

# **SAFER WARFIGHTER COMMUNICATIONS**

## Broad Agency Announcement

DARPA-BAA-10-69

May 20, 2010



---

**Defense Advanced Research Projects Agency**

3701 North Fairfax Drive  
Arlington, VA 22203-1714

# Table of Contents

<b>Part One: Overview Information</b> .....	1
<b>Part Two: Full Text of Announcement</b>	
<b>Sec. I. - Funding Opportunity Description</b> .....	2
<i>Introduction</i> .....	2
<i>Program Scope</i> .....	2
<i>Technical Area 1</i> .....	3
<i>Technical Area 2</i> .....	3
<i>Technical Area 3</i> .....	4
<i>Program Structure</i> .....	4
<i>Schedule</i> .....	5
<i>Deliverables</i> .....	6
<i>Intellectual Property</i> .....	6
<b>Sec. II. - Award Information</b> .....	7
<b>Sec. III. - Eligibility Information</b>	
Eligible Applicants.....	8
<i>Procurement Integrity, Standards of Conduct, Ethical Considerations, and</i> <i>Organizational Conflicts of Interest</i> .....	9
Cost Sharing and Matching.....	9
<b>Sec. IV. - Application and Submission Information</b>	
Address to Request Application Package .....	10
Content and Form of Application Submission	
<i>Security and Proprietary Issues</i> .....	10
<i>Proposal Information</i> .....	12
<i>Proposal Preparation and Format</i> .....	13
Submission Dates and Times .....	20
Funding Restrictions .....	21
Other Submission Requirements.....	21
<b>Sec. V. - Application Review Information</b>	
Evaluation Criteria .....	21
Review and Recommendation Process .....	22
<b>Sec. VI. - Award Administration Information</b>	
Award Notices .....	23
Administrative and National Policy Requirements.....	23
Electronic Systems.....	27
Reporting .....	28
<b>Sec. VII. - Agency Contacts</b> .....	28
<b>Sec. VIII. - Other Information</b>	
Intellectual Property.....	29
Solicitation Web Site .....	31
Cost Volume Check List.....	31
Submission Check List.....	34

## Part One: Overview Information

- **Federal Agency Name** – Defense Advanced Research Projects Agency (DARPA)
- **Funding Opportunity Title** – Transformational Convergence Technology Office (TCTO) SAFER WARFIGHTER COMMUNICATIONS (SAFER)
- **Announcement Type** – Initial Broad Agency Announcement (BAA)
- **Funding Opportunity Number** – DARPA-BAA-10-69
- **Catalog of Federal Domestic Assistance Numbers (CFDA)** – N/A
- **Dates**
  - Posting Date: See announcement at [www.fbo.gov](http://www.fbo.gov)
  - Proposals
    - Initial Closing – 1200 noon (ET), 6 July 2010
    - Final Closing – 1200 noon (ET), 24 November 2010
- **Anticipated Individual Awards** – We anticipate multiple awards for Technical Area 1 and Technical Area 2, and a single award for Technical Area 3.
- **Types of Instruments That May Be Awarded** – Procurement contract and Other Transactions
- **Technical POC** – Drew Dean, Program Manager, DARPA/TCTO
  - EMAIL: [DARPA-BAA-10-69@darpa.mil](mailto:DARPA-BAA-10-69@darpa.mil)
  - FAX: (703) 516-8757
  - ATTN: DARPA-BAA-10-69  
3701 North Fairfax Drive  
Arlington, VA 22203-1714

## **Part Two: Full Text of Announcement**

### **I. FUNDING OPPORTUNITY DESCRIPTION**

DARPA is soliciting proposals for innovative research to maintain technological superiority in the area of resilient communications, privacy, and anonymity on the Internet. The proposed research should investigate innovative approaches that enable revolutionary advances in science, devices, or systems. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of practice.

#### **Introduction**

The goal of the Safer Warfighter Communications (SAFER) program is to develop technology that will enable safe, resilient communications over the Internet, particularly in situations in which a third-party is attempting to discover the identity or location of the end users, or block the communication. The technology developed in the program will also provide the quality of service (QoS) required to support applications such as instant messaging, electronic mail, social networking, streaming video, voice over Internet protocol (VoIP), video conferencing, and other media that promote effective communication.

The SAFER program addresses the resilience of information distribution and access on the Internet, including any and all technologies that allow anonymous Internet communications to bypass techniques that suppress, localize, and/or corrupt information such as:

- Internet Protocol (IP)-address filtering or “blocking,” typically by blacklisting the IP addresses of websites or other services, possibly by the network operator, to deny the user access
- Domain Naming Service (DNS) hijacking, redirecting a user to a different website or service from what the user intended, by supplying a false reply to the user’s domain name resolution request
- Content filtering that captures and analyzes the content of the user’s network traffic through deep packet inspection to check whether the traffic contains predefined signatures or sensitive keywords

#### **Program Scope**

The scope of the SAFER program includes the following Technical Areas of Interest:

1. Measurement
2. Circumvention
3. Testbed and Evaluation Support

Proposers may submit to all three technical areas. A single proposal may be submitted for either or both of technical areas 1 and 2. Proposals for technical area 3 may not address technical areas 1 or 2.

Performers in technical areas 1 and 2 are required to support test evaluations conducted by the technical area 3 performer and the Government. Consistent with federal laws and regulations, all performers shall have an Associate Contractor Agreement clause included in the award document to help facilitate the open exchange of information. This clause is intended to ensure appropriate coordination and integration of work done by the SAFER performers.

### **Technical Area 1: SAFER Measurement**

The SAFER measurement technical area includes the development of quantitative metrics to provide a basis for assessment of the resulting system. Metrics of interest include confidentiality, anonymity, latency, end-user availability, traffic (in)distinguishability, and QoS (e.g., latency and jitter) in relation to the types of applications supported by technical area 2. Proposals should be explicit about how the measurements will be taken and interpreted to measure progress toward program goals. Proposals are encouraged to describe additional metrics to enable the correlation of end-user safety with the technical metrics.

### **Technical Area 2: Circumvention**

The circumvention technical area includes the development of tools, methods, and systems used to overcome the suppression, localization, and corruption of desired Internet communications. As users prefer not to change the websites and media (e.g., instant messaging and VoIP) that they use, the SAFER program seeks solutions that enable anonymous and resilient access to existing websites and media. This includes technologies that provide:

- Safe/Protected networking through the development of technology that protects user communication from identification by third-party observers. For example, this may include anonymous routing layers and/or relaying traffic through relay nodes. Of special interest are technologies that overcome the problems created by fragile and short-lived paths, which often result in data loss and jitter.
- Resilient communications through the development of technology that provides unblockable access to the Internet. For example, this might be accomplished through a “Moving Target Defense” strategy,<sup>1</sup> in which one or more system attributes are automatically changed.
- Distributed coordination through the development of technology that connects users to the SAFER infrastructure. For example, this might be accomplished through the use of algorithmically generated rendezvous points.
- A “safety gauge” for end users through the development of technology that provides timely estimates of the likelihood that the SAFER system will provide anonymity. For example, this may be a simplified presentation of measurements collected by the technical area 1 technologies.

---

<sup>1</sup> As defined in the National Cyber Leap Year effort.

Proposals should describe the approach taken to mitigate the detection of the SAFER technology being used. Proposers should be explicit about any assumptions in their solutions. While it is assumed that the proposed approaches may employ some type of server-side infrastructure and software, some solutions may require client-side software support. In the case of client-side software support, the distribution, reliability (potentially in the face of cyber attacks), and detectability of such software, via network traffic analysis and/or forensic analysis of the client, should be explicitly addressed in the proposal.

Solutions that leverage small amounts of out-of-band communication, such as an SMS message, to bootstrap participation in the SAFER infrastructure are acceptable. The assumption of out-of-band communications should be explicitly stated in the proposal.

### **Technical Area 3: Testbed and Evaluation Support**

The testbed and evaluation support performer will be responsible for supporting performers of technical areas 1 and 2 by hosting the developed technology, providing configuration management of the technology developed, and developing a plan for using an existing server-side network testbed. It is expected that this network testbed will scale from 10 nodes in year 1 to 1,000 nodes by the end of the program. The nodes may be either physical or virtual, as long as sufficient CPU cycles and network bandwidth are provided. The performer will be responsible for system engineering, including system-level concepts of operation and deployment development, use case development, requirements analysis, documentation, and interface design.

The Government intends to use an independent red team to support testing, performance verification, and validation as part of its evaluation. The performer can nominate participants of the red team. Red team testing and evaluation support includes:

- Employing the metrics developed in technical area 1.
- Interfacing with leaders in the field to define and develop testing plans, simulations, and simulation input data.
- Supporting the Government in its evaluation of the technology from technical area 2.

