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FOR

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SIMULATION AND TRAINING TECHNOLOGY
CENTER (STTC)
U.S. ARMY RESEARCH LABORATORY (ARL) HRED
U.S. ARMY RESEARCH, DEVELOPMENT AND
ENGINEERING COMMAND (RDECOM)**

ISSUED BY:

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PART I - INTRODUCTION

AUTHORITY

The U.S. Army Contracting Command on behalf of ARL – HRED STTC issues this BAA under the provisions of paragraphs 35.016 and 6.102(d)(2) of the Federal Acquisition Regulation (FAR), which provides for the competitive selection of research proposals. Contract(s) based on responses to this BAA are in full compliance with the provisions of PL 98-369, "The Competition in Contracting Act of 1984" and any subsequent amendments.

STTC through the U.S. Army Contracting Command, contracts with educational institutions, nonprofit organizations, and private industry for Research and Development (R&D) in those areas covered in Part II of this BAA. Proposed efforts should address issues in all domains including Advanced Concepts and Requirements and Research, Development and Acquisition. Although not required for eligibility under this BAA, Contractors are encouraged to consider cost sharing schemes in cooperation with STTC.

PROCESS

Funding of research within STTC will be determined by funding constraints and research priorities set during each budget cycle. Therefore, those contemplating submission of a white paper are encouraged to contact the STTC BAA Coordinator, or the technical point of contact as noted at the end of the technical area entry, to determine whether the research warrants further inquiry. If the research warrants further inquiry and if funding is available, then submission of a white paper/proposal will be entertained.

The following four-step sequence is established for offerors contemplating submission of a proposal under this BAA. This sequence allows for an early determination of the potential for interest based on technical merit, applicability to STTC and projected funding. This process is designed to limit offeror and Government expenditure of effort to prepare and review formal proposals for research that may have little chance of being supported.

STEP 1 - TELEPHONE CONTACT

This step initiates a technical dialog between the Government and the potential offeror. The initial point of contact may direct callers to a specific scientific/technical point of contact based on the topic area and specifics of the proposed research project. The initial contact points for each area of research interest identified in Part II are shown below:

Research Area	OFFICE SYMBOL	Phone / Alternate Phone
Advanced Distributed Simulation	RDRL-HRT-M	407-384-3996 407-384-5460
Immersive Learning	RDRL-HRT-B	407-384-3636 407-384-5460
Intelligent Technologies for Training	RDRL-HRT	407-208-5693 407-384-5460

Synthetic Environments	RDRL-HRT-G	407-384-3733 407-384-5460
Three-Dimensional Holography Modeling and Simulation	RDRL-HRT-B	407-384-3862 407-384-5460
Training Application Environments Ground	RDRL-HRT-G	407-384-5338 407-384-5460
Training Application Environments Medical	RDRL-HRT-S	407-384-3897 407-384-5460
Training Application Environments Dismounted Soldier	RDRL-HRT-G	407-384-3663 407-384-5460
Modeling and Training Simulation Research	RDRL-HRT-B	407-384-5460
ADL Co-Lab Collaboration	RDRL-HRT-B	407-384-5464 407-384-5460
DAU Collaboration	RDRL-HRT-B	407-384-5697 407-384-5460
Specific DoD Collaboration	RDRL-HRT-G	407-384-3835 407-384-5460

STEP 2 – INFORMAL WHITE PAPER (TECHNICAL DIALOG)

This step is a continuation of the technical dialog for projects of interest. The scientific point of contact may request submission of an white paper no more than 4 pages in length (exclusive of resumes and diagrams) to facilitate their understanding of the scientific and technical aspects of the proposed research project. Although there are no restrictions or formal requirements, use of the white paper is intended to determine which efforts are of sufficient scientific and technical merit prior to submission of a formal research proposal as described in Part IV; therefore, informal white papers should not be so lengthy or detailed as to constitute a formal proposal (see Part IV). White papers should contain a Rough Order of Magnitude (ROM) estimate.

Please note that the Government may use non-Government participants during the white paper review process (See Part III – Use of Non-Government Personnel).

All submitted papers will undergo an initial review for technical merit and program applicability. The technical review team may discuss the proposed project with the potential offeror, as required, to facilitate the Government’s understanding of the scientific and technical aspects of the proposed research project.

STEP 3 - SUBMISSION OF FORMAL RESEARCH PROPOSAL

This step ends the technical dialog. If there is sufficient interest in a proposed research project, the Contracting Officer will invite the offeror to submit a formal research proposal (see Part IV). Once the Contracting Office receives a research proposal, communication between scientific personnel and the offeror is permitted only as authorized by the Contracting Officer.

Please note that the Government may use non-Government participants during the evaluation of the proposals technical section (See Part III – Use of Non-Government Personnel).

STEP 4 - CONTRACT AWARD FOR SELECTED PROJECTS

Regardless of whether the four-step process is used, all proposals will receive an initial review (see Part V) and the Contracting Officer will notify the offeror, in writing, whether the proposal will be processed for award. The primary basis for selecting proposals for award shall be scientific/technical merit, importance to agency programs, corporate capabilities, and personnel. Cost realism, reasonableness and fund availability will also be considered to the extent appropriate. **See Part V for specific evaluation criteria.** The Government has the right to make multiple awards.

GOVERNMENT OBLIGATION

Persons submitting white papers and proposals are cautioned that only a Contracting Officer may obligate the Government to any agreement involving expenditure of Government funds.

BAA POINT OF CONTACTS

Technical questions should be sent via email to RDST-BR@peostri.army.mil, Attention: BAA Technical Coordinator.

Administrative or contractual questions should be sent via email to rd-cc-st@peostri.army.mil or fax questions to (407) 208-3299.

MAILING ADDRESS

SFC Paul Ray Smith
Simulation and Training Technology Center (STTC)
U.S. Army Research Laboratory (ARL) HRED
Attn: BAA Coordinator
12423 Research Parkway
Orlando, FL 32826-3276

All offeror requests must include the requester's name, email address and phone number.

PART II - STTC RESEARCH INTERESTS

OVERVIEW

STTC has the mission to develop and advance the state-of-the-art in simulation, training, learning and instrumentation technologies with the overall goal of producing more efficient and effective Army training, test and evaluation systems. Programs funded under this BAA will include exploratory and advanced research related to this mission, as well as, technology demonstrations. Collaboration between universities and industrial companies is encouraged. Projects should take maximum advantage of existing university and industry research and engineering programs and facilities, and those of the Army's sister DOD services. It is envisioned that project emphasis will be in those areas that: explore and develop novel applications of new simulation, training and instrumentation technologies; explore new methods of implementing instructional principles in training devices; and foster productive and synergistic working relationships through interdisciplinary groups in which instructional specialists, engineers, psychologists and other specialists can work together to optimally develop technologies for equipment to train and assess the Army's current and future forces. Additional information on STTC projects can be found on our public website at <http://www.arl.army.mil/www/default.cfm?page=540>.

TOPIC 1. ADVANCED DISTRIBUTED SIMULATION

Test-Bed for a Soldier-Centered Army Learning Environment (SCALE)

Emerging training concepts being put forth by the U.S. Army Training and Doctrine Command (TRADOC) prescribe the transformation of the Soldier education and training process through the integration of advanced training technologies and methods (Ref: The Army Training Concept, The Army Leader Development Strategy, The Army Learning Concept draft for 2015). STTC is investigating innovative, license-free tools and techniques to train and educate Soldiers and leaders in individual and team knowledge, skills, attributes, and abilities in order to execute Full Spectrum Operations in an era of persistent conflict. STTC in conjunction with U.S. Army Research Institute and TRADOC are planning to develop a Test-Bed around this concept and are currently soliciting white papers from industry and academia.

The white papers shall address the fundamental components of the Test-Bed for SCALE, their development and integration to include but not necessarily limited to: the SCALE architecture, content management capability, the Learning Management System (LMS), training authoring tools, and the learning environments (hardware/software). The SCALE architecture shall be:

- Flexible, robust and secure.
- Support the integration of new technologies for evaluation, and support fast content generation and presentation.
- Include all the hardware and software components and their connectivity.

- Contain a content management capability that is data driven and capable of taking doctrine, training requirements, historical records and other user inputs, creating a linkage between the set and auto-generating content for courseware across multiple, varied platforms once.
- Contain a LMS that includes student registration, record keeping, training models, assessment and measurement.
- Contain authoring tools that are user friendly with minimum train-up time, support the rapid development of learning principle-based content across several platforms (e.g. game-based, mobile, virtual worlds) and support the insertion of user generated content.
- The learning environment could include immersive components, mobile devices, virtual worlds, game/scenario based training, artificial intelligent agents/tutors and allow for peer-based learning and social networking.

The SCALE program is a four year program to include the research, development, integration, demonstration, user evaluation and experimentation of SCALE concepts and technologies. The first two years will focus on a demonstration of the SCALE concept for New Equipment Training with the development and demonstration of a second training task in the third year and a user defined and authored training task in the fourth year.

Principal to this program will be the requirement to develop proper experimental design techniques and metrics to evaluate the effectiveness of the content management capability, authoring capability and learning across platforms, effectiveness of the advanced distributed techniques used/required to deliver the content and knowledge and of the Test-Bed itself. The integrated SCALE Test-Bed will allow for the measurement of Soldier progress and will allow research engineers and psychologists to evaluate the impact of new technology and training methods on student performance.

STTC Technical Point of Contact via e-mail: Mr. Chris Gaughan, chris.gaughan@us.army.mil.

TOPIC 2. IMMERSIVE LEARNING

Immersive learning encompasses technology described in other paragraphs of this paper and extends beyond our current understanding of the subject. It includes games and virtual worlds for learning as well as immersive collaboration environments and traditional simulations (otherwise described as virtual environments). It also includes the means by which we interact with those environments. Therefore this section focuses on virtual environment research that:

- Improves the sense of presence and engagement in a virtual environment
- Improves the realism of a virtual environment and the ability to visualize information
 - Real time data feeds
 - Weather
 - Local media
 - Sensor feeds
 - Realistic Artificial Intelligence
 - Conversational bots
 - Just in-time instruction

- Librarian/Reference
- Representing culturally specific characteristics
- Improved graphics
 - 3-D
 - Augmented reality
- Realistic Terrain
- On-the-fly document and video sharing
- Improves the user's experience and within the environment
 - Engaging scenarios or gameplay
 - Improved Graphical User Interfaces
- Provides the ability for multiple users to edit the environment on-the-fly (a user should be able to easily replicate a concept within their mind without platform limitations)
 - Creating assets
 - Moving or editing assets
 - Sharing assets for others to modify

As described above, the environment is only part of the equation. The user interface should not limit but rather should augment the virtual experience by:

- Providing realistic feedback from experiences within the virtual environment
 - Ballistics effects
 - Debilitating suits
 - Biological data collected from the user that influences the virtual experience
 - Indicators of engagement, distraction
 - Stress
- Providing subtle environmental effects to the user
 - Wind
 - Smell
 - Temperature changes
- Improving the user's ability to navigate through and within the environment through natural means
 - Neural Navigation
 - 3-D cameras for gesturing
 - Facial gesturing

STTC Technical Point of Contact is via email: Ms. Tami Griffith, Tami.Griffith@us.army.mil.

