may file, or continue prosecution of, or make any required payment on, an application, and COLLABORATOR agrees, upon request by UNIT, to assign to the GOVERNMENT all right, title and interest of COLLABORATOR in any such application and to cooperate with UNIT in executing all necessary documents and obtaining cooperation of its employees in executing such documents related to such application. The party filing an application shall provide a copy thereof to the other party. Any patent application filed on any INVENTION MADE UNDER this AGREEMENT shall include in the patent specification thereof the statement: “This invention was made in the performance of a cooperative research and development agreement with the Department of Defense. The invention may be manufactured and used by or for the Government of the United States for all government purposes without the payment of any royalty.”

5.4 Patent Expenses. Unless otherwise agreed, the party filing an application shall pay all patent application preparation and filing expenses and issuance, post issuance and patent maintenance fees associated with that application.

Article 6. Copyrights

6.1 COLLABORATOR shall own the copyright in all works CREATED in whole or in part by COLLABORATOR UNDER this AGREEMENT, which are copyrightable under Title 17, United States Code. COLLABORATOR shall mark any such works with a copyright notice showing COLLABORATOR as an owner

and shall have the option to register the copyright at COLLABORATOR's expense.

6.2 COLLABORATOR hereby grants in advance to the GOVERNMENT a GPL in all copyrighted works CREATED UNDER this AGREEMENT. COLLABORATOR will prominently mark each such copyrighted work subject to the GPL with the words: "This work was created in the performance of a cooperative research and development agreement with USTRANSCOM. The Government of the United States has a royalty free government purpose license to use, duplicate or disclose the work, in whole or in part and in any manner, and to have or permit others to do so, for government purposes."

6.3 COLLABORATOR shall furnish to UNIT, at no cost to UNIT, three (3) copies of each work CREATED in whole or in part by COLLABORATOR UNDER this AGREEMENT.

6.4 COLLABORATOR shall pay to UNIT twenty percent (20%) of all gross income received by COLLABORATOR or its affiliates from the sale, lease, or rental of any copyrighted work CREATED UNDER this AGREEMENT. COLLABORATOR shall pay to UNIT fifty percent (50%) of all gross royalties received by COLLABORATOR or its affiliates from the licensing or assignment of any copyrighted work CREATED UNDER this AGREEMENT. Any sale, lease or rental to GOVERNMENT shall not be subject to payments hereunder and shall be discounted in price by a corresponding amount. All such payments to UNIT shall be due and paid on or before the last day of the month next following receipt by COLLABORATOR of any such gross income or gross royalties. COLLABORATOR shall provide to UNIT a report at least annually showing all gross income and royalties received. COLLABORATOR shall make payments due hereunder to UNIT in accordance with paragraph 4.3 of this AGREEMENT. COLLABORATOR's obligation to make payments to UNIT hereunder shall survive expiration or other termination of this AGREEMENT.

6.5 UNIT, at its expense, may require an accounting of income received by COLLABORATOR and its affiliates and may, at reasonable times and upon reasonable notice to COLLABORATOR, examine COLLABORATOR'S and any affiliate's books and records to verify the accounting.

Article 7. Proprietary Information

7.1 Neither party to this AGREEMENT shall deliver to the other party any PROPRIETARY INFORMATION, except with the written consent of the receiving party. Unless otherwise expressly provided in a separate document, such PROPRIETARY INFORMATION shall not be disclosed by the receiving party except under a written agreement of confidentiality to employees and contractors of the receiving party who have a need for the information in connection with their duties UNDER this AGREEMENT.