The red team tests will occur periodically. The performer will be responsible for:

- Documenting and briefing performance metrics.
- Developing plans for simulation modeling.
- Developing future test plans and providing feedback on metrics.
- Presenting the results of the tests at technical interchange meetings.

### **Program Structure**

The program consists of four phases as described below. The phases are designed such that the key challenges, related to the number and type of applications, are expanded in each phase.

**Phase I** (12 months): Activities should focus on developing the initial algorithms and a demonstration prototype within 6 months involving 10 nodes that can be used to support a lightweight instant messaging application. The demonstration prototype should scale to support a full instant messaging application. During this time, effort should be allocated to planning the broader systems integration. This phase should end with a red team exercise intended to provide direction for the subsequent phases.

**Phase II** (12 months): Activities should broaden the scope of services provided to include graphical information and should scale the demonstration to 100 nodes. The demonstrations should include the ability to enable simple web surfing and to quantify the improvements to the quality of service (QoS) of the system. Red team exercises should be developed to stress the technology and provide direction for subsequent phases.

**Phase III** (12 months): Activities should focus on improving the QoS of the system. The technology should demonstrate VoIP applications with the necessary QoS for natural conversations. The infrastructure should scale from 100 to 1,000 nodes. Red team exercises should be developed to stress the technology and provide direction for the final phase.

**Phase IV** (12 months): Activities should focus on transition, deployment, and QoS improvements that will enable full motion video within the SAFER system.

The result of the SAFER program should be a set of transitional technologies that provides resilient sending and receiving of Internet content with a controllable degree of anonymity. Such transitional technologies include: access to instant messaging, electronic mail, social networking, streaming video, VoIP, video conferencing, and other media that promote effective communication. In addition, a set of metrics will be established to gauge the runtime effectiveness of the SAFER technology.

## **Schedule**

The schedule listed herein contains notional estimates. Proposers should submit a detailed schedule that is consistent with the maturity of their approaches and the risk reduction required for their concepts. These schedules will be synchronized across performers, as required, and monitored/revised as necessary throughout the SAFER program's period of performance. For budgeting purposes, the anticipated start date for the program is October 1, 2010.

At the beginning of each phase, a kickoff meeting will be held to communicate proposed technical approaches, functional architectures and interfaces. Around month 6, a principal investigator (PI) meeting will occur to demonstrate the current approach and to conduct an independent red team evaluation. At month 11, another red team evaluation will take place. The results of this evaluation will be presented the following month in a PI meeting that will also serve as a kickoff to the next phase. The PI meetings goals will be to: (a) review system architecture; (b) analyze system performance in simulation/red team evaluations; (c) review

accomplishments of each performer; (d) demonstrate prototype and other phase accomplishments; and (e) review plans for the next phase.

The locations for the technical interchanges, PI meetings, and other events will be specified by the Government. In general, for budgeting travel, assume that technical interchanges will be held either in Washington, D.C., or at the performer's location. Assume that PI meetings will be held alternately at East and West Coast locations. In addition to site visits, regular teleconference meetings are encouraged to enhance communications with the Government team. Should important issues arise between program reviews, the Government team will be available to support informal interim technical interchange meetings.

## **Deliverables**

Performer program deliverables may include:

- System Development Plan (SDP) – Applicable to all technical areas. The SDP for each phase, based upon the performers' proposals, shall be revised after each PI meeting, and shared with other performers for synchronization. The SDP shall describe the scope of the design and development effort, describe hardware and software architectures (as applicable) in sufficient detail for review, reference any applicable documents, and provide a schedule.
- Slide Presentations – Applicable to all technical areas. Annotated slide presentations shall be submitted within one month after the program kickoff meeting and after each review.
- System Documentation – Applicable to all technical areas. System documentation shall be provided within one month after the end of each phase documenting the source code, hardware description, language specifications, system diagrams, part numbers, and any other data necessary to replicate and test the designs.
- Monthly Progress Reports – Applicable to all technical areas. A monthly progress report describing progress made, resources expended, and any issues requiring the attention of the Government team shall be provided within 10 days after the end of each month.
- Final Report – Applicable to all technical areas. The final report shall concisely summarize the effort conducted.

## **Intellectual Property**

The Government desires that all technical data or computer software that is developed or delivered under this program should be furnished to the Government with at least Government Purpose Rights. If there is client side software and/or technical data, the Government desires that software and/or technical data be freely redistributable. See Section VIII and the Proposal Roadmap instructions for Section 2.M, Intellectual Property, for further details.



## **II. AWARD INFORMATION**

Multiple awards are anticipated. The amount of resources made available under this BAA will depend on the quality of the proposals received and the availability of funds.

Proposers are allowed to submit proposals on all three technical areas; however, the technical area 3 performer will not be allowed to participate in technical areas 1 or 2.

The Government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this solicitation, and to make awards without discussions with proposers. The Government also reserves the right to conduct discussions if it is later determined to be necessary. If warranted, portions of resulting awards may be segregated into pre-priced options. Additionally, the Government reserves the right to accept proposals in their entirety or to select only portions of proposals for award. In the event that the Government desires to award only portions of a proposal, negotiations may be opened with that proposer. The Government reserves the right to fund proposals in phases with options for continued work at the end of one or more of the phases.

Awards under this BAA will be made to proposers on the basis of the evaluation criteria listed below (see section V - Application Review Information), and program balance to provide overall value to the Government. Proposals identified for negotiation may result in a procurement contract or Other Transactions depending upon the nature of the work proposed, the required degree of interaction between parties, and other factors. The Government reserves the right to request any additional, necessary documentation once it makes the award instrument determination. Such additional information may include, but is not limited to, Representations and Certifications. The Government reserves the right to remove proposers from award consideration should the parties fail to reach agreement on award terms, conditions and cost/price within a reasonable time or the proposer fails to timely provide requested additional information.

As of the date of publication of this BAA, the Government expects that program goals for this BAA may be met by proposers intending to conduct 'fundamental research,' i.e., basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization the results of which ordinarily are restricted for proprietary or national security reasons. Notwithstanding this statement of expectation, the Government is not prohibited from considering and selecting research proposals that, while perhaps not qualifying as 'fundamental research' under the foregoing definition, still meet the BAA criteria for submissions. In all cases, the contracting officer shall have sole discretion to select award instrument type and to negotiate all instrument provisions with selectees.

### **III. ELIGIBILITY INFORMATION**

#### **A. Eligible Applicants**

All responsible sources capable of satisfying the Government's needs may submit a proposal that shall be considered by DARPA. Historically Black Colleges and Universities (HBCUs), Small Businesses, Small Disadvantaged Businesses and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals; however, no portion of this announcement will be set aside for these organizations' participation due to the impracticality of reserving discrete or severable areas of this research for exclusive competition among these entities.

Federally Funded Research and Development Centers (FFRDCs) and Government entities (Government/National laboratories, military educational institutions, etc.) are subject to applicable direct competition limitations and cannot propose to this BAA in any capacity unless they address the following conditions. FFRDCs must clearly demonstrate that the proposed work is not otherwise available from the private sector AND must also provide a letter on letterhead from their sponsoring organization citing the specific authority establishing their eligibility to propose to government solicitations and compete with industry, and compliance with the associated FFRDC sponsor agreement and terms and conditions. This information is required for FFRDCs proposing to be the prime or as a subcontractor. Government entities must clearly demonstrate that the work is not otherwise available from the private sector and provide written documentation citing the specific statutory authority (as well as, where relevant, contractual authority) establishing their ability to propose to Government solicitations. At the present time, DARPA does not consider 15 U.S.C. 3710a to be sufficient legal authority to show eligibility. While 10 U.S.C. 2539b may be the appropriate statutory starting point for some entities, specific supporting regulatory guidance, together with evidence of agency approval, will still be required to fully establish eligibility. DARPA will consider eligibility submissions on a case-by-case basis; however, the burden to prove eligibility for all team members rests solely with the Proposer.

Foreign participants and/or individuals may participate to the extent that such participants comply with any necessary Non-Disclosure Agreements, Security Regulations, Export Control Laws, and other governing statutes applicable under the circumstances.

Applicants considering classified submissions (or requiring access to classified information during the life-cycle of the program) shall ensure all industrial, personnel, and information system processing security requirements are in place and at the appropriate level (e.g., Facility Clearance (FCL), Personnel Security Clearance (PCL), certification and accreditation (C&A)) and any Foreign Ownership Control and Influence (FOCI) issues are mitigated prior to such submission or access. Additional information on these subjects can be found at: [www.dss.mil](http://www.dss.mil).