TOPIC 3. INTELLIGENT TECHNOLOGIES FOR TRAINING

The purpose of this research is to design, develop, apply and evaluate intelligent agent technologies (tools and methods) to enhance Training, Leadership and Education (TLE) and/or to reduce associated support costs with producing, delivering or managing TLE events. Proposed research should use intelligent agents in novel ways to supplement one-to-one, one-to-many or many-to-many TLE experiences where human support is limited, impractical or completely unavailable. Examples of

agent technologies include, but are not limited to: adaptive tutoring technologies, advanced tutoring architectures and concepts, scalable virtual humans and any associated authoring or other processes managed by intelligent agents.

STTC Technical Point of Contact is via email: Dr. Heather Holden, Heather.K.Holden@us.army.mil.

TOPIC 4. SYNTHETIC ENVIRONMENTS

Army simulation and battle command systems are transforming into highly integrated, distributed/collaborative tool suites that improve Warfighter readiness and responsiveness by enabling commanders and staffs to see, understand, act first and finish decisively. To function properly, these systems depend on accurate, timely geospatial data; this will be especially true for the Army Current and Future Force. Accurate, timely geospatial data is also critical to the User Defined Operational Picture; embedded training systems; mission rehearsal systems; course of action analysis / development / evaluation tools and other Command and Control (C2) planning; integrated Intelligence, Surveillance, and Reconnaissance; situational awareness; and robotics. Providing representations of complex environments is a critical element of models and simulations. It includes those physical aspects of the real world which provide the context for application-specific simulations. Interoperability of heterogeneous simulation systems depends heavily on sharing complex environment data in a consistent and complete manner. The emphasis is to provide the capability to represent the synthetic environment as realistically as possible to support the Army mission, including the ability to update the synthetic environment and to provide access to derived services across many platforms.

Areas of consideration include:

Environment generation

- Preprocess raw source in an automated fashion to support rapid terrain generation and mission rehearsal activities.
- Minimize the need for manual source cleaning.
- Research and develop generation capability gaps, especially in support of urban operations, sensor modeling, behavior modeling, and weapons effects.
 - Including, but not limited to, natural and man-made underground structures, buildings, bridges and overpasses, walls and fences, civil infrastructure (electrical grid, sewers, sidewalks, etc.).
- Meteorological and oceanographic data generation.
- Correlation between datasets (source vs. transformed, transformed vs. transformed) to verify correlation between derived products).
- Data management and distribution.

Environment representation

- More efficient run-time environment formats for use in handheld and embedded devices where resources are limited.
- Composable/configurable environment representations to tailor database information to specific needs (i.e., take only what you need).
- Multi-resolution support for Live, Virtual, Constructive (LVC) and C2 domains

Environment services

- Address gaps in environment reasoning and analysis services.

- Higher fidelity, better performing environment reasoning algorithms to support future vehicle, weapons, and behavior models.
- Environment analysis to aid planning and decision-making.
- Take advantage of GPU (Graphics Processing Unit) and multi-core Central Processing Unit (CPU) hardware when appropriate.
- Composable/configurable environment services to eliminate the “one size fits all” approach.

Dynamic Environments

- Results of environment changes due to man-made effects.
 - Weapons, breaching, earthworks, civil infrastructure, combat engineers, construction, etc.
- Results of environment changes due to nature.
 - Weather, erosion, natural disasters, diurnal cycles (illumination, tides, etc.), etc.
- Dynamic models.
 - Chemical, Biological, Radiological, and Nuclear (CBRN) propagation, smoke, flares, forest fires, flooding, etc.
- Effects of dynamic effects on environment services (line of sight, mobility, etc.).
- Secondary and tertiary effects (precipitation affecting mobility, injury due to rubble from explosion, etc.).
- Synchronized representations (correlation across disparate resolutions and formats).
- Visualization of complex dynamic effects.
- Use of physics engines.

Simulation Support, environment representation R&D to support advances in:

- Battlefield visualization; virtual simulation visualization enhancements
- Support for mobile and embedded devices
- Command, Control, Communications, Computers and Intelligence integration and extensions (advanced data and functionality, Force XXI Battle Command Brigade and Below, Tactical Ground Reporting System, etc).
- Gaming engines and support for first person immersive training.
- Behavioral modeling.
- Interoperability, correlation, and fair fight especially across LVC domains.
- After Action Review (AAR).
- Robotics/unmanned vehicles.
- Gunnery training scenario development.
- Open and common solutions.
- Immersive individual Soldier training.
- Extensions to and application of industry standards and common reuse components in innovative ways.
- Preparation of advanced research capabilities for transition to production programs and long-term maintenance providers.

The STTC is also interested in other areas not defined herein that enhance the representation, exchange, and use of synthetic environments.

STTC Technical Point of Contact is via email: Mr. Julio De La Cruz, Julio.Delacruz@us.army.mil or Mr. Hector Gonzalez, Hector.Gonzalez24@us.army.mil.

TOPIC 5. THREE-DIMENTIONAL (3D) HOLOGRAPHY MODELING AND SIMULATION

There continues to be a need for visualization tools that provide a bridge between complex imagery data and the ability to view this data. This visualization problem is particularly acute for complex terrain, subterranean bunkers, and urban environments where two dimensional maps and photographs cannot adequately represent a 3D area. STTC has an interest in research, development and demonstration of 3D holography to address this need for use in mission planning, mission rehearsal and mission execution. Areas for consideration include:

- Imaging systems (i.e., holographic technologies and laser-optical projection systems)
- 3D holographic technologies that do not require viewing aids
- 3D technologies to be viewed with existing military issued equipment (i.e. Night Vision Goggles)
- Holographic displays incorporating dynamic movement
- Lightweight, portable and rugged display systems
- Hologram output from multiple input sources; data agnostic
- Linking to existing Warfighter simulations
- Incorporation of medical content, such as medical imaging data and anatomical models, into novel imagery projection systems

STTC Technical Point of Contact via email: Ms. Michelle Kalphat, Michelle.Kalphat@us.army.mil.

TOPIC 6. TRAINING APPLICATION ENVIRONMENTS

6A. Training Application Environments Ground

Research and development in VC simulation and training systems of ground combat and support of Army systems.

6A-1. Embedded Simulation and Training for Combat Systems and Vehicles

Embedded Training (ET) is a capability designed into a Ground Combat System (GCS) and Dismounted Soldiers (DS) that enables the GCS and DS to provide necessary environmental and system feedback to train individuals, crews and units, and enhance operational readiness using the system's operational equipment. Having a training capability integrated within the system's operational equipment allows units to train anywhere and anytime, including while deployed. The goal is to enable more cost-effective training and mission rehearsal, on demand, whether at home station or deployed. ET must ensure maximum accessibility, as well as flexibility in execution of training, Soldiers and commanders. ET must have the capability to train without significant external support. It must rapidly execute training with organic assets saving time for leaders to focus on execution and retraining. ET development may also aid in the areas of vehicle development and operational testing. The advent of emerging technologies such as enhanced visual systems, miniaturization, and

computational processing power combine to support on-vehicle/on-location training that is realistic, low cost, and environmentally friendly. ET is a mandatory requirement for the Army's Future Systems and a requirement for other current force systems (e.g., Abrams, Stryker, and Bradley) as well as dismounted Ground Soldier Systems. The primary focus of research in this area is to mitigate the technology risk for current and future GCS by providing a technology demonstration on current force systems, with the goal of accelerating ET into the current force by facilitating the integration of earlier spirals of ET into the current force. Pacing technologies include, but are not limited to the following: embedding training and mission rehearsal on current force vehicles (Stryker, Bradley, Abrams), innovative methods to inject image generation and stimulate weapon sensors for ET, innovative methods to modify mostly analog-based systems (brake, steering, direct view optics) to support ET, common ET implementation strategies across current force systems, embedded visual and display systems, embedded computer systems, mounted/dismounted interoperable ET environments to include ET on Future Warrior Technology Integration Ground Soldier Systems, ET for robotic systems, Live ET or Embedded Tactical Engagement Simulation System (ETESS), ET supporting complex urban areas, ET architectures using Training Common Components (scaled as required) for current force ET designs AAR, computer generated forces, Intelligent Tutoring, system management, etc., game based systems to support ET, efficient use of terrain databases and models for LVC domains, and embedded test environments.

STTC Technical Point of Contact via email: Ms. Latika Eifert, Latika.Eifert@us.army.mil.

6A-2. Tactical Engagement Simulation Sensor Technology for Live Training

The Army has successfully fielded the Multiple Integrated Laser Engagement System as a means of providing non-lethal, real-time casualty assessment for direct fire, force-on-force engagement exercises. Current development efforts will extend capabilities to include Non Line-of-Sight (NLOS), area weapons, and extended data collection for use in AARs. New sensor technologies need to be explored to enable NLOS simulated tactical engagements of the future.

We are seeking new approaches for determining real-time casualty assessment of weapons engagement simulations while providing high level resolution of aspect angle and location of hit for direct and indirect fire weapons. Of particular interest are approaches which capitalize on the use of new, emerging attitude sensor technologies such as gyroscopes, accelerometers, inertial measurement units, Global Positioning Systems (GPS) receivers (both hardware and software-based), and video or camera based feature tracking technologies. Additionally, sensors that can measure true geodetic (absolute) North with an accuracy of 1 degree are desired which require minimal or ideally no initialization or field calibration, that are low cost (under \$2,000 in quantities of tens of thousands), have a battery life of up to 72 hours under typical training exercise conditions, and have a weight under 500 grams.

We are also seeking technical approaches to enable aural and visual signature effects of target hits for direct and indirect weapons fire effects to allow the Soldier the capability to establish cognitive awareness of fire effectiveness during live training exercises. Proposed solutions must be automated, be reusable without the need for spare parts, be low cost (under \$1,000 in quantities of tens of thousands), have a battery life of up to 72 hours under typical training exercise conditions, and have a weight under 250 grams.

STTC Technical Point of Contact via email: Mr. Frank Tucker, frank.tucker2@us.army.mil.

6A-3. Position, Location, and Tracking for Live Training

STTC is interested in technologies that improve live training of simulated tactical engagements, particularly in urban terrain, where GPS signals may become degraded or obscured due to multi-path phenomena. During simulated tactical engagement training exercises shooter-target sensor pairings require position/location information. The technology applied to solve these challenges must be able to determine the position/location accuracy to less than 60cm (95%) and have a battery life of up to 72 hours without changing or charging batteries.

The need for infrastructure to support the technology must be minimal, or ideally, none at all.

STTC Technical Point of Contact via email: Mr. Frank Tucker, frank.tucker2@us.army.mil.