7.2 PROPRIETARY INFORMATION developed UNDER this AGREEMENT shall be owned by the developing party, and any jointly developed PROPRIETARY INFORMATION shall be jointly owned. GOVERNMENT shall have a GPL to use, duplicate and disclose, in confidence, and to authorize others to use, duplicate and disclose, in confidence, for government purposes, any such PROPRIETARY INFORMATION developed solely by COLLABORATOR. COLLABORATOR may use, duplicate and disclose, in confidence, and authorize others on its behalf to use, duplicate and disclose, in confidence, any such PROPRIETARY INFORMATION developed solely by UNIT. PROPRIETARY INFORMATION developed UNDER this AGREEMENT shall be exempt from the Freedom of Information Act, 5 U.S.C. § 552 et seq, as provided at 15 U.S.C. § 3710a(c)(7)(A) & (B). The exemption for PROPRIETARY INFORMATION developed jointly by the parties or solely by UNIT shall expire not later than five years from the date of development of such PROPRIETARY INFORMATION.

Article 8. Term, Modification, Extension, Termination and Disputes

8.1 Term and Extension. The term of this AGREEMENT is for a period of three (3) years, commencing on the EFFECTIVE DATE of this AGREEMENT. This AGREEMENT shall expire at the end of this term unless both parties hereto agree in writing to extend it further. Expiration of this AGREEMENT shall not affect the rights and obligations of the parties accrued prior to expiration.

8.2 Modification. Any modifications shall be by mutual written agreement signed by the parties'

representatives authorized to execute this AGREEMENT and attached hereto. A copy of any modifications will be forwarded to the REVIEWING OFFICIAL for information purposes.

8.3 Termination. Either party may terminate this AGREEMENT for any reason upon delivery of written notice to the other party at least three (3) months prior to such termination. Termination of this AGREEMENT shall not affect the rights and obligations of the parties accrued prior to the date of termination of this AGREEMENT. In the event of termination by either party, each party shall be responsible for its own costs incurred through the date of termination, as well as its own costs incurred after the date of termination and which are related to the termination. If either UNIT or COLLABORATOR terminates this AGREEMENT, it shall not be liable to the other or its contractors or subcontractors for any costs resulting from or related to the termination, including, but not limited to, consequential damages or any other costs.

8.4 Disputes. All disputes arising out of, or related to, this AGREEMENT shall be resolved in accordance with this Article.

8.4.1 The parties shall attempt to resolve disputes between themselves. Any dispute which is not disposed of by agreement of the parties shall be referred to the REVIEWING OFFICIAL for decision.

8.4.2 REVIEWING OFFICIAL. The REVIEWING OFFICIAL shall within sixty (60) days of the receipt of the dispute, notify the parties of the decision. This decision shall be final and conclusive.

8.5 Continuation of Work. Pending the resolution of any such dispute, work under this AGREEMENT will continue as elsewhere provided herein.

Article 9. Representations and Warranties

9.1 UNIT hereby represents and warrants to COLLABORATOR as follows:

9.1.1 Mission. The performance of the activities specified by this AGREEMENT is consistent with the mission of UNIT.

9.1.2 Authority. All prior reviews and approvals required by regulations or law have been obtained by UNIT prior to the execution of the AGREEMENT. The UNIT official executing this AGREEMENT has the requisite authority to do so.

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

9.2 COLLABORATOR hereby represents and warrants to UNIT as follows:

9.2.1 Corporate Organization. COLLABORATOR, as of the date hereof, is a corporation duly organized, validly existing and in good standing under the laws of the State of TBD.

9.2.2 Statement of Ownership. COLLABORATOR is not a foreign owned or a subsidiary of a foreign owned entity. COLLABORATOR has the right to assignment of all INVENTIONS MADE and copyrightable works CREATED by its employees UNDER this AGREEMENT.

9.2.3 Authority. The COLLABORATOR official executing this AGREEMENT has the requisite authority to enter into this AGREEMENT and COLLABORATOR is authorized to perform according to the terms

thereof.

Article 10. Liability

10.1 Property. All property is to be furnished "as is." No party to this AGREEMENT shall be liable to any other party for any property of that other party consumed, damaged or destroyed in the performance of this AGREEMENT, unless it is due to the gross negligence or willful misconduct of the party or an employee or agent of the party.