## **1. Procurement Integrity, Standards of Conduct, Ethical Considerations, and Organizational Conflicts of Interest**

Current federal employees are prohibited from participating in particular matters involving conflicting financial, employment, and representational interests (18 USC 203, 205, and 208.). The DARPA Program Manager for this BAA is Dr. Drew Dean.

Once the proposals have been received, and prior to the start of proposal evaluations, the Government will assess potential conflicts of interest in regards to the DARPA program manager, as well as those individuals chosen to evaluate proposals received under this BAA, and will promptly notify the proposer if any appear to exist. (Please note the Government assessment does NOT affect, offset, or mitigate the proposer's own duty to give full notice and planned mitigation for all potential organizational conflicts, as discussed below.)

All proposers and proposed subcontractors must affirm whether they are providing scientific, engineering, and technical assistance (SETA) or similar support to any DARPA technical office(s) through an active contract or subcontract. All affirmations must state which office(s) the proposer supports and identify the prime contract numbers. Affirmations shall be furnished at the time of proposal submission. All facts relevant to the existence or potential existence of organizational conflicts of interest (FAR 9.5) must be disclosed. The disclosure shall include a description of the action the proposer has taken or proposes to take to avoid, neutralize, or mitigate such conflict. In accordance with FAR 9.503 and without prior approval or a waiver from the DARPA Director, a Contractor cannot simultaneously be a SETA and Performer. Proposals that fail to fully disclose potential conflicts of interests and/or do not have plans to mitigate this conflict will be rejected without technical evaluation and withdrawn from further consideration for award.

If a prospective proposer believes that any conflict of interest exists or may exist (whether organizational or otherwise), the proposer should promptly raise the issue with DARPA by sending the proposer's contact information and a summary of the potential conflict by email to the mailbox address for this BAA at [DARPA-BAA-10-69@darpa.mil](mailto:DARPA-BAA-10-69@darpa.mil), before time and effort are expended in preparing a proposal and mitigation plan. If, in the sole opinion of the Government after full consideration of the circumstances, any conflict situation cannot be effectively mitigated, the proposal may be rejected without technical evaluation and withdrawn from further consideration for award under this BAA.

### **B. Cost Sharing/Matching**

Cost sharing is not required for this particular program; however, cost sharing will be carefully considered where there is an applicable statutory condition relating to the selected funding instrument (e.g., for any Technology Investment Agreement under the authority of 10 U.S.C. 2371). Cost sharing is encouraged where there is a reasonable probability of a potential commercial application related to the proposed research and development effort.

#### **IV. APPLICATION AND SUBMISSION INFORMATION**

##### **A. Address to Request Application Package**

This solicitation contains all information required to submit a proposal. No additional forms, kits, or other materials are needed. This notice constitutes the total BAA. No additional information is available, nor will a formal Request for Proposal (RFP) or additional solicitation regarding this announcement be issued. Requests for same will be disregarded.

##### **B. Content and Form of Application Submission**

###### **1. Security and Proprietary Issues**

**NOTE: If proposals are classified, the proposals must indicate the classification level of not only the proposal itself, but also the anticipated award document classification level.**

**The Government anticipates proposals submitted under this BAA will be unclassified.**

However, if a proposal is submitted as “Classified National Security Information” as defined by Executive Order 12958 as amended, then the information must be marked and protected as though classified at the appropriate classification level and then submitted to DARPA for a final classification determination.

Proposers choosing to submit a classified proposal from other classified sources must first receive permission from the respective Original Classification Authority in order to use their information in replying to this BAA. Applicable classification guide(s) should also be submitted to ensure the proposal is protected at the appropriate classification level.

Classified submissions shall be appropriately and conspicuously marked with the proposed classification level and declassification date. Submissions requiring DARPA to make a final classification determination shall be marked as follows:

CLASSIFICATION DETERMINATION PENDING - Protect as though classified (insert the recommended classification level: e.g., Top Secret, Secret, or Confidential)

Classified submissions shall be in accordance with the following guidance:

**Confidential and Secret Collateral Information:** Use classification and marking guidance provided by previously issued security classification guides, the Information Security Regulation (DoD 5200.1-R), and the National Industrial Security Program Operating Manual (DoD 5220.22-M) when marking and transmitting information previously classified by another Original Classification Authority. Classified information at the Confidential and Secret level may be mailed via appropriate U.S. Postal Service methods (e.g., (USPS) Registered Mail or USPS Express Mail). All classified information will be enclosed in opaque inner and outer covers and double wrapped. The inner envelope shall be sealed and plainly marked with the assigned classification and addresses of both sender and addressee. The inner envelope shall be addressed to:

Defense Advanced Research Projects Agency  
ATTN: TCTO  
Reference: DARPA-BAA-10-69  
3701 North Fairfax Drive  
Arlington, VA 22203-1714

The outer envelope shall be sealed with no identification as to the classification of its contents and addressed to:

Defense Advanced Research Projects Agency  
Security & Intelligence Directorate, Attn: CDR  
3701 North Fairfax Drive  
Arlington, VA 22203-1714

**All Top Secret materials:** Top Secret information should be hand carried by an appropriately cleared and authorized courier to the DARPA CDR. Prior to traveling, the courier shall contact the DARPA CDR at (571) 218-4842 to coordinate arrival and delivery.

**Special Access Program (SAP) Information:** SAP information must be transmitted via approved methods. Prior to transmitting SAP information, contact the DARPA SAPCO at 703-526-4052 for instructions.

**Sensitive Compartmented Information (SCI):** SCI must be transmitted via approved methods. Prior to transmitting SCI, contact the DARPA Special Security Office (SSO) at 703-248-7213 for instructions.

**Proprietary Data:** All proposals containing proprietary data should have the cover page and each page containing proprietary data clearly marked as containing proprietary data. It is the proposer's responsibility to clearly define to the Government what is considered proprietary data.

Security classification guidance via a DD Form 254, "DoD Contract Security Classification Specification," will not be provided at this time since DARPA is soliciting ideas only. After reviewing the incoming proposals, if a determination is made that the award instrument may result in access to classified information a DD Form 254 will be issued and attached as part of the award.

Proposers must have existing and in-place prior to execution of an award, approved capabilities (personnel and facilities) to perform research and development at the classification level they propose. It is DARPA's policy to treat all proposals as competitive information, and to disclose their contents only for the purpose of evaluation. Proposals will not be returned. The original of each proposal received will be retained at DARPA and all other non-required copies destroyed. A certification of destruction may be requested, provided the formal request is received at this office within five days after unsuccessful notification.

## 2. Proposal Information

Proposers are required to submit full proposals by the time and date specified in the BAA in order to be considered during the initial round of selections. DARPA may evaluate proposals received after this date for a period up to 180 days from the date of posting on FedBizOpps. Ability to review late submissions remains contingent on availability of funds.

Restrictive notices notwithstanding, proposals may be handled, for administrative purposes only, by a support contractor. This support contractor is prohibited from competition in DARPA technical research and is bound by appropriate non-disclosure requirements. Proposals may not be submitted by fax or e-mail; any so sent will be disregarded.

Submissions not meeting the format described in the BAA may not be reviewed.

All administrative correspondence and questions on this solicitation, including requests for information on how to submit a full proposal to this BAA, should be directed to the administrative addresses below; e-mail or fax is preferred.

- EMAIL: DARPA-BAA-10-69@darpa.mil
- FAX: (703) 516-8757
- ATTN: DARPA-BAA-10-69  
3701 North Fairfax Drive  
Arlington, VA 22203-1714

**DARPA will employ an electronic upload submission system (T-FIMS) for all unclassified responses to this BAA.** Unclassified proposals sent in response to DARPA-BAA-10-69 must be submitted through T-FIMS. See <https://www.tfims.darpa.mil/baa/> for more information on how to request an account, upload proposals, and use the T-FIMS tool. Because proposers using T-FIMS may encounter heavy traffic on the web server, and T-FIMS requires a registration and certificate installation for all proposers, proposers should not wait until the day the proposal is due to create an account in T-FIMS and submit the proposal. All proposers using T-FIMS must also encrypt the proposal, as per the instructions below.

All proposals submitted electronically through T-FIMS must be encrypted using Winzip or PKZip with 256-bit AES encryption. Only one zipped/encrypted file will be accepted per proposal and proposals not zipped/encrypted will be rejected by DARPA. An encryption password form must be completed and emailed to DARPA-BAA-10-69@darpa.mil following the proposal submission process, as proposers will be issued a document control number at that time. See <https://www.tfims.darpa.mil/baa/> for the encryption password form.

Note the word "PASSWORD" must appear in the subject line of the above email and there are minimum security requirements for establishing the encryption password. Failure to provide the encryption password may result in the proposal not being evaluated. For further information and instructions on how to zip and encrypt proposal files, see <https://www.tfims.darpa.mil/baa/>.