6B. Training Application Environments Medical

STTC has an interest in researching, developing and demonstrating technologies, techniques and strategies for immersing the military medical community into realistic, simulated military medical training environments for initial, transition, refresher, and sustainment training. Both individual and team training concepts shall be included in this area of interest. Areas for consideration include:

- Technologies to reduce or eliminate the use of live tissue and cadavers in military medical training
- Imaging systems (i.e., holographic technologies and laser-optical projection systems)
- Virtual patients and innovative interaction capabilities
- Total immersion and mixed reality across levels of care
- High-fidelity haptics
- Integration with existing Warfighter simulations
- Medical training technologies that realistically simulate human trauma
- High fidelity patient simulation technologies
- Lifelike movement of simulated patients
- Olfactory and malodor simulation technologies
- Simulated body fluids and hemostatic agent training technologies
- Portable, rugged training systems
- Personal Computer and game based training technologies
- Virtual and Constructive medical simulation efforts
- Total immersion across levels of care; from the point of injury to Return-to-Duty status
- Methodologies that improve cost effectiveness and increase test scores as well as skill levels
- Objective performance measures of knowledge and psycho-motor skills
- Student and instructor performance and tracking technologies
- Joint and international medical simulation research collaborations

STTC Technical Point of Contact via email: Mr. Jack Norfleet, Jack.Norfleet@us.army.mil.

6C. Training Application Environments Dismounted Soldier

The Army needs advanced technology to provide dismounted Soldiers with fully immersive, simulation based training environments. These systems will provide the small unit leaders and individual Soldiers with a capability to conduct fully immersive, self contained, simulation based training. STTC has an interest in researching, developing and demonstrating technologies and advanced techniques for virtual immersion as well as next generation Mixed Augmented Reality (MAR) environments for dismounted Soldiers. A core requirement of the system(s) is the ability to execute scenarios within immersive, virtual and MAR environments that allows advanced mission planning, analysis, and rehearsal. This environment should replicate the full spectrum operations to include non-kinetic social and cultural situations. The Army seeks to explore methods of presenting 2D/3D virtual objects (representing various types of targets, fire and effects, friendly forces and opposition forces, civilians on the battlefield, vehicles, etc.) to the dismounted Soldier while operating both indoors and outdoors, on various types of live training environments. Additionally, the trainee would be capable of interacting with virtual targets, personnel, vehicles, etc. as though real. The objective is to create an interactive, multi-sensory, non-linear environment that provides the Warfighter with training that is unparalleled in flexibility and realism.

Warfighter payoffs include capability to provide on-demand, multi-function training to support the multi-skilled Soldier. The technology applied to solve these challenges should have the following characteristics or capabilities:

- Low power man-portable CPU and Graphics processing hardware.
- Exploits the use of commercial gaming technology to provide immersive capabilities that leverages the advanced rendering and scenario development capabilities to present Soldiers with increasing levels of complexity and realism.
- Exploits the use of commercial gaming technology to provide immersive capabilities that leverages the advanced rendering and scenario development capabilities to present Soldiers with increasing levels of complexity and realism.
- Flexibility to incorporate the latest Tactics, Techniques, and Procedures for constantly changing mission environments.
- Increased capabilities in field of view and resolution of head mounted display systems. Exploration of multi-modality for the man-machine interface. Augmented Reality (AR) for dismounted Soldier applications must provide a low cost, man-wearable system that uses minimal infrastructure, site preparation and set up time.
- Support Interfaces, Instrumentation & Infrastructure in various types of military training environments (MOU sites, maneuver ranges, firing ranges, test ranges) as part of implementing realistic AR.

Pacing technologies include, but are not limited to: visual and display systems to include head mounted displays, computer systems, wireless tracking devices to include markerless tracking technologies, natural locomotion, wireless video/audio transmission, MAR systems to include optically aided video odometry, accurate depth sensing and occlusion mapping, visual landmark detection technology; mission rehearsal, distributed AAR systems, and advanced synthetic natural environments.

STTC Technical Point of Contact via email: Mr. Pat Garrity, Pat.Garrity@us.army.mil.

TOPIC 7. MODELING AND TRAINING SIMULATION RESEARCH

Research conducted in technology fields that are broader than those identified in the preceding paragraphs may be of considerable interest to STTC. Such research will relate to resolving technical issues that will optimize Army research and development programs involving simulation, training and/or instrumentation systems in the most cost effective manner.

STTC Technical Point of Contact via email: Ms. Thao Pham, PhuongThao.Pham@us.army.mil.

TOPIC 8. ADL CO-LAB COLLABORATION

The ADL Initiative envisions learning technology that can provide access to the highest quality education and training, tailored to individual needs, delivered cost effectively, anytime and anywhere. As live training and one-on-one instruction are difficult to resource, technology offers the potential to provide the learning and training necessary to maintain readiness and increase human performance at near the same level of effectiveness. The ADL vision of anytime and anywhere access to learning focuses ADL research on technologies that allow for learning on mobile devices, personal computers, and other consumer devices. Open source technologies are of particular interest as they can be widely distributed. Specific research interests include the following:

8A. Learning Architectures

ADL has an interest in researching, developing, and demonstrating technologies to create new or enhance existing learning architectures that are able to flexibly track performance using diverse forms of content. Specific areas of consideration include:

- Learner profile management technologies for both the capture and sharing of individual and team competencies as well as other pertinent data about learners.
- Structured learning content schemas and transformation technologies that can modularize content, enhance semantic understanding, and improve the prospects for reuse.
- Digital rights or related technologies, techniques, or strategies for facilitating the exchange of information between systems to make controlled resources accessible to learners.
- Tracking experiences associated with learning or training performances across different devices and formats.

8B. Immersive Technologies

ADL has an interest in researching, developing, and demonstrating immersive technologies that can enhance learning and training. Specific areas of consideration include:

- Learning and Training Immersive environments included but not limited to serious games, virtual worlds, and simulations.

- Thin client solutions to bring typically large scale installation training to the desktop or web.
- Tools and techniques to improve the user's ability to easily generate and use 3D content in a training environment. Interoperable 3D content is desired in order to reuse 3D content in different learning contexts to include 3D models, textures, animations, scripts, and other supporting assets.
- Innovative approaches to performance assessment and tracking within immersive environments including linkages to conventional learning systems.

8C. Intelligent Systems Architectures

Tailoring instruction to the unique needs of a given learner remains a challenge to realizing the ADL vision. ADL has an interest in researching, developing, and demonstrating intelligent tutoring technologies that can enhance learning and training. Specific areas of consideration include:

- Intelligent, context-aware systems that are seamlessly interoperable with other systems in a network and can adaptively display and transmit relevant information on-demand and as needed.
- Innovative neuroergonomic assessment and biometric behavior tracking/analysis methods.
- Intelligent gestural or haptic user interfaces.
- Intelligent tutoring and context-aware systems that provide an adaptive, personalized experience for 24/7 "training" or "learning" opportunities and on-the-job performance aiding.

8D. Mobile Learning and Social Web

Mobile devices free learners from traditional learning environments and provide for greater, more agile knowledge sharing. ADL has an interest in researching, developing, and demonstrating how mobile devices and social networks can enhance education and training. Specific areas of consideration include:

- The use of Social Networking for developing a sense of community to share ideas/lessons-learned and solve problems in collaborative, disparate environments in a manner that improves learning outcomes.
- A need to determine how mobile devices can better facilitate the practical relationship between distributed learning and knowledge sharing. Of particular interest is how structured learning content that is based on predetermined product design requirements is maintained, updated, and then distributed to mobile devices at the time of need.
- New projects that will demonstrate the application of the spacing effect using current mobile technologies to reinforce learning and improve long-term retention.

ADL Co-Lab Technical Point of Contact via email: Dr. Kristy Murray, Kristy.Murray@us.army.mil or Mr. Steve Hicks, Steven.Hicks1@us.army.mil.

STTC Technical Point of Contact via email: Ms. Thao Pham, PhuongThao.Pham@us.army.mil.

TOPIC 9. DAU COLLABORATION

DAU is partnering with the STTC since it is anticipated that current research, projects and initiatives can be leveraged for dual use in both organizations. The intent of this partnership is to continue to move and transform DAU into a leading edge trainer and deliverer of game-based and simulation context learning. DAU is also interested in advanced learning/educational research and applied acquisition research which will enhance work performance across generations to improve acquisition program outcomes. Additionally, these research efforts will help DOD to implement best practices, lessons learned, knowledge management and knowledge sharing. Findings from this research will improve DAU learning products and will ensure that DAU's programs of instruction will maximize the transfer of skills and knowledge from its courses to the DOD acquisition workforce. Some of the specific areas that DAU is most interested in are:

- The application of games and simulation technologies to:
 - Distance Learning Environments
 - Classroom settings
 - 508 Compliance
 - Learning Management Systems
- The use of games within appropriate acquisition contexts in order to increase relevance and motivation of the Acquisition Technology and Logistic workforce. Specifically the following types of games:
 - Mini Games
 - Decision Making Games
 - Strategy Games
 - Virtual Worlds
 - Acquisition Systems Simulations
 - Fully immersive games
 - Console games for education
- Faculty and Staff Professional Development education and training methodologies for incorporating games and simulations into curriculum.
- Topical games related to the DoD Acquisition Life Cycle
- Games and Simulation based instructional design tools.
- Research initiatives focused on generational differences in the following areas:
 - Learning
 - Ubiquitous Computing
 - Performance Oriented Outcomes
 - Technology
 - Technology uses
 - Technology acceptance
 - Technology adoption
 - Teamwork and Leadership
 - Distance Learning and Telework
 - Teaching a Generationally Diverse Workforce

Additionally, DAU is very interested in applied acquisition research. This research will enable the DOD acquisition workforce members to achieve improved success as they manage DOD weapon systems and information systems throughout development and operations. This research will result in the following types of products:

- Lessons Learned Data Base
- Best Practices Clearinghouse
- Knowledge Management Repository
- Knowledge Sharing Tools
- Learning Asset Development
- Learning Management System Suites
- Multi-Media Strategy
- Research Reports/Research Articles

DAU Technical Point of Contact via email: Dr. Alicia Sanchez, Alicia.Sanchez@dau.mil.

STTC Technical Point of Contact via email: Ms. Thao Pham, PhuongThao.Pham@us.army.mil.

TOPIC 10. SPECIFIC DOD COLLABORATION

The terms predictive analysis (U.S. Army) and predictive battlespace awareness (U.S. Air Force) describe future techniques and technologies that will help the commander estimate enemy courses of action and adaptively plan friendly actions based on these estimates. Both communities have identified the lack of critical technologies, techniques and simulation and training tools to support such capabilities. Adaptation of these types of technologies to the training, modeling and simulation domain is needed. For example, tactical platform and unit behaviors can be driven within a simulation by using the estimating tools to produce a “low overhead” driver capability. This capability is needed to reduce the manpower overhead currently required for simulation, training and test environments. New training process techniques (for individuals and teams) are also needed to address this technology area.