10.2 COLLABORATOR Employees. COLLABORATOR agrees to indemnify and hold harmless and defend the GOVERNMENT, its employees and agents, against any liability or loss for any claim made by an employee or agent of COLLABORATOR, or persons claiming through them, for death, injury, loss or damage to their person or property arising as a result of COLLABORATOR'S performance under this AGREEMENT, except to the extent that such death, injury, loss or damage arises solely from the negligence of UNIT or its employees.

10.3 NO WARRANTY. EXCEPT AS SPECIFICALLY STATED IN ARTICLE 9, THE PARTIES MAKE NO EXPRESS OR IMPLIED WARRANTY AS TO ANY MATTER WHATSOEVER, INCLUDING THE CONDITIONS OF THE RESEARCH OR ANY INVENTION OR PRODUCT, WHETHER TANGIBLE OR INTANGIBLE, MADE, OR DEVELOPED UNDER THIS AGREEMENT, OR THE MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF THE RESEARCH OR ANY INVENTION OR PRODUCT. THE PARTIES FURTHER MAKE NO WARRANTY THAT THE USE OF ANY INVENTION OR OTHER INTELLECTUAL PROPERTY OR PRODUCT CONTRIBUTED, MADE OR DEVELOPED UNDER THIS AGREEMENT WILL NOT INFRINGE ANY OTHER UNITED STATES OR FOREIGN PATENT OR OTHER INTELLECTUAL PROPERTY RIGHT. IN NO EVENT WILL ANY PARTY BE LIABLE TO ANY OTHER PARTY FOR COMPENSATORY, PUNITIVE, EXEMPLARY OR CONSEQUENTIAL DAMAGES.

10.4 Other Liability. The GOVERNMENT shall not be liable to any other party, whether directly or by way of contribution or indemnity, for any claim made by any person or other entity for personal injury or death, or for property damage or loss, arising in any way from this AGREEMENT, including, but not limited to, the later use, sale or other disposition of research and technical developments, whether by resulting products or otherwise, whether made or developed UNDER this AGREEMENT, or whether contributed by either party pursuant to this AGREEMENT, except as provided under the Federal Tort Claims Act (28 U.S.C. §§ 2671 et seq.) or other Federal law where sovereign immunity has been waived.

Article 11. General Terms and Provisions

11.1 Disposal of Toxic or Other Waste. COLLABORATOR shall be responsible for the removal and disposal, from UNIT property, of any and all toxic or other material provided or generated by COLLABORATOR in the course of performing this AGREEMENT, other than material quantities that are normal byproducts of standard USTRANSCOM lab processes. COLLABORATOR shall obtain, at its own expense, all necessary permits and licenses as required by local, state, and federal law and regulation and shall conduct such removal and disposal in a lawful and environmentally responsible manner.

11.2 Force Majeure. Neither party shall be in breach of this AGREEMENT for any failure of performance caused by any event beyond its reasonable control and not caused by the fault or negligence of that party. In the event such a force majeure event occurs, the party unable to perform shall promptly notify the other party and shall in good faith maintain such part performance as is reasonably possible and shall resume full performance as soon as is reasonably possible.

11.3 Relationship of the Parties. The parties to this AGREEMENT and their employees are independent contractors and are not agents of each other, joint venturers, partners or joint parties to a formal business organization of any kind. Neither party is authorized or empowered to act on behalf of the other with regard to any contract, warranty or representation as to any matter, and neither party will be bound by the acts or conduct of the other. Each party will maintain sole and exclusive control over its own personnel and operations.