### 3. Proposal Preparation and Format

The proposal shall be delivered in two volumes, Volume 1 (technical proposal) and Volume 2 (cost proposal). Proposals not meeting the format described in this BAA may be rejected without review.

The technical proposal shall include the following sections. All submissions must be in English. **Sections 2.A. – 2.L. (found on page 14 below) may not exceed 35 pages in length**, where a "page" is 8-1/2 by 11 inches with type not smaller than 12 point, charts may use 10 point font, margins not smaller than 1 inch, and line spacing not smaller than single-spaced. The Innovative Claims for the Proposed Research (Section 2.B.) and Statement of Work (Section 2.G.) must start on a new page. Other sections are not required to start a new page.

#### **Volume 1 – Technical and Management Proposal**

##### **Proposal Section 1 - Administrative**

###### **1.A. Cover Sheet**

**The cover sheet should contain the following information:**

- BAA number;
- Proposal title;
- Technical area;
- Lead organization submitting the proposal;
- Technical point of contact, including: name, telephone number, electronic mail address, fax (if available), and mailing address;
- Administrative point of contact, including: name, telephone number, electronic mail address, fax (if available), and mailing address;
- Total funds requested from DARPA. Summary of the costs of the proposed research, including total base cost, estimates of base cost in each year of the effort, estimates of itemized options in each year of the effort, and cost sharing if relevant;
- Contractor's reference number (if any); and
- Contractor's type of business, selected from among the following categories:
  - WOMEN-OWNED LARGE BUSINESS,
  - OTHER LARGE BUSINESS,
  - SMALL DISADVANTAGED BUSINESS [Identify ethnic group from among the following: Asian-Indian American, Asian-Pacific American, Black American, Hispanic American, Native American, or Other],
  - WOMEN-OWNED SMALL BUSINESS,
  - OTHER SMALL BUSINESS,
  - HBCU,
  - MI,

- OTHER EDUCATIONAL,
- OTHER NONPROFIT, or
- FOREIGN CONCERN/ENTITY.
- Other team members (if applicable) and type of business for each.

### **1.B. Official Transmittal Letter**

### **1.C. Table of Contents**

## **Proposal Section 2 - Technical Details**

### **2.A. Summary Chart**

Provide a one slide summary of the proposal that effectively and succinctly conveys the main objective, key innovations, expected impact, and other unique aspects of the proposal.

### **2.B. Innovative Claims for the Proposed Research**

This page is the centerpiece of the proposal and should succinctly describe the unique proposed approach and contributions. This section may also *briefly* address the following topics:

- a. Problem Description - Provide a concise description of the problem areas addressed. Make this specific to your approach.
- b. Research Goals - Identify specific research goals. Goals should address the technical challenges of the effort.
- c. Expected Impact - Describe the expected impact of your research.

### **2.C. Proposal Roadmap**

The roadmap provides a top-level view of the content and structure of the proposal. It contains a synopsis for each of the roadmap areas defined below, which should be elaborated elsewhere. It is important to make the synopses as explicit and informative as possible. The roadmap must also cross-reference the proposal page number(s) where each area is elaborated. The required roadmap areas are:

- a. Main goals of the proposed research.
- b. Tangible benefits to end users (i.e., benefits of the capabilities afforded if the proposed technology is successful).
- c. Critical technical barriers (i.e., technical limitations that have, in the past, prevented achieving the proposed results).
- d. Main elements of the proposed technical approach.
- e. Basis of confidence (i.e. rationale that builds confidence that the proposed approach will overcome the technical barriers).
- f. Nature and description of end results to be delivered to DARPA. In what form will results be developed and delivered to DARPA and the scientific community? Note that DARPA encourages experiments, simulations, specifications, proofs, etc. to be documented and published to promote progress in the field. Proposers should specify both final and intermediate products.
- g. Cost and schedule of the proposed effort.



## **2.D. Technical Approach**

Provide a detailed description of the technical approach. This section will elaborate on many of the topics identified in the proposal roadmap and will serve as the primary expression of the proposers' scientific and technical ideas.

## **2.E. Prior Work**

Describe any ongoing work or past projects in the related space that have been successfully completed by the team members. Describe if the deliverable or products are fielded (and to what extent), and whether the technology is being marketed.

## **2.F. Comparison with Current Technology**

Describe state of the art approaches and the limitations that relate to each area addressed by the proposal. Describe and analyze state of the art results, approaches, and limitations within the context of the problem area addressed by this research. Demonstrating problem understanding requires not just the enumeration of related efforts; rather, related work must be compared and contrasted to the proposed approach.

## **2.G. Statement of Work (SOW)**

In plain English, clearly define the technical tasks/subtasks to be performed, their durations, and dependencies among them. For each task/subtask, provide:

- A general description of the objective (for each defined task/activity);
- A detailed description of the approach to be taken to accomplish each defined task/activity);
- Identification of the primary organization responsible for task execution (prime, sub, team member, by name, etc.);
- The completion criteria for each task/activity - a product, event or milestone that defines its completion.
- Define all deliverables (reports, data, software, hardware, prototypes, etc.) to be provided to the Government in support of the proposed research tasks/activities. Include expected delivery date for each deliverable.
- Cost, schedule and measurable milestones for the proposed research, including estimates of cost for each major task in each year of the effort delineated by the prime and major subcontractors, total cost and company cost share, if applicable. (Note: Measurable milestones should capture key development points in tasks and should be clearly articulated and defined in time relative to start of effort.)

Note: The SOW should be developed so that each phase of the program is separately defined. Do not include any proprietary information in the SOW.

## **2.H. Management Plan**

Describe any formal teaming agreements that are required to execute this program and a clearly defined organization chart for the program team (prime contractor and subcontractors, if any).

## 2.I. Schedule and Milestones

This section should include:

- a. Schedule Graphic - Provide a graphic representation of project schedule including detail down to the individual effort level. This should include but not be limited to, a multi-phase development plan, which demonstrates a clear understanding of the proposed research; and a plan for periodic and increasingly robust tests over the project life that will show applicability to the overall program concept. Show all project milestones. Use “x months after contract award” designations for all dates.
- b. Detailed Task Descriptions - Provide detailed task descriptions for each discrete work effort and/or subcontractor in schedule graphic.
- c. Project Management and Interaction Plan - Describe the project management and interaction plans for the proposed work. If proposal includes subcontractors that are geographically distributed, clearly specify working / meeting models. Items to include in this category include software/code repositories, physical and virtual meeting plans, and online communication systems that may be used.

## 2.J. Personnel, Qualifications, and Commitments

List key personnel, in particular, key developers, showing a concise summary of their qualifications. Provide a description of any previous accomplishments or similar efforts completed/ongoing in this or closely related research area, including identification of other Government sponsors, if any.

Indicate the level of effort in terms of hours to be expended by each person during each contract year and other (current and proposed) major sources of support for them and/or commitments of their efforts. DARPA expects all key personnel associated with a proposal to make substantial time commitment to the proposed activity and the proposal will be evaluated accordingly. It is DARPA’s intention to put key personnel clauses into the contracts, so proposers should not bid personnel whom they do not intend to execute the contract.

Include a table of key individual time commitments as follows:

Key Individual	Project	Pending/Current	GFY11	GFY12	GFY13	GFY14
Jane Doe	SAFER	Proposed	hours	hours	hours	
	Project 1	Current	hours	n/a	n/a	
	Project 2	Pending	hours	hours	n/a	
John Deer	SAFER	Proposed				

## 2.K. Facilities

If any portion of the research is predicated upon the use of Government Owned Resources of any type, the proposer shall specifically identify the property or other resource required, the date the property or resource is required, the duration of the requirement, the source from which the resource is required, if known, and the impact on the research if the resource cannot

be provided. If no Government Furnished Property is required for conduct of the proposed research, the proposal shall so state.

## **2.L. Cost Summaries**

Provide a top level total cost summary for the entire program broken down by phases. Show each major task by quarter and delineate prime and major subcontractor efforts. Proposers should format their proposals for Phase I, with Phases II-IV priced as options.

## **2.M. Intellectual Property**

Per section VIII - Other Information, proposers responding to this BAA must submit a separate list of all technical data or computer software that will be furnished to the Government with other than unlimited rights. The Government will assume unlimited rights if proposers fail to identify any intellectual property restrictions in their proposals. Include in this section all proprietary claims to results, prototypes, deliverables or systems supporting and/or necessary for the use of the research, results, prototypes and/or deliverables. If no restrictions are intended, then the proposer should state "NONE".