10A. Material Science Prototypes and the Modeling and Simulation of Material Features and Properties

STTC is interested in exploring material development, simulations and simulation software development for creating new defense capabilities. Developments within material science research and the modeling and simulation domain such as computational fluid dynamics and finite element analysis offer key insights into processing constraints, test routines, test architectures and combinatorial analysis. Research areas of interest include, but are not limited to:

- The influence of feature variation/distribution and the existence of extreme values
- The coupled dependence of properties on features and the influence of these properties
- The existence and evolution of defects on function
- The understanding, predicting, and capability to select and optimize for desired properties at the salient spatial and temporal scale (ato-, nano-, micro-, and macro-level)

- Techniques to reliably and quantitatively predict future behavior, accounting for the stochastic nature of the materials and probabilistic nature of use and environment

To obtain simulation criteria data in support of this topic, material science research may also be proposed that includes materials, quarter scale, half scale and full scale models, mockups and prototypes. These models and prototypes may be utilized in test scenarios and test plans that include human and autonomous control. Prototypes and models should be sufficiently robust to validate design assumptions and design decisions. Models and prototypes must be capable of being instrumented in such a fashion that the collection and production of criteria data sets is realized.

Additionally, material science research products and technical solutions provided must be capable of being analyzed under various performance test conditions to validate design criteria and performance claims. These tests may include the intent to determine the efficacy of the underlying design, the quantification of system performance, robustness of simulation models and simulation trade space assumptions.

10B. Neuroscience

STTC is interested in leading edge neuroscience research ideas enabling innovation in the science and technology for improved human performance, specifically to overcome the challenges encountered in the operational environment and their appropriate replication within training systems. The areas for research may span fundamental, applied, and computational neuroscience, and may include, but are not limited to:

- Neuromorphic information processing systems and architectures, electronic devices, and robotic systems
- Environments, systems, and concepts for the evaluation of machine intelligence
- Advanced signal processing techniques for the decoding of neural signals in real time, specifically those associated with operationally relevant cognitive events, including target detection, errors, and other decision-making processes
- Novel techniques and experimental methods for understanding the impact of stress on the brain (e.g., information processing, decision making, attention, and memory) with a specific interest in translating this work to human training populations

10C. Operational Neuroscience

STTC is interested in leading edge research aimed at the use of neuroscience tools and techniques to design systems, train individuals, and measure cognitive state in military settings. Areas of investigation may include, but are not limited to:

- Adaptability and resilience of individuals to high stress environments
- Novel wearable neural sensors and recording technologies
- Real-time neural signal acquisition and analysis in applied environments
- Investigations into the cognitive state of Warfighters during real and simulated task environments

- New approaches for understanding and predicting the behavior of individuals and groups, especially those that elucidate the neurobiological basis of behavior and decision making
- New approaches for training individuals and teams, including embedded training and simulation
- Understanding and improving team performance
- New approaches for improving rapid decision-making in chaotic or data-poor environments

10D. Emerging Modeling and Simulation Technologies Thrust

STTC is exploring several emerging information processing technologies including:

- Novel uses of modeling and simulation to create new battle command paradigms
- Advanced Bio or Neuro inspired Robotic Manipulation technologies and systems (hardware and software) that reduce or eliminate remote or tele-operation constraints
- Computational social science as the foundation for better understanding of the world faced by the Warfighter
- Advanced Bio or Neuro inspired sensing architectures including new sensing modalities and their modeling and simulation to help counter difficult threats
- Bio or Neuro simulation and alerting of key data in automated storage, indexing, analysis, correlation, search, and the retrieval of multimedia data; and techniques to enable information sharing across organizational boundaries and administrative/security domains as applied in both operational systems and the appropriate training environments

Ideas that address any combination of technology and application that falls within STTC's broad mission objectives, as outlined above, may be submitted under this topic area. Proposed research should investigate innovative approaches and simulation and modeling techniques in one or more of the above mentioned areas. These approaches and techniques must lead to revolutionary advances in the state-of-the-art.

STTC Technical Point of Contact via email: Mr. Jerry Speer, Jerry.Speer@us.army.mil.

PART III - WHITE PAPER SUBMISSIONS

Steps 1 and 2 of the Technical Dialog provide for technical interchange prior to the submission of a formal proposal. Any questions or clarification of project objectives or methods may be directly discussed between the Government representatives and the potential offerors during the Technical Dialog. The purpose of the Technical Dialog is to obviate excessive expenditure of resources for projects that do not warrant consideration based on insufficient technical merits or funding limitations.

USE OF NON-GOVERNMENT PERSONNEL

Offerors are hereby notified that non-Government participants may have access to the offerors' white papers and that providing a white paper shall constitute consent to the disclosure of proprietary information to all non-Government participants in the white paper review process. The non-Government participants are employees of commercial firms under contract to the Government and they will be authorized access to only those portions of the white paper and discussions that are necessary to enable them to provide specific technical advice on specialized matters or on particular problems, and for tracking and recording purposes. All non-Government participants must have executed a Nondisclosure Agreement.

WHITE PAPER FORMAT AND CONTENT

Each white paper must address all of the following elements and should be no more than 4 pages in length (exclusive of resumes and diagrams):

- Contractor format is acceptable.
- White Paper submissions shall be Unclassified.
- Project description addressing in sufficient detail the characteristics identified in Part II.
- Point of contact to provide information and answer further questions, if necessary.
- A ROM cost estimate to implement the research effort.
- An estimated timeline to complete the project.

PART IV - PROPOSAL PREPARATION AND SUBMISSION

GENERAL INFORMATION

This Section is intended to provide information needed in preparing research proposals for submission to STTC. Proposals submitted under this BAA must contain technical, administrative, cost, and other supporting information as described below.

Most of the information needed to prepare a proposal will be found within this Section. Blank proposal forms, included in Part VIII, are designed to provide the required information needed for contracting purposes. Use of the enclosed proposal forms will expedite award of the research contract.

All proposals should include the information specified in this announcement in order to avoid delays in evaluation.

STTC encourages nonprofit organizations, educational institutions, small business, and small disadvantaged business concerns to submit white papers for consideration.

ELIGIBILITY

To be eligible for award of a contract, a prospective contractor (except other Governments, including State and Local Governments) must meet certain minimum standards pertaining to financial resources, ability to comply with the performance schedule, prior record of performance, integrity, organization, experience, operational controls, technical skills, facilities, and equipment. Historically Black Colleges and Universities, Small Businesses, Small Disadvantaged Businesses and Minority Institutions are encouraged to submit proposals and join others on submitting proposals; however, no portion of this BAA will be set aside for these organizations' participation due to the impracticality of reserving discrete or severable areas of the research for exclusive competition among these entities.

POST-EMPLOYMENT CONFLICT OF INTEREST

There are certain post-employment restrictions on former federal officers and employees, including special Government employees (Section 207 of Title 18, United States Code). If a prospective offeror believes that a conflict of interest may exist, the situation should be brought to the attention of the Contracting Officer before time and effort is expended in preparing a proposal.

RESTRICTIVE MARKINGS ON PROPOSALS

Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes shall:

- Mark the title page with the following legend: "This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed -- in whole or in part -- for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of -- or in connection with -- the submission of this data, the Government shall have the right to duplicate, use, or

disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets];" and

- Mark each sheet of data it wishes to restrict with the following legend: "Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal."

All offerors should also complete the Research Proposal Cover Page Attachment (1) and should complete the statements of Attachment (2) indicating their preference for release of information contained in proposals and their understanding of the policy regarding evaluation of the proposals.

The offeror is cautioned, however, that portions of the proposal may be subject to release pursuant to the Freedom of Information Act, 5 U.S.C. 552, as amended.

DATA AND SOFTWARE CLAUSES

Based on responses to the Defense Federal Acquisition Regulation (DFARS) 252.227-7017 and 252.227-7028 in Attachment (2), the appropriate DFARS clauses will be included in the resultant contract, such as:

252.227-7013 Rights in Technical Data-Noncommercial Items

252.227-7014 Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation

252.227-7016 Rights in Bid or Proposal Information

252.227-7019 Validation of Asserted Restrictions-Computer Software

252.227-7025 Limitations on the Use or Disclosure of Government Furnished Information Marked With Restrictive Legends

252.227-7027 Deferred Ordering of Technical Data or Computer Software

252.227-7030 Technical Data--Withholding of Payment

252.227-7037 Validation of Restrictive Markings on Technical Data

REPORTING REQUIREMENTS

The number and types of reports will be specified in the contractual document. The reports will be prepared and submitted in accordance with the procedures contained in the contract, which will be based on the reporting requirements contained in the contractor's proposal and mutually agreed on before award. STTC requires the delivery of a final report at the conclusion of each contract, notwithstanding the fact that the research may be continued under a follow-on contract.

The Data Item Descriptions most frequently used for the delivery of data under this announcement are DI-MGMT-80227 (Contractor's Progress, Status and Management Report), DI-MCCR-80700 (Computer Software Product End Items), DI-MGMT-81117 (Technical and Management Work Plan) and DI-MISC-80711A (Scientific and Technical Report).

OPERATIONS SECURITY EDUCATION

Contractors awarded contracts under STTC BAA may be required to receive Operations Security (OPSEC) training if the technology requires protection. At a minimum, the STTC Security Manager will provide the organization's Essential Elements of Friendly Information and the OPSEC template used for training. The STTC will provide the contractor an OPSEC overview to explain the importance of protecting information and the potential violations for not doing so. The overview presented will provide enough information in order to train personnel in attendance to be able to teach the basics of OPSEC to other contractors or support personnel. The STTC Security Manager can be contacted by emailing sttc.security@peostri.army.mil or calling 407-208-3425 / 384-5501. Training will be documented in accordance with contractual instructions.

CLASSIFIED SUBMISSIONS

Classified proposals are not expected. However, in an unusual circumstance where an offeror believes a proposal has the potential to be classified, the STTC Security Manager shall be contacted prior to the proposal's submission. The STTC Security Manager can be contacted by emailing sttc.security@peostri.army.mil or calling 407-208-3425 / 384-5501.

NON-U.S. CITIZEN PARTICIPATION

If the proposed research (or a portion of the proposed research) requires access to critical technology, Controlled Unclassified Information; For Official Use Only, Sensitive or Private Information, not releasable to the general public, or intelligence material, non-U.S. citizens may participate in the resultant contract (or portion of the resultant contract) **ONLY** if special written permission is granted by the Contracting Officer in accordance with the International Traffic and Arms Regulations 22 CFR Ch 1. The Contracting Officer must seek guidance and approval from the STTC Foreign Disclosure Officer or higher Headquarters prior to granting this permission.

If the proposed research (or a portion of the proposed research) requires access to classified information (i.e., confidential or secret), non-U.S. citizens may participate in the resultant contract (or portion of the resultant contract) only if a Limited Access Authorization (LAA) is granted. A LAA can be granted only in the event that there are no U.S. citizens that can perform the effort with a special written request describing such in detail. Granting of LAAs is not anticipated under this BAA.

If any non-U.S. citizen requires access to STTC buildings, or other Government facilities, special written permission must be requested in accordance with Army Regulation 380-10 and the Attaché Guide for foreign visit requests. Visit requests must be requested in a timely manner, those not meeting this requirement will be rejected by the Department of the Army. Final approval will be sent through the Contracting Officer and the resultant contract's Technical Point of Contact. Requests will also include specific purpose, date or dates, times, frequency of, and exact location (specific room, lab, etc.).