11.4 Publicity/Use of Name Endorsement. Any public announcement of this AGREEMENT shall be

coordinated in advance, in writing, between COLLABORATOR, UNIT and the public affairs office supporting UNIT. COLLABORATOR shall not use the name of UNIT or GOVERNMENT on any product or service which is directly or indirectly related to either this AGREEMENT or any patent license or assignment which implements this AGREEMENT without the prior written approval of UNIT. By entering into this AGREEMENT, UNIT or GOVERNMENT does not directly or indirectly endorse any product or service provided, or to be provided, by COLLABORATOR, its successors, assignees, or licensees. COLLABORATOR shall not in any way imply that this AGREEMENT is an endorsement of any such product or service.

11.5 Governing Law. The construction, validity, performance and effect of this AGREEMENT for all purposes shall be governed by the laws applicable to the GOVERNMENT.

11.6 Waiver of Rights. Any waiver shall be in writing and provided to the other party. Failure to insist upon strict performance of any of the terms and conditions hereof, or failure or delay to exercise any rights provided herein or by law, shall not be deemed a waiver of any rights of either party hereto.

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

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

11.9 Controlled Information. The parties understand that information and materials provided pursuant to or resulting from this AGREEMENT may be export controlled, classified, or unclassified sensitive and protected by law, executive order or regulation. Nothing in this AGREEMENT shall be construed to permit any disclosure in violation of those restrictions.

Article 12. Notices

12.1 Notices, communications, and payments hereunder shall be deemed made if given and addressed as set forth below.

12.1.1. Correspondence relating to administrative matters and formal notices under this AGREEMENT shall be sent by prepaid certified U.S. Mail and addressed as follows:

UNIT: United States Transportation Command
Office of Research and Technology Applications
508 Scott Drive
Scott AFB, IL 62225
Telephone: (618) 229-1366
E-mail: ustcja@ustranscom.mil

COLLABORATOR:
Company Name
Attn: TBD
(Address)
Telephone: TBD
E-mail: TBD

12.1.2 Correspondence relating to technical matters should be sent by prepaid ordinary U.S. Mail and addressed as follows:

UNIT: United States Transportation Command
Attn: TBD
USTRANSCOM/ TBD
508 Scott Drive
Scott AFB, IL 62220

Telephone: TBD
E-mail: TBD

COLLABORATOR:

Company Name
Attn: TBD
(Address)
Telephone: TBD
E-mail: TBD

CRADA between USTRANSCOM and TBD

CRADA Number: TBD

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

COLLABORATOR:

Signature: _____ Date: _____

Printed Name: _____

Title: _____

USTRANSCOM:

Signature: _____ Date: _____

[Name]
[Rank and Service]
Laboratory Director

United States Transportation Command

APPENDIX A

WORK PLAN for CRADA NUMBER: TBD

1.0 OBJECTIVE: Briefly describe the objective for this cooperative effort. Keep it high level and relevant, focusing on what the UNIT and COLLABORATOR hope to accomplish.

2.0 BACKGROUND: Provide key background information which will aid in understanding key points related to why the work needs to be done, who has been involved up to this point, what issues are associated with it, etc.

3.0 TECHNICAL TASKS: Sub-Paragraph 3.1, below, is a mandatory paragraph which enables the UNIT and COLLABORATOR to consult and perform minor research and/or development activities related to the objective, which do not require funding. Follow-on paragraphs can be added to address tasks which are complex, or which require funding, if they are defined prior to the signing of the basic CRADA. Other tasks which are within the scope of the basic CRADA and arise from the initial collaboration, can be defined and approved anytime during the term of the CRADA utilizing the Task Order Process defined in Paragraph 4.1 of this Work Plan.

3.1 Engineering: UNIT and COLLABORATOR will work together on research and/or development activities associated with issues related to systems or components utilized by, or of interest to, the U.S. Department of Defense, or the U.S. Industrial base. Tasks which can be performed under this paragraph include technical and programmatic consultation, as well as non-complex engineering efforts which do not require funding.

3.2 – 3.x Utilize these sub-paragraphs to delineate tasks which can be clearly defined at the time of initial CRADA development, and which are programmatically or technically complex and/or tasks that do require funding.