## **2.N. Organizational Conflict of Interest Affirmations and Disclosure**

Per the instructions in section III.A.1. above, if the proposer or any proposed sub IS providing SETA support, as described, to any DARPA technical office(s) through an active contract or subcontract (regardless of which DARPA technical office is being supported), they must provide documentation: 1) stating which office(s) the proposer, sub and/or individual supports, 2) identify the prime contract numbers, AND 3) include a description of the action the proposer has taken or proposes to take to avoid, neutralize, or mitigate the conflict.

If the proposer or any proposed sub IS NOT currently providing SETA support as described, then the proposer should simply state "NONE."

**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.**

## **2.O. Human Use**

For all proposed research that will involve human subjects in the first year or phase of the project, the institution must provide evidence of or a plan for review by an Institutional Review Board (IRB) upon final proposal submission to DARPA. For further information on this subject, see section VI.B.4 below. If human use is not a factor in a proposal, then the proposer should state "NONE."

## **2.P. Animal Use**

For submissions containing animal use, proposals must briefly describe plans for Institutional Animal Care and Use Committee (IACUC) review and approval. For further information on this subject, see Section VI.B.5 below. If animal use is not a factor in a proposal, then the proposer should state "NONE."

## **2.Q. Statement of Unique Capability Provided by Government or Government-funded Team Member**

Per section III.A. - Eligible Applicants, proposals which include Government or Government-funded entities (i.e., FFRDC's, National laboratories, etc.) as prime, sub or team member, shall provide a statement which clearly demonstrates the work being provided by the Government or Government-funded entity team member is not otherwise available from the private sector. If none of the team members belongs to a Government or Government-funded entity, then the proposer should state "Not Applicable."

## **2.R. Government or Government-funded Team Member Eligibility**

Per section III.A. - Eligible Applicants, proposals which include Government or Government-funded entities (i.e., FFRDC's, National laboratories, etc.) as prime, sub or team member shall provide documentation citing the specific authority which establishes they are eligible to propose to Government solicitations: 1) statutory authority; 2) contractual authority; 3) supporting regulatory guidance; AND 4) evidence of agency approval. If no such entities are involved, then the proposer should state "None."

## **Proposal Section 3 - Additional Information**

Proposers must submit a bibliography and may submit up to three papers showing previous work relevant to this BAA.

### **Volume 2 – Cost Proposal**

#### **Cover Sheet**

#### **The cover sheet should contain the following information:**

- BAA number;
- Technical area;
- Lead Organization Submitting proposal;
- Type of business, selected among the following categories: "LARGE BUSINESS", "SMALL DISADVANTAGED BUSINESS", "OTHER SMALL BUSINESS", "HBCU", "MI", "OTHER EDUCATIONAL", OR "OTHER NONPROFIT";
- Contractor's reference number (if any);
- Other team members (if applicable) and type of business for each;
- Proposal title;
- Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
- Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), and electronic mail (if available);
- Award instrument requested: cost-plus-fixed-fee (CPFF), cost-fee, cost sharing contract – no fee, or other type of procurement contract (*specify*), or other transaction;

- Place(s) and period(s) of performance;
- Total proposed cost separated by basic award and option(s) (if any);
- Name, address, and telephone number of the proposer’s cognizant Defense Contract Management Agency (DCMA) administration office (*if known*);
- Name, address, and telephone number of the proposer’s cognizant Defense Contract Audit Agency (DCAA) audit office (*if known*);
- Date proposal was prepared;
- DUNS number (refer to: [http://www.dnb.com/US/duns\\_update](http://www.dnb.com/US/duns_update));
- TIN number;
- Cage code;
- Subcontractor information; and
- Proposal validity period (minimum 180 days).

The Government requests and recommends that tables included in the cost proposal also be provided in MS Excel™ format with calculations formulae intact to allow traceability of the cost proposal numbers across the prime and subcontractors. If the PDF submission differs from the Excel submission, the PDF will take precedence. Each copy must be clearly labeled with the DARPA BAA number, proposer organization, and proposal title (short title recommended).

### **Cost Summaries {5 page limit}**

Provide a top-level total cost summary for the entire program broken down by phases. Show each major task and subtask by month and delineate prime and major subcontractor efforts.

### **Detailed Cost Breakdown {No page limit}**

For purposes of building your cost proposal, assume an estimated start date of 1 October 2010. Provide: (1) total program cost broken down by major cost items (direct labor, including labor categories; subcontracts; materials; other direct costs, overhead charges, etc.) and further broken down by task and phase; (2) major program tasks by fiscal year; (3) an itemization of major subcontracts and equipment purchases; (4) an itemization of any information technology (IT) purchase<sup>2</sup>; (5) a summary of projected funding requirements by month; and (6) the source, nature, and amount of any industry cost-sharing; (7) identification of pricing assumptions of

---

<sup>2</sup> IT is defined as “any equipment, or interconnected system(s) or subsystem(s) of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the agency. (a) For purposes of this definition, equipment is used by an agency if the equipment is used by the agency directly or is used by a contractor under a contract with the agency which – (1) Requires the use of such equipment; or (2) Requires the use, to a significant extent, or such equipment in the performance of a service or the furnishing of a product. (b) The term “information technology” includes computers, ancillary, software, firmware and similar procedures, services (including support services), and related resources. (c) The term “information technology” does not include – (1) Any equipment that is acquired by a contractor incidental to a contract; or (2) Any equipment that contains imbedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, are not information technology.”

which may require incorporation into the resulting award instrument (e.g., use of Government Furnished Property/Facilities/Information, access to Government Subject Matter Expert/s, etc.) and 8) provide appropriate cost or price analyses of subcontractor proposals, IAW FAR 15.404-3, to establish the reasonableness of proposed subcontract prices.

**The prime contractor is responsible for compiling and providing all subcontractor proposals for the Procuring Contracting Officer (PCO) with the submission of this proposal.**

Subcontractor proposals should include Interdivisional Work Transfer Agreements (ITWA) or similar arrangements, if applicable. Where the effort consists of multiple portions, which could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each. NOTE: For IT and equipment purchases, include a letter stating why the proposer cannot provide the requested resources from its own funding.

Provide supporting cost and pricing information in sufficient detail to substantiate the summary cost estimates above. Include a description of the method used to estimate costs and supporting documentation. Note: "Cost or pricing data" as defined in FAR Subpart 15.4 shall be required if the proposer is seeking a procurement contract award of \$650,000 or greater unless the proposer requests an exception from the requirement to submit cost or pricing data. "Cost or pricing data" are not required if the proposer proposes an award instrument other than a procurement contract (e.g., other transaction.) All proprietary subcontractor proposal documentation, prepared at the same level of detail as that required of the prime, shall be made immediately available to the Government, upon request, under separate cover (i.e., mail, electronic/email, etc.), either by the proposer or by the subcontractor organization.

### **C. Submission Dates and Times**

#### **Proposals**

The full proposal must be submitted per the instructions in section IV.B. - Content and Form of Application Submission above by 1200 noon (ET) on 6 July 2010 (initial closing) in order to be considered during the initial warned that the likelihood of funding is greatly reduced for proposals submitted after the initial closing date. While DARPA-BAA-10-69 will remain open until 1200 noon (ET) 24 November 2010 (final closing date/BAA expiration, proposers are warned that the likelihood of funding is greatly reduced for proposals submitted after the initial closing date deadline.

DARPA will acknowledge receipt of complete submissions via email and assign control numbers that should be used in all further correspondence regarding proposals.

Failure to comply with the submission procedures may result in the submission not being evaluated.

## **D. Intergovernmental Review - N/A**

## **E. Funding Restrictions**

DARPA currently anticipates using 6.2 funding for this program.

## **F. Other Submission Requirements**

Proposals **MUST NOT** be submitted to DARPA via email or fax (see Submission instructions above in section IV.B.).

# **V. APPLICATION REVIEW INFORMATION**

## **A. Evaluation Criteria**

Evaluation of proposals will be accomplished through a scientific review of each proposal using the following criteria. Proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement. DARPA's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons. While these criteria are listed in descending order of relative importance, the combination of all non-cost evaluation factors is significantly more important than cost.

### **1. Overall Scientific and Technical Merit**

The proposed technical approach is feasible, achievable, complete and supported by a proposed technical team that has the expertise and experience to accomplish the proposed tasks. Task descriptions and associated technical elements provided are complete and in a logical sequence with all proposed deliverables clearly defined such that a final outcome that achieves the goal can be expected as a result of award. The proposal identifies major technical risks and planned mitigation efforts are clearly defined and feasible.