PERIOD OF PERFORMANCE

Proposals submitted in response to this BAA may be for a period of performance up to five years. Such long-term proposals shall contain a brief summary of the work contemplated for each 12-month period, so

contracts may be negotiated for an entire five-year program or for individual one-year increments up to five years. Proposals for periods of less than 12 months will also be considered.

CONTRACT TYPES

It is anticipated that all offers under **\$100,000** will be proposed and awarded on a firm-fixed-price completion basis.

It is anticipated that all offers over **\$100,000** will be proposed and awarded on a cost-reimbursement [cost plus fixed fee, cost (no fee), or cost sharing*] completion basis. Contractors must have an approved accounting system in order to be awarded a cost-reimbursement contract.

***Note:** A cost-sharing contract is a cost-reimbursement contract in which the contractor receives no fee and is reimbursed only for an agreed-upon portion of its allowable costs. A cost-sharing contract may be used when the contractor agrees to absorb a portion of the costs, in the expectation of substantial compensating benefits.

WHITE PAPER/PROPOSAL SUBMISSION CUT-OFF DATE

This BAA is open and effective for a period of five years from the date of release (11 AUG 08 through 11 AUG 13), unless superseded or expired. It is **recommended** that white papers be received by **May** of each year to maximize the possibility of award. (See Appendix A) White Papers/Proposals will be accepted at any time, however, the later in each respective Government Fiscal Year, the least likely funding will be available.

FOLLOW-ON CONTRACTS

A proposal for continuation of a given research project will be considered on the same basis as proposals for new research. The proposal should be submitted sufficiently in advance of the termination of the existing contract so that if it is accepted, contract performance may be continued without interruption.

PROPOSAL COPIES

Offerors shall submit copies of their proposal as follows:

Proposal Section	Paper	Electronic
Technical Proposal	Original	One
Administrative Proposal	Original	One
Timeline and Cost Proposal	Original	One

Each paper and electronic copy must contain any restrictive legends and the electronic copy must be in a format compatible with Microsoft Office 2003 or 2007.

MAILING ADDRESSES

If, as a result of the telephone contact, the research effort is determined to have sufficient interest, a **white paper** outlining the proposed approach should be submitted to the following address:

SFC Paul Ray Smith
Simulation and Training Technology Center (STTC)
U.S .Army Research Laboratory (ARL) HRED
Attn: BAA Coordinator
12423 Research Parkway
Orlando, FL 32826-3276

All proposals, written communications or documentation concerning this BAA shall be forwarded to the following address:

Department of the Army
U. S. Army Contracting Command
Aberdeen Proving Ground (Soldier, Chemical, Research & Test)
Aberdeen Contracting Division – Orlando Team
12423 Research Parkway
Orlando, FL 32826-3276

PROPOSAL PREPARATION INSTRUCTIONS

The proposal is the only vehicle available to the offeror for receiving consideration for award. The proposal must stand on its own merit; only information provided in the proposal can be used in the evaluation process leading to an award. The proposal should be prepared simply and economically, providing straightforward, concise delineation of capabilities necessary to perform the proposed work. The technical proposal must be accompanied by a fully supported cost proposal as cost and technical considerations are reviewed simultaneously.

Each proposal shall be submitted under cover of Attachment (1) and shall contain three distinct sections. The first section shall contain the technical discussion. The second section shall contain contractual information, certifications, and other documentation. The last section shall contain a breakdown of the anticipated costs.

PROPOSALS NOT MEETING THE FORMAT DESCRIBED IN THIS BAA MAY NOT BE REVIEWED.

TECHNICAL SECTION CONTENTS

The nature of the effort to be performed will determine its acceptability for award under this BAA. Proposed efforts shall be investigative in nature and explore innovative technology concepts. Development of specific hardware systems shall not be allowed; developments of prototypes to demonstrate the innovative technology concepts are allowed.

The Technical Section shall contain the following:

PART A - Technical Proposal

- **Cover Page:** The cover page should include the BAA Number, research topic and reference number, name and telephone number for the principal points of contact (both technical and contractual), and any other information that identifies the proposal. The cover page should also contain the proprietary data disclosure statement, if applicable.
- **Table of Contents:** It is highly recommended that the Offeror follow the above table of contents and use it for a final quality-control checklist.
- **List of Illustrations/Tables:** This list is a quick reference of charts, graphs, and other important information. A separate list of Tables is recommended.
- **Executive Summary:** The executive summary allows the offeror to present briefly and concisely the important aspects of its proposal to key management personnel. The summary should present an organized progression of the work to be accomplished, without the technical details, such that the reader can grasp the core issues of the proposed program. The Executive Summary should rarely exceed two pages.
- **Technical Approach:** In this section, the Offeror should provide as much technical detail and analysis as is necessary or useful to support the technical approach they are proposing. One must clearly identify the core of the intended approach. It is not effective to address a variety of possible solutions to the technology problems.
 - **Technical Discussion:** No technical approach is without its limitations or shortcomings. Every issue should be identified and compared with the successes/failures of previous approaches. A tradeoff analysis is a good way to make this comparison and should be supported by theory, simulation, modeling, experimental data, or other sound engineering and scientific practices. If the offeror has a "new and creative" solution to the problem(s), that solution should be developed and analyzed in this section. The preferred technical approach should be described in as much detail as is necessary or useful to establish confidence in the approach.
 - **Technical Program Summary:** This section summarizes the above technical discussion in an orderly progression through the program, emphasizing the strong points of the proposed technical approach.
 - **Potential Contribution:** Discuss the potential contribution to research programs relating to STTC initiatives, including:
 - Benefits that the technology will provide to the Research, Development, Test and Evaluation community,
 - Identification of advancements that will be achieved,
 - Identification of opportunities for transition of the technology into existing and future systems and/or operational use, and
 - Identification of the specific areas of understanding and knowledge that are lacking that the proposed effort will address, the specific areas of investigation necessary to advance understanding and knowledge for the

purpose of meeting STTC initiatives, and the current level of understanding and knowledge in the area of investigation.

- **Risk Analysis and Alternatives:** Every technology has its limitations and shortcomings. The proposal evaluator(s) will formulate a risk assessment and it is in the best interest of the Offeror to have its own understanding of the risk factors presented. Critical technologies should be identified along with their impact on the overall program as well as fallback positions that could still improve on existing approaches.
- **References:** Any good technology discussion must present the basis for and reference the findings cited in the literature.
- **Special Technical Factors:** In this section, the Offeror should describe any capabilities it has that are uniquely supportive of the technology to be pursued. The following subparagraphs are offered as possible areas to be addressed:
 - Capabilities and Relevant Experience
 - Previous or Current Relevant Internal Research & Development Work
 - Related Government Contracts
 - Identification of prediction or modeling techniques, test programs and data analysis programs that are key elements in the technical approach (with a discussion on the adequacy and effectiveness of each)
 - Information on facilities/resources that will be used to accomplish the proposed effort and an explanation of why they are adequate to conduct a successful program.
- **Schedule:** The schedule represents the Offeror's commitment to perform the program tasks in an orderly, timely manner.
 - **Time Line Chart by Task:** Each major task identified in the Statement of Work (SOW) must appear as a separate line on the program schedule. Planned meetings, such as kick-off, presentations (including final), Technical Interchange Meetings, etc., must be included in the Time Line. The Time Line must also indicate the anticipated meeting site.
- **Program Organization:** In this paragraph, the Offeror should present its organization's ability to conduct difficult technical programs. Any pertinent or useful information may be included in this paragraph, but a minimum recommended response should address the following subparagraphs:
 - **Organizational Chart(s) with Key Personnel:** Include prime contractor and subcontractor organization charts.
 - **Management and Technical Team:** This should specifically identify what tasks will be performed by which party and why each subcontractor, if any, was selected to perform its task(s).
 - Prime Contractor Responsibilities

- Subcontractor(s) Responsibilities
- Consultant(s) Responsibilities
- **Resumes of Key Personnel:** Key personnel are those skilled, experienced, professional and technical personnel essential for successful accomplishment of the proposal objectives, such as the principal investigator, team leader, etc. Information regarding the qualifications, capabilities, and experience of the proposed key personnel should be addressed. Include the resumes of the prime contractor, subcontractor, and consultant personnel to include the names, brief biography, and list of recent publications of the offeror's key personnel. Documentation of previous work or experience in the field of the proposer is especially important.
- **Appendix(es):** Appendices may include technical reports, published papers, and referenced material. A listing of these reports/papers with short descriptions of the subject matter is usually adequate. Do not provide commercial product advertising brochures; these are unwanted.
- **Offeror Statement Of Work (SOW)**
 - It is the intent of the Government to use the Offeror's SOW, as written, provided that the Offeror's SOW accurately describes the work to be performed, is enforceable, and is void of inconsistencies. If, in the Government's opinion, the Offeror's SOW does not reflect these requirements, the Government will prepare a SOW using information available in the offeror's proposal; this process may delay the award. **The SOW shall be a separate and distinct part of the proposal, and must also be provided as a separate WORD document in the format called out previously.** The proposed SOW must contain a summary description of the technical methodology as well as the task description, but not in so much detail as to make the contract inflexible. **Do not include any proprietary information in the SOW.**
 - The following is offered as a recommended format for the SOW. Begin this section on a new page. Start your SOW at Paragraph 1.0. Remember a SOW only has three sections. (See MIL-HDBK-245D for additional guidance)
 - **Scope:** This section is intended to give a brief overview of the specialty area and should describe why it is being pursued, and what you are trying to accomplish.
 - **Objective:** This section provides an overall concise picture of the work to be accomplished. This should include the technology area to be investigated, goals to be achieved and major milestones for the effort. The key elements of this section, however, are task development and deliverables. This section should describe in a clean-cut statement, the anticipated end result or end product of the effort. It must also be consistent with the detailed requirements stated in the 3.0 section.

- **Background:** This section includes any information, explanations, or constraints that are necessary in order to understand the requirements. It may include relationship to previous, current and future operations. It may also include techniques previously tried and found ineffective.

- **2.0 - Applicable Documents:** The Offeror shall identify appropriate documents that are applicable to the effort to be performed. This section shall include a listing of all documents used as a reference in the technical requirements (Section 3.0) and specify the exact title, revision and date.

- **3.0 - Task/Technical Requirements:**
 - ✓ The detailed description of tasks, which represent the work to be performed under the contract, are to be considered binding. Thus, it should be developed in an orderly progression and in enough detail to establish the feasibility of accomplishing the overall program goals. The work effort should be segregated into major tasks and identified in separately numbered paragraphs according to a numeric decimal system. Each numbered major task should delineate by subtask the work to be performed. The **SOW MUST** contain every task to be accomplished. The tasks must be definite, realistic, and clearly stated in performance terms. Use "shall" whenever the work statement expresses a provision that is binding. Use "should" or "may" whenever it is necessary to express a declaration of purpose. Use "will" in cases where no contractor requirement is involved; i.e., power will be supplied by the Government.

 - ✓ If presentations/meetings are identified in your schedule, include the following paragraph in your SOW:
"Conduct presentations/meetings at times and places specified in the Contract Schedule."

 - ✓ The Offeror shall reference/acknowledge in the SOW all specified data items that were attached to the letter requesting a formal proposal.