4.0 USTRANSCOM Task Order Process. Utilize the following process to accomplish follow-on tasks which arise during the term of the basic CRADA, which are within the scope of the basic CRADA, and which require funding or significant programmatic or technical effort.

4.1 The COLLABORATOR will work with the USTRANSCOM Technical Point of Contact to identify the scope of the task, the detailed requirements, and other significant information necessary for USTRANSCOM to prepare an estimate of the level of effort and funding required. This estimate will be recorded on a draft Task Order utilizing the format shown in Appendix B.

4.2 The USTRANSCOM Technical Point of Contact will complete the Task Order and provide it to USTRANSCOM for internal USTRANSCOM coordination.

4.3 Once a Task Order is coordinated and signed by the USTRANSCOM "Authorizing Officials", the USTRANSCOM focal point will provide a copy, which will include the resource requirements and any estimated costs, to the USTRANSCOM Technical Point of Contact for distribution to the COLLABORATOR. The COLLABORATOR will then obtain formal approval and signatures, as required.

4.4 Initial project engineering and cost estimates reflected in Task Orders can change over time as actual data is developed. Task Orders shall not require revision unless the USTRANSCOM Technical Point of Contact determines that there has been a significant change in the scope, funding, or schedule of the effort. If a Task Order revision is required, the Task Order approval process will be repeated.

5.0 BENEFITS:
Identify significant benefits which each party expects to achieve as a result of this cooperative effort. Benefits may include things such as: access to technical expertise, equipment sharing, critical surge support, improved product base, improved international competitive posture, improved process efficiency, broadened logistics capabilities, acquisition of key data required for technical studies, etc.

5.1 Benefits to COLLABORATOR:

5.2 Benefits to UNIT:

6.0 MILESTONES:
Identify key milestone objectives for any task addressed in paragraphs 3.2 – 3.x, or in any Task Order, to allow effective tracking of progress, accomplishments, or deliverables. Milestones can include planned project start and end dates, estimated requirement and design review dates, product delivery dates, etc.

7.0 REPORTS:
The USTRANSCOM Technical Point of Contact will prepare an annual report for internal USTRANSCOM use, and will submit it to USTRANSCOM for review and archiving. Other reports, as appropriate, will be defined in individual Task Orders.

APPENDIX B
(Task Order Sample Format Only - Submit an Actual Task Order as Separate Document)

TASK ORDER NUMBER: TBD

THIS TASK ORDER IS ASSOCIATE WITH CRADA NUMBER: TBD

TASK TITLE: TBD

This Task Order augments the associated CRADA and shall not exceed the scope defined therein. This Task Order shall become "effective" immediately upon the signature of the USTRANSCOM Authorizing Official identified below, and no work shall be initiated until this Task Order is effective.

1. Technical Task(s) Description:

2. Planned Schedule of Required Activities (include Start Date; Key Milestones; and End Date):

3. Personnel:
   a. Key USTRANSCOM Personnel to be assigned to the Task.
   b. Key Collaborator Personnel to be assigned to Task.
      - Identify personnel requiring access to USTRANSCOM facilities.
      - Ensure paperwork is submitted to USTRANSCOM Security Manager for approval well in advance of visits.

4. Test Equipment Requirements and cost:

5. Facility Requirements / cost:

6. Funds Requirements and total estimated cost of task order:

7. Payment Schedule Amount and Dates: (Calendar Month/Year)

8. Report Requirements: (Identify any reports required, in addition to the Annual Report)

(Collaborator Name) AUTHORIZING OFFICIALS:

_____
(Collaborator Name) Authorizing Official / Date

_____
(Collaborator Title)

USTRANSCOM AUTHORIZING OFFICIALS:

_____
USTRANSCOM Investigator / Date

_____
USTRANSCOM Principal Investigator / Date

_____
USTRANSCOM Directorate Representative/ Date