### **2. Potential Contribution and Relevance to the DARPA Mission**

The potential contributions of the proposed effort with relevance to the national technology base will be evaluated. Specifically, DARPA's mission is to maintain the technological superiority of the U.S. military and prevent technological surprise from harming our national security by sponsoring revolutionary, high-payoff research that bridges the gap between fundamental discoveries and their application. In addition, the evaluation will take into consideration the extent to which intellectual property (IP) rights restrictions impact the estimated lifecycle costs of the transitioned technology item, component or process.

### **3. Realism of Proposed Schedule**

The proposer's submission will be evaluated on how realistic the proposed schedule is in relation to the program metrics. The proposer will be evaluated on its understanding of the timeframe necessary to meet program metrics and to identify and mitigate any potential risk in schedule.

### **4. Proposer's Capabilities and/or Related Experience**

The proposer's prior experience in similar efforts must clearly demonstrate an ability to deliver products that meet the proposed technical performance within the proposed budget and schedule. The proposed team has the expertise to manage the cost and schedule. Similar efforts completed/ongoing by the proposer in this area are fully described including identification of other Government sponsors.

### **5. Cost Realism**

The objective of this criterion is to establish that the proposed costs are realistic for the technical and management approach offered, as well as to determine the proposer's practical understanding of the effort. The proposal will be reviewed to determine if the costs proposed are based on realistic assumptions, reflect a sufficient understanding of the technical goals and objectives of the BAA, and are consistent with the proposer's technical approach (to include the proposed Statement of Work). At a minimum, this will involve review, at the prime and subcontract level, of the type and number of labor hours proposed per task as well as the types and kinds of materials, equipment and fabrication costs proposed. It is expected that the effort will leverage all available relevant prior research in order to obtain the maximum benefit from the available funding. For efforts with a likelihood of commercial application, appropriate direct cost sharing may be a positive factor in the evaluation. The evaluation criterion recognizes that undue emphasis on cost may motivate proposers to offer low-risk ideas with minimum uncertainty and to staff the effort with junior personnel in order to be in a more competitive posture. DARPA discourages such cost strategies.

NOTE: PROPOSERS ARE CAUTIONED THAT EVALUATION RATINGS MAY BE LOWERED AND/OR PROPOSALS REJECTED IF SUBMITTAL INSTRUCTIONS ARE NOT FOLLOWED.

## **B. Review and Recommendation Process**

It is the policy of DARPA to ensure impartial, equitable, comprehensive proposal evaluations and to select the source (or sources) whose offer meets the Government's technical, policy, and programmatic goals. Pursuant to FAR 35.016, the primary basis for selecting proposals for acceptance shall be technical, importance to agency programs, and fund availability. In order to provide the desired evaluation, qualified Government personnel will conduct reviews and (if necessary) convene panels of experts in the appropriate areas.

Each proposal will be evaluated on the merit and relevance of the specific proposal as it relates to the office rather than against other proposals for research in the same general area, since no common work statement exists. DARPA's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons. For



evaluation purposes, a proposal is the document described above in section IV.B. - Content and Form of Application Submission. Other supporting or background materials submitted with the proposal will be considered for the reviewer's convenience only and not considered as part of the proposal.

Award(s) will be made to proposers whose proposals are determined to be the most advantageous to the Government, all factors considered, including the potential contributions of the proposed work to the overall research program and the availability of funding for the effort. Award(s) may be made to any proposer whose proposal is determined selectable regardless of its overall rating.

Restrictive notices notwithstanding, proposers are advised that employees of commercial firms under contract to the Government may be used by DARPA to administratively process proposals, monitor contract performance, or perform other administrative duties requiring access to other contractors' proprietary information. These support contracts include nondisclosure agreements prohibiting their contractor employees from disclosing any information submitted by other contractors or using such information for any purpose other than that for which it was furnished. By submission of its proposal, each proposer agrees that proposal information may be disclosed to those non-Government personnel for the limited purposes stated above. In addition, these support contractors are prohibited from competition in DARPA technical research. Subject to the restrictions set forth in FAR 37.203(d), input on technical aspects of the proposals may be solicited by DARPA from non-Government consultants/experts who are strictly bound by the appropriate non-disclosure requirements.

It is the policy of DARPA to treat all proposals as competitive information and to disclose their contents only for the purpose of evaluation. No proposals will be returned. Upon completion of the scientific review process, the original electronic uploaded file of each proposal received will be retained at DARPA for an indefinite period of time.

## **VI. AWARD ADMINISTRATION INFORMATION**

### **A. Award Notices**

As soon as the evaluation of a proposal is complete, the proposer will be notified that 1) the proposal has been selected for funding pending contract negotiations, or 2) the proposal has not been selected. These official notifications will be sent via US mail to the Technical POC identified on the proposal coversheet.

### **B. Administrative and National Policy Requirements**

#### **1. Meeting and Travel Requirements**

There will be a program kickoff meeting and all key participants are required to attend. Performers should also anticipate regular program-wide meetings and periodic site visits at the Program Manager's discretion.

## 2. Human Use

All research involving human subjects, to include use of human biological specimens and human data, selected for funding must comply with the federal regulations for human subject protection. Further, research involving human subjects that is conducted or supported by the DoD must comply with 32 CFR 219, *Protection of Human Subjects* ([http://www.access.gpo.gov/nara/cfr/waisidx\\_07/32cfr219\\_07.html](http://www.access.gpo.gov/nara/cfr/waisidx_07/32cfr219_07.html)) and DoD Directive 3216.02, *Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research* (<http://www.dtic.mil/whs/directives/corres/pdf/321602p.pdf>).

Institutions awarded funding for research involving human subjects must provide documentation of a current Assurance of Compliance with Federal regulations for human subject protection, for example a Department of Health and Human Services, Office of Human Research Protection Federal Wide Assurance (<http://www.hhs.gov/ohrp>). All institutions engaged in human subject research, to include subcontractors, must also have a valid Assurance. In addition, personnel involved in human subjects research must provide documentation of completing appropriate training for the protection of human subjects.

For all proposed research that will involve human subjects in the first year or phase of the project, the institution must provide evidence of or a plan for review by an Institutional Review Board (IRB) upon final proposal submission to DARPA. The IRB conducting the review must be the IRB identified on the institution's Assurance. The protocol, separate from the proposal, must include a detailed description of the research plan, study population, risks and benefits of study participation, recruitment and consent process, data collection, and data analysis. Consult the designated IRB for guidance on writing the protocol. The informed consent document must comply with federal regulations (32 CFR 219.116). A valid Assurance along with evidence of appropriate training all investigators should all accompany the protocol for review by the IRB.

In addition to a local IRB approval, a headquarters-level human subjects regulatory review and approval is required for all research conducted or supported by the DoD. The Army, Navy, or Air Force office responsible for managing the award can provide guidance and information about their component's headquarters-level review process. Note that confirmation of a current Assurance and appropriate human subjects protection training is required before headquarters-level approval can be issued.

The amount of time required to complete the IRB review/approval process may vary depending on the complexity of the research and/or the level of risk to study participants. Ample time should be allotted to complete the approval process. The IRB approval process can last between one to three months, followed by a DoD review that could last between three to six months. No DoD/DARPA funding can be used towards human subjects research until ALL approvals are granted.

### 3. Animal Use

Any Recipient performing research, experimentation, or testing involving the use of animals shall comply with the rules on animal acquisition, transport, care, handling, and use in: (i) 9 CFR parts 1-4, Department of Agriculture rules that implement the Laboratory Animal Welfare Act of 1966, as amended, (7 U.S.C. 2131-2159); (ii) the guidelines described in National Institutes of Health Publication No. 86-23, "Guide for the Care and Use of Laboratory Animals"; (iii) DoD Directive 3216.01, "Use of Laboratory Animals in DoD Program."

For submissions containing animal use, proposals should briefly describe plans for Institutional Animal Care and Use Committee (IACUC) review and approval. Animal studies in the program will be expected to comply with the PHS Policy on Humane Care and Use of Laboratory Animals, available at <http://grants.nih.gov/grants/olaw/olaw.htm>.

All Recipients must receive approval by a DoD certified veterinarian, in addition to an IACUC approval. No animal studies may be conducted using DoD/DARPA funding until the USAMRMC Animal Care and Use Review Office (ACURO) or other appropriate DoD veterinary office(s) grant approval. As a part of this secondary review process, the Recipient will be required to complete and submit an ACURO Animal Use Appendix, which may be found at [https://mrmc-www.army.mil/index.cfm?pageid=Research\\_Protections.acuro&rn=1](https://mrmc-www.army.mil/index.cfm?pageid=Research_Protections.acuro&rn=1).