PART B- COST SECTION CONTENTS

In accordance with FAR 15.403-3(15.408 Table 15.2 when submission of Cost or Pricing Data is required), a detailed cost proposal shall be submitted with the research proposal and shall include, as a minimum, the following information (contractor's format is acceptable):

PERIOD OF PERFORMANCE

Identify the proposed duration of the effort.

DIRECT LABOR

Provide a list of participants, by category (and name, if appropriate), showing the hours and labor rates to be charged for each and the total amount per year proposed to be paid for each. For proposals from universities, the time and amounts to be charged should be identified by academic year and summer effort. Disclose and explain the basis of any escalation factors utilized.

MATERIALS

Provide an itemized list of permanent equipment showing the cost of each item and the basis for the proposed cost. Provide a general description and total estimated cost of expendable equipment and supplies. Permanent equipment is any article of non-expendable tangible personal property having a useful life of more than two years and an acquisition cost of \$500 or more per unit. Permanent equipment costs shall not be fee/profit bearing.

OTHER DIRECT COSTS

- **Travel:** Include contemplated expenditures for travel with explanations for each trip and its proposed length and number of participants. The breakdown of these costs shall show the airfare, per diem rates, car rental rate, and any other travel expenses (such as parking fees, etc.) and shall be in accordance with the Joint Travel Regulation.
- **Subcontracts:** The Subcontractor's cost proposal must be prepared at a level of detail as required by this BAA, FAR 15.403 and FAR 15.404 in order to support proposal analysis by the Government. The prime contractor is responsible for providing appropriate cost or price analyses of subcontractor proposals, in accordance with FAR 15.404-3, to establish the reasonableness of proposed subcontract prices.
- **Consultants:** Provide a breakdown of any costs for consulting services showing number of days, daily rates, and estimated travel/per diem costs to the level of detail described in the travel narrative above. The need for consulting services must be explained and the basis for the daily rates must be provided.

- **Miscellaneous:** Miscellaneous costs may include such items as publication charges, copying, subscriptions, photography, graphics, etc., only if they are consistent with and allowable under the offeror's cost accounting system.

INDIRECT COSTS

Indirect rates (overhead, G&A, etc.) utilized must be disclosed. Indicate whether any indirect rates used are fixed or provisional and the time frames to which they are applicable (e.g., a fixed rate may apply until a specified date, after which the rate becomes provisional). Proposals for contracts subject to FAR Subpart 31.2 shall complete Attachment (4). Facilities Capital Cost of Money (FCCM) will not be an allowable cost in any resulting contract if the offeror's proposal fails to identify or propose FCCM (see FAR 15.408(i)).

FEE/PROFIT

The proposed fee or profit, if any, which the organization proposes to assess the research project and how the fee/profit was derived. Reminder: Permanent equipment costs and the cost of facilities when purchased for the account of the Government (i.e., charged as a direct cost) shall not be fee/profit bearing.

PART C- ADMINISTRATIVE SECTION CONTENTS

This portion of the proposal shall contain the completed certifications and applicable forms contained in this BAA and shall include the following:

CONTRACT TYPE

Identify the type of completion contract proposed. (**Note:** Offers proposed on a cost-reimbursement basis **MUST** contain evidence that the offeror's accounting system is approved for such type contracting; i.e., provide identification of audit agency and dates last accounting and estimating system audits were performed. If approval was not obtained before submission of the proposal, the proposal shall address how the offeror will obtain the required approvals. Evidence of an approved accounting system **MUST** be obtained prior to contract award.)

ENVIRONMENTAL CONSIDERATIONS

Discuss all applicable environmental and energy conservation objectives associated with the acquisition (see FAR Part 23), the applicability of an environmental assessment or environmental impact statement (see 40 CFR 1502), the proposed resolution of environmental issues, and any environmentally-related requirements to be included in the resultant contract.

ORGANIZATIONAL CONFLICTS OF INTEREST

Identify any members of the offeror's organization or team with potential conflicts of interest. Possible conflicts of interest include any people with prior federal employment, including employment of the Principal Investigator as a special Government employee (duties, agency with whom employed, dates of employment) within two years from the date of proposal submission. If none, so state.

Proposals that fail to fully disclose potential conflicts of interests or do not have acceptable plans to mitigate identified conflicts will be rejected without technical evaluation and withdrawn from further consideration for award.

FACILITY CLEARANCE

- Offerors requiring access to classified information shall have the facility and personnel security clearances, granted by the Defense Industrial Security Office, in place before access can be granted.
- Offerors without the requisite security clearances shall request sponsorship through the Contracting Officer.

DISCLOSURE REQUIREMENT

Completion of Attachment (2) is prerequisite to evaluation of the proposal under this BAA.

UNDERSTANDING OF EVALUATION POLICY

Completion of Attachment (2) is prerequisite to evaluation of the proposal under this BAA.

REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS

Attachment (3) is provided for **INFORMATION ONLY**. In accordance with FAR 4.1201, prospective offerors shall complete electronic annual representatives and certifications at <http://orca.bpn.gov>.

CONTRACTOR MANPOWER REPORTING

A Contractor Manpower Reporting (CMR) requirement will be incorporated as a deliverable in all resultant contracts. Contractors will report the required information to the CMR System, web address: <https://cmra.army.mil>.

WIDE AREA WORK FLOW (WAWF)

Unless using another approved electronic invoicing system, contractors will be required to register and submit invoices for payment directly via the Internet/WAWF at <https://wawf.eb.mil>. Registration to WAWF is required prior to any award under this BAA.

CENTRAL CONTRACTOR REGISTRATION (CCR)

Offerors selected, but not already registered in the CCR will be required to register in CCR prior to any award under this BAA. Information on CCR registration is available at <http://www.ccr.gov>.

SUBCONTRACTING

Pursuant to Section 8(d) of the Small Business Act (15 U.S.C. 637(d)), it is the policy of the Government to enable small business and small disadvantaged business concerns to be considered fairly as subcontractors to contractors performing work or rendering services as prime contractors or subcontractors under Government contracts, and to assure that prime contractors and subcontractors carry out this policy. Each offeror who submits a contract proposal and includes subcontractors is required to submit a subcontracting plan in accordance with FAR 19.702(a)(1) and (2) should do so with their proposal. The plan format is outlined in FAR 19.704. The contract cannot be executed unless the Contracting Officer determines that the Subcontracting Plan provides the maximum practicable opportunity for small, small disadvantaged and women-owned small business concerns to participate in the performance of the contract. Should the offeror's Subcontracting Plan be determined acceptable and should the offeror fail to comply with the terms of the Subcontracting Plan, noncompliance will be considered to be a material breach of the contract.

TITLE TO EQUIPMENT

Title to equipment or other tangible property purchased with contract funds will be disposed of in accordance with FAR 52.45 Government Property and Contracting Officer instructions at the time of contract completion.

PART V - PROPOSAL EVALUATION

INITIAL REVIEW

Upon receipt of a proposal, the Government will perform an initial review of the proposal's scientific/technical merit and potential contribution to the STTC mission. The Government will also determine if funds are expected to be available based on the proposed cost for the effort. Proposals not considered having sufficient scientific/technical merit or relevance to the STTC mission, or those in areas for which funds are not expected to be available, may be declined without being subject to the detailed peer review described below. At this stage, scientific/technical merit, relevance to the STTC mission, and availability of funding are of equal importance.

PEER REVIEW

Formal proposals not declined as a result of the initial review will be subject to a detailed extensive peer review by highly qualified personnel from both inside and outside the Government.

Proposals submitted in response to this BAA will be evaluated in accordance with the following criteria, which are listed in **descending** order of importance:

PROPOSED RESEARCH

The overall scientific and/or technical merits of the proposed research, including the adequacy and effectiveness of any analysis and/or testing required to substantiate the technology being developed.

POTENTIAL CONTRIBUTION

Evaluation will include potential contributions of the effort to the STTC mission and the extent to which the research effort will contribute to balancing the overall STTC Research Initiative relating to simulation, training and technology.

OFFEROR'S QUALIFICATIONS

The offeror's capabilities will be based on related experience, facilities, techniques, or unique combinations of these that are integral factors for achieving the proposal objectives.

PERSONNEL

The qualifications, capabilities, and experience of the proposed key personnel, such as the principal investigator, team leader, etc. will need to include in the proposal. Key personnel are those skilled,

experienced, professional and technical personnel essential for successful accomplishment of the proposal objectives.

COST REALISM

The objective of this criterion is to establish that the proposed costs are realistic for the proposed approach, as well as to determine the offeror's practical understanding of the effort. The proposal will be reviewed to determine if the cost proposed are based on realistic assumptions, reflect a sufficient understanding of the technical goals and objectives of the BAA, and are consistent with the offeror's technical approach (to include the proposed SOW). At a minimum, this will involve a review, at the prime and subcontract level, of the number and types of labor hours proposed (quantity and mix) per task as well as the types and quantity of materials, equipment cost, travel and other various elements proposed.

ADMINISTRATIVE PROPOSAL

The Contracting Officer will review the administrative section of the proposal for compliance.

PROPOSAL COMPARISONS

Each proposal will be evaluated based on the merit and relevance of the specific research proposed as it relates to the overall STTC Research Initiative, rather than against other proposals for research in the same general area.

PART VI – RESERVED

PART VII - PROPOSAL FORMS

<u>List of Attachments</u>	<u>Number of Pages</u>
(1) Research Proposal Cover Page	1
(2) Disclosure Requirement and Evaluation Policy Understanding: Policy Statement, Statement of Disclosure Concurrence and Statement of Evaluation Policy Understanding	2
(3) Representations, Certifications and Other Statements of Offerors	18
(4) DD Form 1861, Contract Facilities Capital Cost of Money.....	1
(5) RDECOM STTC BAA Schedule	1
(6) Standard CDRL for All Contracts	1

DISCLOSURE REQUIREMENT AND EVALUATION POLICY UNDERSTANDING

POLICY STATEMENT

STTC has a continuing interest in receiving and evaluating proposals containing new ideas, suggestions for researching ways to enhance the state-of-the-art in simulation, training, learning and instrumentation technology capabilities for our Warfighters. However, Government personnel and contractors are constantly engaged in R&D activities, and the substance of your proposal may already be known to Government employees or contractors, or may even be in the public domain. For such reasons it is desirable, when receiving proposals for evaluation, to insure that the persons submitting them are aware of the conditions under which the STTC will consider them.

It must be understood that the receipt and evaluation of the proposal by STTC does not imply a promise to pay, recognition of novelty or originality, or any relationship, which might require the Government to pay for use of information to which it is otherwise lawfully entitled.

Due care will be exercised to ensure that, in addition to technical design or concept data submitted, administrative and cost data will not be used by the Government for any purpose other than evaluation of the proposal. Administrative and cost data will not be disclosed to non-Government participants. Additionally, such data will not be disclosed outside the Government or be duplicated, used or disclosed in whole or in part by the Government, except for tracking and record purposes or to evaluate the proposal. This restriction does not limit the Government's right to use information contained in such data if it is obtained from another source, or is in the public domain.

All research proposals will be treated as privileged information before award and contents will only be disclosed for purposes of evaluation. Your voluntary submission will be handled in accordance with established Government procedures for safeguarding such articles or information against unauthorized disclosure. All Government reviewers will be made aware that proposals sent to them are not to be duplicated, used, or disclosed in whole or in part for any purpose other than to evaluate the proposal, without the written permission of the offeror.

You should be aware that, despite all precautions, we may be able to protect the confidentiality of proposal only to the extent that it is exempt from disclosure under the Freedom of Information Act (see FAR Subpart 24.2).

Upon receipt, your proposal will be submitted to the appropriate technical experts for evaluation. Your proposal will undergo initial review within 60 days after receipt. If additional time for this review is required, you will be notified in writing. Processing of proposals not declined as a result of the initial review may require as much as 120 days.

Having read and understood the above policy please execute and submit the following statements:

<p><u>STATEMENT OF DISCLOSURE PREFERENCE</u></p> <p><input type="checkbox"/> This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed -- in whole or in part -- for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of -- or in connection with -- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction.</p> <p><input type="checkbox"/> The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]: _____ _____.</p> <p><input type="checkbox"/> All data contained in this proposal are subject to this restriction.</p> <p><input type="checkbox"/> Permission is hereby granted to STTC to evaluate this proposal, which may include evaluation by evaluators both within and outside the Government, with the understanding that written agreement not to disclose this information shall be obtained from any non-Government evaluator.</p>	<p><u>STATEMENT OF UNDERSTANDING OF EVALUATION POLICY</u></p> <p>It is understood that STTC has accepted the above proposal for the purpose of evaluating it and advising of any possible interest.</p> <p>It is further understood that such acceptance does not imply or create a promise to pay; an obligation to give up any legal right or to assume any duty; a recognition of novelty, originality or priority; or any relationship, contractual or otherwise, such as would render the Government liable to pay for or give up any legal right or assume any obligation for disclosure or use of any information in the proposal to which the Government would otherwise lawfully be entitled.</p>
Company or Corporation Name:	
Proposal Title:	
Signature:	
Name and Title/Position of Authorized Rep Signing:	
Date:	
BAA Number:	

REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS OR QUOTERS

A. The following FAR provision must be completed ONLY if the proposed contract type is firm fixed price:

52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 85)

- (a) The offeror certifies that
- 1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;
 - 2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
 - 3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.
- (b) Each signature on the offer is considered to be a certification by the signatory that the signatory
- 1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or
 - (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above
_____ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);
 - (ii) As an authorized agent, does certify that the principals named in subdivision (b)(1)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and
 - (iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.
 - 2) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

{End of provision}

B. *The following DFARS provisions must be completed ONLY if the proposal is for supplies or services involving supplies:*

252.225-7000

**BUY AMERICAN ACT - BALANCE OF PAYMENTS PROGRAM
CERTIFICATE (APR 03)**

- (a) *Definitions.* "Domestic end product," "foreign end product," "qualifying country," and "qualifying country end product" have the meanings given in the Buy American Act and Balance of Payments Program clause of this solicitation.
- (b) *Evaluation.* The Government-
- 1) Will evaluate offers in accordance with the policies and procedures of Part 225 of the DFAR Supplement; and
 - 2) Will evaluate offers of qualifying country end products without regard to the restrictions of the Buy American Act or the Balance of Payments Program.
- (c) *Certifications and identification of country of origin.*
- 1) For all line items subject to the Buy American Act and Balance of Payments Program clause of this solicitation, the offeror certifies that-
 - (i) Each end product, except those listed in paragraphs (c)(2) or (3) of this provision, is a domestic end product; and
 - (ii) Components of unknown origin are considered to have been mined, produced, or manufactured outside the United States or a qualifying country.
 - 2) The offeror certifies that the following end products are qualifying country end products:

Line Item Number

Country of Origin

- 3) The following end products are other foreign end products:

Line Item Number

Country of Origin (If known)

(End of provision)

252.247-7022

REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 92)

- (a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term "supplies" is defined in the Transportation of Supplies by Sea clause of this solicitation.
- (b) Representation. The Offeror represents that it
 - Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.
 - Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.
- (c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the DFAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

C. *The following FAR and DFARS provisions must be completed by ALL offerors.*

52.203-11

CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 91)

- (a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this certification.
- (b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989
 - 1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;
 - 2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and
 - 3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.
- (c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

{End of provision}

52.204-3 TAXPAYER IDENTIFICATION (OCT 98)

(a) Definitions.

Common parent, as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

Taxpayer Identification Number (TIN), as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C.7701(c) and 3325(d), reporting requirements of 26 U.S.C.6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C.7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) TIN.

- TIN: _____
- TIN has been applied for.
- TIN is not required because:
- Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;
- Offeror is an agency or instrumentality of a foreign government;
- Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

- Sole proprietorship;
- Partnership;
- Corporate entity (not tax-exempt);
- Corporate entity (tax-exempt);
- Government entity (Federal, State, or local);
- Foreign government;
- International organization per 26 CFR 1.6049-4;
- Other _____

(f) Common parent.

- Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

Name and TIN of common parent:

Name _____

TIN _____

{End of provision}

52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)

- (a) Definition. Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.
- (b) Representation. [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representations, of this solicitation.] The offeror represents that it

is a women-owned business concern.

{End of Provision}

52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (OCT 2003)

- (a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS+4" followed by the DUNS number or "DUNS+4" that identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet, Inc. The DUNS+4 is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the offeror to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11) for the same parent concern.
- (b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

- 1) An offeror may obtain a DUNS number—
- (i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at <http://www.dnb.com> or
- (ii) If located outside the United States, by contacting the local Dun and Bradstreet office.
- 2) The offeror should be prepared to provide the following information:
- (i) Company legal business name.
- (ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

- (iii) Company physical street address, city, state and ZIP Code.
- (iv) Company mailing address, city, state and ZIP Code (if separate from physical).
- (v) Company telephone number.
- (vi) Date the company was started.
- (vii) Number of employees at your location.
- (viii) Chief executive officer/key manager.
- (ix) Line of business (industry).
- (x) Company Headquarters name and address (reporting relationship within your entity).

{End of Provision }

252.204-7001 **COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (AUG 99)**

- (a) The offeror is requested to enter its CAGE code on its offer in the block with its name and address. The CAGE code entered must be for that name and address. Enter "CAGE" before the number.
- (b) If the offeror does not have a CAGE code, it may ask the Contracting Officer to request one from the Defense Logistics Information Service (DLIS). The Contracting Officer will –
 - 1) Ask the Contractor to complete section B of a DD Form 2051, Request for Assignment of a Commercial and Government Entity (CAGE) Code;
 - 2) Complete section A and forward the form to DLIS; and
 - 3) Notify the Contractor of its assigned CAGE code.
- (c) Do not delay submission of the offer pending receipt of a CAGE code.

{End of provision }

252.204-7004 **REQUIRED CENTRAL CONTRACTOR REGISTRATION – ALT A (NOV 03)**

As prescribed in 204.1104, substitute the following paragraph (a) for paragraph (a) of the clause at FAR 52.204-7:

Definitions. As used in this clause--

"Central Contractor Registration (CCR) database" means the primary Government repository for contractor information required for the conduct of business with the Government.

"Commercial and Government Entity (CAGE) code" means-

- 1) A code assigned by the Defense Logistics Information Service (DLIS) to identify a commercial or Government entity; or
- 2) A code assigned by a member of the North Atlantic Treaty Organization that DLIS records and maintains in the CAGE master file. This type of code is known as an "NCAGE code."

"Data Universal Numbering System (DUNS) number" means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

"Data Universal Numbering System +4 (DUNS+4) number" means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative EFT accounts (see Subpart 32.11 of the FAR) for the same parent concern.

"Registered in the CCR database" means that-

- 1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 numbers, into the CCR database;
- 2) The Contractor's CAGE code is in the CCR database; and
- 3) The Government has validated all mandatory data fields and has marked the records "Active".

52.209-5

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 01)

- (a) 1) The Offeror certifies, to the best of its knowledge and belief, that --
 - (i) The Offeror and/or any of its Principals --
 - o Are are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;
 - o Have have not , within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and
 - o Are are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.
 - (ii) The Offeror has has not , within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.
- 2) "*Principals*," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

- (b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror non-responsible.
- (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

{End of Provision }

252.209-7001

DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 98)

- (a) Definitions. As used in this provision --
 - 1) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.
 - 2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.
 - 3) "Significant interest" means --
 - (i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;
 - (ii) Holding a management position in the firm, such as a director or officer;
 - (iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

- (iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or
- (v) Holding 50 percent or more of the indebtedness of a firm.
- (b) Prohibition on award. In accordance with 10 U.S.C.2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary or, in the case of a subsidiary, the firm that owns the subsidiary, unless a waiver is granted by the Secretary of Defense.
- (c) Disclosure. If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclose such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include:
 - 1) Identification of each government holding a significant interest; and
 - 2) A description of the significant interest held by each government.

{end of provision}

52.215-6 PLACE OF PERFORMANCE (OCT 97)

- (a) The offeror or respondent, in the performance of any contract resulting from this solicitation, intends, does not intend [check applicable block] to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.
- (b) If the offeror or respondent checks "intends" in paragraph (a) of this provision, it shall insert in the following spaces the required information:

Place of performance (Street address, City, County, State, ZIP Code)

Name and address of owner and operator of the plant or facility if other than offeror or quoter

{end of provision}

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 02) (ALTERNATE I – APR 02)

- (a)
 - 1) The North American Industry Classification System (NAICS) code for this acquisition is NEED CODE [insert NAICS code].
 - 2) The small business size standard is _____ [insert size standard].
 - 3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.
- (b) *Representations.*

- 1) The offeror represents as part of its offer that it * is, * is not a small business concern.
- 2) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, for general statistical purposes, that it * is, * is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.
- 3) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents as part of its offer that it * is, * is not a women-owned small business concern.
- 4) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents as part of its offer that it * is, * is not a veteran-owned small business concern.
- 5) [Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.] The offeror represents as part of its offer that it * is, * is not a service-disabled veteran-owned small business concern.
- 6) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, as part of its offer, that –

(i) It * is, * is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It * is, * is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate of the HUBZone small business concern or concerns that are participating in the joint venture. [The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: _____.] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(c) *Definitions.* As used in this provision--

“Service-disabled veteran-owned small business concern”—

- 1) Means a small business concern—
 - (i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and
 - (ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.
- 2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

“Small business concern,” means a concern, including its affiliates that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

“Veteran-owned small business concern” means a small business concern—

- 1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and
- 2) The management and daily business operations of which are controlled by one or more veterans.

“Women-owned small business concern” means a small business concern --

- 1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and
- 2) Whose management and daily business operations are controlled by one or more women.