### 4. Publication Approval

It is the policy of the Department of Defense that the publication of products of fundamental research will remain unrestricted to the maximum extent possible. The definition of Contracted Fundamental Research is:

"Contracted Fundamental Research includes [research performed under] grants and contracts that are (a) funded by budget category 6.1 (Basic Research), whether performed by universities or industry or (b) funded by budget category 6.2 (Applied Research) and performed on-campus at a university. The research shall not be considered fundamental in those rare and exceptional circumstances where the applied research effort presents a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense, and where agreement on restrictions have been recorded in the contract or grant." Such research is referred to by DARPA as "Restricted Research."

Pursuant to DoD policy, research performed under grants and contracts that are (a) funded by budget category 6.2 (Applied Research) and NOT performed on-campus at a university or (b) funded by budget category 6.3 (Advanced Research) does not meet the definition of fundamental research. Publication restrictions will be placed on all such research.

It is anticipated that awards for both Fundamental and Restricted Research may be made as a result of this BAA. Appropriate clauses will be included in resultant awards for Restricted Research to prescribe publication requirements and other restrictions, as appropriate. DARPA does not anticipate applying publication restrictions of any kind to Fundamental Research to each individual award that may result from this BAA.

For certain research projects, it may be possible that although the research being performed by the Prime Contractor is Restricted Research, a subcontractor may be conducting Contracted Fundamental Research. In those cases, it is the Prime Contractor's responsibility to explain in their proposal why its subcontractor's effort is Contracted Fundamental Research.

The following same or similar provision will be incorporated into any resultant Restricted Research or Non-Fundamental Research procurement contract or other transaction:

There shall be no dissemination or publication, except within and between the Contractor and any subcontractors, of information developed under this contract or contained in the reports to be furnished pursuant to this contract without prior written approval of the DARPA Public Release Center (DARPA/PRC). All technical reports will be given proper review by appropriate authority to determine which Distribution Statement is to be applied prior to the initial distribution of these reports by the Contractor. With regard to subcontractor proposals for Contracted Fundamental Research, papers resulting from unclassified contracted fundamental research are exempt from prepublication controls and this review requirement, pursuant to DoD Instruction 5230.27 dated October 6, 1987.

When submitting material for written approval for open publication, the Contractor/Awardee must submit a request for public release to the DARPA PRC and include the following information: 1) Document Information: document title, document author, short plain-language description of technology discussed in the material (approx. 30 words), number of pages (or minutes of video) and document type (briefing, report, abstract, article, or paper); 2) Event Information: event type (conference, principle investigator meeting, article or paper), event date, desired date for DARPA's approval; 3) DARPA Sponsor: DARPA Program Manager, DARPA office, and contract number; and 4) Contractor/Awardee's Information: POC name, e-mail and phone. Allow four weeks for processing; due dates under four weeks require a justification. Unusual electronic file formats may require additional processing time. Requests can be sent either via e-mail to [prc@darpa.mil](mailto:prc@darpa.mil) or via 3701 North Fairfax Drive, Arlington VA 22203-1714, telephone (571) 218-4235. Refer to <http://www.darpa.mil/prc> for information about DARPA's public release process.

## **5. Export Control**

Should this project develop beyond fundamental research (basic and applied research ordinarily published and shared broadly within the scientific community) with military or dual-use applications the following apply:

(1) The Contractor shall comply with all U. S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of this contract. In the absence of available license exemptions/exceptions, the Contractor shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of

(including deemed exports) hardware, technical data, and software, or for the provision of technical assistance.

(2) The Contractor shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this contract, including instances where the work is to be performed on-site at any Government installation (whether in or outside the United States), where the foreign person will have access to export-controlled technologies, including technical data or software.

(3) The Contractor shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.

(4) The Contractor shall be responsible for ensuring that the provisions of this clause apply to its subcontractors.

## **6. 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 proposer 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.

## **7. Employment Eligibility Verification**

As per FAR 22.1802, recipients of FAR-based procurement contracts must enroll as Federal Contractors in E-verify and use E-Verify to verify employment eligibility of all employees assigned to the award. All resultant contracts from this solicitation will include FAR 52.222-54, "Employment Eligibility Verification." This clause will not be included in grants, cooperative agreements, or Other Transactions.

## **C. Electronic Systems**

### **1. Central Contractor Registration (CCR)**

Proposers selected, but not already registered in the Central Contractor Registry (CCR) will be required to register in CCR prior to any award under this BAA. Information on CCR registration is available at <https://www.bpn.gov/ccr/default.aspx>.

### **2. On-line Representations and Certifications (ORCA)**

In accordance with FAR 4.1201, prospective proposers shall complete electronic annual representations and certifications at <http://www.darpa.mil/cmo/sectionK.html>.

### **3. Wide Area Work Flow (WAWF)**

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

#### **4. Electronic and Information Technology**

All electronic and information technology acquired through this solicitation must satisfy the accessibility requirements of Section 508 of the Rehabilitation Act (29 U.S.C. 794d) and FAR Subpart 39.2. Each proposer who submits a proposal involving the creation or inclusion of electronic and information technology must ensure that Federal employees with disabilities will have access to and use of information that is comparable to the access and use by Federal employees who are not individuals with disabilities and members of the public with disabilities seeking information or services from DARPA will have access to and use of information and data that is comparable to the access and use of information and data by members of the public who are not individuals with disabilities.

#### **D. Reporting**

The number and types of reports will be specified in the award document, but will include as a minimum monthly financial status reports and an annual project summary. In addition, each performing contractor (including subs) on each team will be expected to provide monthly status reports to the Program Manager. Reports and briefing material will also be required as appropriate to document progress in accomplishing program metrics. These shall be prepared and submitted in accordance with the procedures contained in the award document. A Final Report that summarizes the project and tasks will be required at the conclusion of the performance period for the award, notwithstanding the fact that the research may be continued under a follow-on vehicle.

##### **1. T-FIMS**

The above reports may be electronically submitted by each awardee under this BAA via the DARPA Technical – Financial Information Management System (T-FIMS). If applicable, the T-FIMS URL and instructions will be furnished by the contracting agent prior to award.

##### **2. I-Edison**

All required reporting shall be accomplished, as applicable, using the i-Edison.gov reporting website at <http://s-edison.info.nih.gov/iEdison>.

#### **VII. AGENCY CONTACTS**

DARPA will use email for all technical and administrative correspondence regarding this BAA, with the exception of select/not-selected notifications.

Administrative, technical or contractual questions should be sent via e-mail to DARPA-BAA-10-69@darpa.mil. All requests must include the name, email address, and phone number of a point of contact.

The technical POC for this effort is Dr. Drew Dean, electronic mail: DARPA-BAA-10-69@darpa.mil.

## **VIII. OTHER INFORMATION**

### **1. Intellectual Property**

#### **a. Procurement Contract Proposers**

##### **i. Noncommercial Items (Technical Data and Computer Software)**

Proposers responding to this BAA requesting a procurement contract to be issued under the FAR/DFARS shall identify all noncommercial technical data and noncommercial computer software that it plans to generate, develop, and/or deliver under any proposed award instrument in which the Government will acquire less than unlimited rights, and to assert specific restrictions on those deliverables. Proposers shall follow the format under DFARS 252.227-7017 for this stated purpose. In the event that proposers do not submit the list, the Government will assume that it automatically has “unlimited rights” to all noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, unless it is substantiated that development of the noncommercial technical data and noncommercial computer software occurred with mixed funding. If mixed funding is anticipated in the development of noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, then proposers should identify the data and software in question, as subject to Government Purpose Rights (GPR). In accordance with DFARS 252.227-7013 Rights in Technical Data - Noncommercial Items, and DFARS 252.227-7014 Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation, the Government will automatically assume that any such GPR restriction is limited to a period of five (5) years in accordance with the applicable DFARS clauses, at which time the Government will acquire “unlimited rights” unless the parties agree otherwise. Proposers are admonished that the Government may use the list during the scientific review process to evaluate the impact of any identified restrictions and may request additional information from the proposer, as may be necessary, to evaluate the proposer’s assertions. If no restrictions are intended, then the proposer should state “NONE.” It is noted an assertion of “NONE” indicates that the Government has “unlimited rights” to all noncommercial technical data and noncommercial computer software delivered under the award instrument, in accordance with the DFARS provisions cited above. Failure to provide full information may result in a determination that the proposal is not compliant with the BAA – resulting in nonselectability of the proposal.