(d) *Notice.*

- 1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.
- 2) Under 15 U.S.C. 645(d), any person who misrepresents a firm’s status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall --
 - (i) Be punished by imposition of fine, imprisonment, or both;
 - (ii) Be subject to administrative remedies, including suspension and debarment; and
 - (iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of Provision)

Alternate I (Apr 02). As prescribed in [19.307](#)(a)(2), add the following paragraph (b)(7) to the basic provision:

[*Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.*]
The offeror shall check the category in which its ownership falls:

___ Black American.

___ Hispanic American.

___ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

___ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

___ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

___ Individual/concern, other than one of the preceding.

{End of provision}

52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 99)

The offeror represents that –

- (a) It has, has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;
- (b) It has, has not filed all required compliance reports; and
- (c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract award.

{end of provision}

52.222-25 AFFIRMATIVE ACTION COMPLIANCE (APR 84)

The offeror represents that (a) it has developed and has on file, has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) it has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

{end of provision}

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (AUG 03)

- (a) Executive Order 13148, of April 21, 2000, Greening the Government through Leadership in Environmental Management, requires submission of this certification as a prerequisite for contract award.

- (b) By signing this offer, the offeror certifies that --

1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: *[Check each block that is applicable.]*

(i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed in 40 CFR 372.65;

(ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

(iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

(iv) The facility does not fall within the following Standard Industrial Classification codes or their corresponding North American Industry Classification System sectors:

(A) Major group code 10 (except 1011, 1081, and 1094).

(B) Major group code 12 (except 1241).

(C) Major group codes 20 through 39.

(D) Industry code 4911, 4931, 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce).

(E) Industry code 4953 (limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C (42 U.S.C. 6921, *et seq.*)), or 5169, 5171, 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis); or

(v) The facility is not located within any State of the United States or its outlying areas.

(End of Provision)

52.226-2 HISTORICALLY BLACK COLLEGE OR UNIVERSITY AND MINORITY INSTITUTION REPRESENTATION (MAY 01)

(a) Definitions. As used in this provision –

Historically black college or university means an institution determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. For the DoD, the National Aeronautics and Space Administration, and the Coast Guard, the term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

Minority institution means an institution of higher education meeting the requirements of Section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1067k, including a Hispanic-serving institution of higher education, as defined in Section 316(b)(1) of the Act (20 U.S.C. 11101a)).

(b) Representation. The offeror represents that it --

- is is not a historically black college or university;
 is is not a minority institution.

{end of provision}

52.227-6 ROYALTY INFORMATION (APR 84)

- (a) *Cost or charges for royalties.* When the response to this solicitation contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:
- 1) Name and address of licensor.
 - 2) Date of license agreement.
 - 3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.
 - 4) Brief description, including any part or model numbers of each contract item or component on which the royalty is payable.
 - 5) Percentage or dollar rate of royalty per unit.
 - 6) Unit price of contract item.
 - 7) Number of units.
 - 8) Total dollar amount of royalties.
- (b) *Copies of current licenses.* In addition, if specifically requested by the Contracting Officer before execution of the contract, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

{end of provision}

252.227-7017 IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS (JUN 95)

- (a) The terms used in this provision are defined in following clause or clauses contained in this solicitation --
- 1) If a successful offeror will be required to deliver technical data, the Rights in Technical Data -- Noncommercial Items clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software -- Small Business Innovative Research (SBIR) Program clause.
 - 2) If a successful offeror will not be required to deliver technical data, the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause, or, if this solicitation contemplates a contract under the SBIR Program, the Rights in Noncommercial Technical Data and Computer Software -- SBIR Program clause.
- (b) The identification and assertion requirements in this provision apply only to technical data, including computer software documentation, or computer software to be delivered with other than unlimited rights. For contracts to be awarded under the SBIR Program, the notification and identification requirements do not apply to technical data or computer software that will be generated under the resulting contract. Notification and identification is not required for restrictions based solely on copyright.

- (c) Offers submitted in response to this solicitation shall identify, to the extent known at the time an offer is submitted to the Government, the technical data or computer software that the Offeror, its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release, or disclosure.
- (d) The Offeror's assertions, including the assertions of its subcontractors or suppliers or potential subcontractors or suppliers, shall be submitted as an attachment to its offer in the following format, dated and signed by an official authorized to contractually obligate the Offeror:
 - 1) Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data Computer Software.
 - 2) The Offeror asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data or computer software should be restricted:

Technical Data Computer Software to be Furnished With Restrictions*	Basis for Assertion**	Asserted Rights Category***	Name of Person Asserting Restrictions****
[LIST]*****	[LIST]	[LIST]	[LIST]

* For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such item, component, or process. For computer software or computer software documentation identify the software or documentation.

** Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.

*** Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specially negotiated licenses).

**** Corporation, individual, or other person, as appropriate.

***** Enter "none" when all data or software will be submitted without restrictions.

Date _____
 Printed Name and Title _____
 Signature _____
 (End of identification and assertion)

- (e) An offeror's failure to submit, complete, or sign the notification and identification required by paragraph (d) of this provision with its offer may render the offer ineligible for award.

- (f) If the Offeror is awarded a contract, the assertions identified in paragraph (d) of this provision shall be listed in an attachment to that contract. Upon request by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate any listed assertion.

{end of provision}

252.227-7028 **TECHNICAL DATA OR COMPUTER SOFTWARE PREVIOUSLY DELIVERED TO THE GOVERNMENT (JUN 95)**

The Offeror shall attach to its offer an identification of all documents or other media incorporating technical data or computer software it intends to deliver under this contract with other than unlimited rights that are identical or substantially similar to documents or other media that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract. The attachment shall identify --

- (a) The contract number under which the data or software were produced;
- (b) The contract number under which, and the name and address of the organization to whom, the data or software were most recently delivered or will be delivered; and
- (c) Any limitations on the Government's rights to use or disclose the data or software, including, when applicable, identification of the earliest date the limitations expire.

{end of provision}

52.230-1 **COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION (JUNE 00)**

Note: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

If the offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

I. *Disclosure Statement -- Cost Accounting Practices and Certification*

- (a) Any contract in excess of \$500,000 resulting from this solicitation will be subject to the requirements of the CAS Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.
- (b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless the offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

Caution: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:

(1) *Certificate of Concurrent Submission of Disclosure Statement.* The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows:

(i) Original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable; and

(ii) One copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: _____

Name and Address of Cognizant ACO or Federal Official Where Filed:

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

(2) *Certificate of Previously Submitted Disclosure Statement.* The offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: _____

Name and Address of Cognizant ACO or Federal Official Where Filed:

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

(3) *Certificate of Monetary Exemption.* The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling more than \$50 million or more in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

(4) *Certificate of Interim Exemption.* The offeror hereby certifies that

(i) The offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and

(ii) In accordance with 48 CFR 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting

from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

Caution: Offerors currently required disclosing because they were awarded a CAS-covered prime contractor subcontract of \$50 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

II. *Cost Accounting Standards -- Eligibility for Modified Contract Coverage*

The offeror hereby claims an exemption from the CAS clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$50 million in awards of CAS-covered prime contracts and subcontracts. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the CAS clause.

The offeror hereby claims an exemption from the CAS clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$25 million in awards of CAS-covered prime contracts and subcontracts, or the offeror did not receive a single CAS-covered award exceeding \$1 million. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

Caution: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$50 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contractor subcontract of \$50 million or more.

III. *Additional CAS Applicable to Existing Contracts*

The offeror shall indicate below whether award of the contemplated contract would, in accordance with subparagraph (a)(3) of the CAS clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

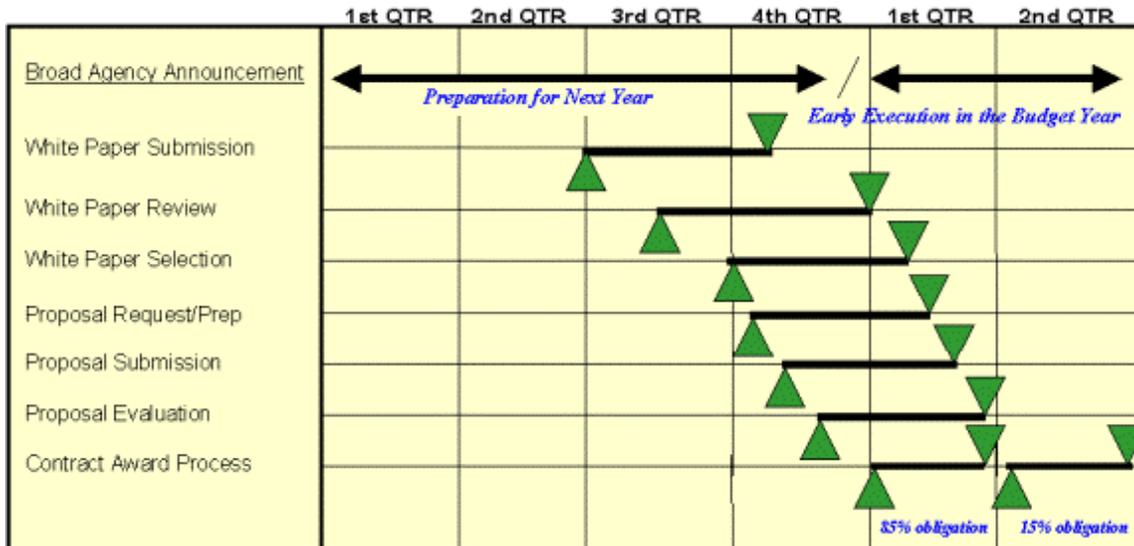
yes no

{end of provision}

CONTRACT FACILITIES CAPITAL COST OF MONEY			Form Approved OMB No. 0704-0267 Expires Apr 30, 2004	
<small>The public reporting burden for this collection of information is estimated to average 10 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0267), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</small>				
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THIS ADDRESS. RETURN COMPLETED FORM TO YOUR CONTRACTING OFFICIAL.				
1. CONTRACTOR NAME		2. CONTRACTOR ADDRESS		
3. BUSINESS UNIT				
4. RFP/CONTRACT PIIN NUMBER		5. PERFORMANCE PERIOD		
6. DISTRIBUTION OF FACILITIES CAPITAL COST OF MONEY				
POOL a.	ALLOCATION BASE b.	FACILITIES CAPITAL COST OF MONEY c.		
		FACTOR (1)	AMOUNT (2)	
d. TOTAL				
e. TREASURY RATE			%	
f. FACILITIES CAPITAL EMPLOYED (TOTAL DIVIDED BY TREASURY RATE)				
7. DISTRIBUTION OF FACILITIES CAPITAL EMPLOYED				
		PERCENTAGE a.	AMOUNT b.	
(1) LAND		%		
(2) BUILDINGS		%		
(3) EQUIPMENT		%		
(4) FACILITIES CAPITAL EMPLOYED		100%		

RDECOM ARL – HRED STTC BAA SCHEDULE

New Starts: Obligating Early within New Fiscal Year



STANDARD CDRL FOR ALL CONTRACTS

DI-MGMT-80227:

Title: Contractor's Progress, Status and Management Report

Frequency: Monthly

Due Date: The 15th day of each month and continue through the life of the contract

Submit To: COR, ACOR, Contract Specialist of the contract via e-mail

Format: Microsoft Word 2003 or 2007. Graphic packages used to create figures, tables and charts shall be compatible with Microsoft Word 2003 or 2007.