A sample list for complying with this request is as follows:

NONCOMMERCIAL				
Technical Data Computer Software To be Furnished With Restrictions	Summary of Intended Use in the Conduct of the Research	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(NARRATIVE)	(LIST)	(LIST)	(LIST)

**ii. Commercial Items (Technical Data and Computer Software)**

Proposers responding to this BAA requesting a procurement contract to be issued under the FAR/DFARS shall identify all commercial technical data and commercial computer software (including open source software) that may be embedded in, or that may create linkages affecting distribution rights to, any noncommercial deliverables contemplated under the research effort, along with any applicable restrictions on the Government’s use of such commercial technical data and/or commercial computer software. In the event that proposers do not submit the list, the Government will assume that there are no restrictions on the Government’s use of such commercial items. The Government may use the list during the scientific review process to evaluate the impact of any identified restrictions and may request additional information from the proposer, as may be necessary, to evaluate the proposer’s assertions. If no restrictions are intended, then the proposer should state “NONE.” Failure to provide full information may result in a determination that the proposal is not compliant with the BAA – resulting in nonselectability of the proposal.

A sample list for complying with this request is as follows:

COMMERCIAL			
Technical Data Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

**b. Non-Procurement Contract Proposers – Noncommercial and Commercial Items (Technical Data and Computer Software)**

Proposers responding to this BAA requesting a Procurement Contract or Other Transaction shall follow the applicable rules and regulations governing these various award instruments, but in all cases should appropriately identify any potential restrictions on the Government’s use of any Intellectual Property contemplated under those award instruments in question. This includes both Noncommercial Items and Commercial Items. Although not required, proposers may use a format similar to that described above. The Government may use the list during the scientific review process to evaluate the impact of any identified restrictions, and may request additional information from the proposer, as may be necessary, to evaluate the proposer’s assertions. If no restrictions are intended, then the proposer should state “NONE.” Failure to



provide full information may result in a determination that the proposal is not compliant with the BAA – resulting in nonselectability of the proposal.

**c. All Proposers – Patents**

Include documentation proving your ownership of or possession of appropriate licensing rights to all patented inventions (or inventions for which a patent application has been filed) that will be utilized under your proposal for the DARPA program. If a patent application has been filed for an invention that your proposal utilizes, but the application has not yet been made publicly available and contains proprietary information, you may provide only the patent number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and a summary of the patent title, together with either: 1) a representation that you own the invention, or 2) proof of possession of appropriate licensing rights in the invention.

**d. All Proposers – Intellectual Property Representations**

Provide a good faith representation that you either own or possess appropriate licensing rights to all other intellectual property that will be utilized under your proposal for the DARPA program. Additionally, proposers shall provide a short summary for each item asserted with less than unlimited rights that describes the nature of the restriction and the intended use of the intellectual property in the conduct of the proposed research.

**2. Solicitation Web Site**

The solicitation web page at [http://www.darpa.mil/tcto\\_solicitations.html](http://www.darpa.mil/tcto_solicitations.html) will have a Frequently Asked Questions (FAQ) list.

**3. Cost Volume Checklist**

The following checklist is provided to assist the proposer in developing a complete and responsive cost volume. Full instructions appear in “Volume 2 - Cost Proposal” beginning on Page 18 of this solicitation document. This worksheet must be included with the coversheet of the Cost Proposal.

1. Are all items included on your Cost Proposal cover sheet?

YES

NO

If reply is “No”, please explain:

2. Does your Cost Proposal include (1) a summary cost buildup by Phase, (2) a summary cost buildup by Year, and (3) a detailed cost buildup of for each Phase that breaks out each task and shows the cost per month?

YES

NO

**Appears on Page(s)** [Type text]

If reply is “No”, please explain:

3. Does your cost proposal (detailed cost buildup #3 above in item 2) show a breakdown of the major cost items listed below:

Direct Labor (Labor Categories, Hours, Rates)

YES    NO      **Appears on Page(s)** [Type text]

Indirect Costs/Rates (i.e., overhead charges, fringe benefits, G&A)

YES    NO      **Appears on Page(s)** [Type text]

Materials and/or Equipment

YES    NO      **Appears on Page(s)** [Type text]

Subcontracts/Consultants

YES    NO      **Appears on Page(s)** [Type text]

Other Direct Costs

YES    NO      **Appears on Page(s)** [Type text]

Travel

YES    NO      **Appears on Page(s)** [Type text]

If reply is "No", please explain:

4. Have you provided documentation for proposed costs related to travel, to include purpose of trips, departure and arrival destinations and sample airfare?

YES                       NO                      **Appears on Page(s)** [Type text]

If reply is "No", please explain:

5. Does your cost proposal include a complete itemized list of all material and equipment items to be purchased (a priced bill-of-materials (BOM))?

YES                       NO                      **Appears on Page(s)** [Type text]

If reply is "No", please explain:

6. Does your cost proposal include vendor quotes or written engineering estimates (basis of estimate) for all material and equipment with a unit price exceeding \$5000?

YES                       NO                      **Appears on Page(s)** [Type text]

If reply is "No", please explain:

7. Does your cost proposal include a clear justification for the cost of labor (written labor basis-of-estimate (BOE)) providing rationale for the labor categories and hours proposed for each task?

YES                       NO                      **Appears on Page(s)** [Type text]

If reply is "No", please explain:

8. Do you have subcontractors/consultants? If YES, continue to question 9. If NO, skip to question 13.

**YES**                       **NO**                      **Appears on Page(s)** [Type text]

9. Does your cost proposal include copies of all subcontractor/consultant technical (to include Statement of Work) and cost proposals?

**YES**                       **NO**                      **Appears on Page(s)** [Type text]

If reply is "No", please explain:

10. Do all subcontract proposals include the required summary buildup, detailed cost buildup, and supporting documentation (SOW, Bill-of-Materials, Basis-of-Estimate, Vendor Quotes, etc.)?

**YES**                       **NO**                      **Appears on Page(s)** [Type text]

If reply is "No", please explain:

11. Does your cost proposal include copies of consultant agreements, if available?

12. If requesting a FAR-based contract, does your cost proposal include a tech/cost analysis for all proposed subcontractors?

**YES**                       **NO**                      **Appears on Page(s)** [Type text]

If reply is "No", please explain:

13. Have all team members (prime and subcontractors) who are considered a Federally Funded Research & Development Center (FFRDC), included documentation that clearly demonstrates work is not otherwise available from the private sector AND provided a letter on letterhead from the sponsoring organization citing the specific authority establishing their eligibility to propose to government solicitations and compete with industry, and compliance with the associated FFRDC sponsor agreement and terms and conditions?

**YES**                       **NO**                      **Appears on Page(s)** [Type text]

If reply is "No", please explain:

14. Does your proposal include a response regarding Organizational Conflicts of Interest?

**YES**                       **NO**                      **Appears on Page(s)** [Type text]

If reply is "No", please explain:

15. Does your proposal include a completed Data Rights Assertions table/certification?

**YES**                       **NO**                      **Appears on Page(s)** [Type text]

If reply is “No”, please explain:

#### 4. Submission Checklist

The following items apply prior to proposal submission.

Item	Section	Applicability	Comment
Conflict of Interest	III A 1	Organizations and individuals with potential conflicts	Email DARPA-BAA-10-69@darpa.mil
Obtain DUNS number	Volume 2 - Cost Proposal	Required for cost proposal cover page	<a href="http://www.dnb.com/US/duns_update/">http://www.dnb.com/US/duns_update/</a>
Obtain Taxpayer ID Number (TIN)	Volume 2 - Cost Proposal	Required for proposal cover page	<a href="http://www.irs.gov/businesses/small/international/article/0,,id=96696,00.html">http://www.irs.gov/businesses/small/international/article/0,,id=96696,00.html</a>
Obtain CAGE code	Volume 2 - Cost Proposal	Required for proposal cover page	<a href="http://www.dlis.dla.mil/CAGESearch/cage_faq.asp">http://www.dlis.dla.mil/CAGESearch/cage_faq.asp</a>
Enroll in E-Verify	VI B 11	Applies to FAR-based contracts, not grants, cooperative agreements, or other transactions	<a href="http://www.uscis.gov/portal/site/uscis">http://www.uscis.gov/portal/site/uscis</a>
Enroll in Contractor Database	VI B 7	Required of all proposers	<a href="https://www.bpn.gov/ccr/default.aspx">https://www.bpn.gov/ccr/default.aspx</a>

The following items must be included in zip file comprising the submission package of all proposers:

Item	Section	Comment
Proposal Volume I		See page 13
Proposal Volume II		See page 18
Cost proposal spreadsheet		See page 19
Representations and Certifications	VI B 8	<a href="http://www.darpa.mil/cmo/sectionK.html">http://www.darpa.mil/cmo/sectionK.html</a>
Intellectual Property	VIII 1	

The following items are required as part of the proposal submission package under certain conditions, as specified:

<b>Item</b>	<b>Section</b>	<b>Applicability</b>
FFRDC compliance letter	III A	Applies only to Federally Funded Research and Development Centers
Government entity compliance letter	III A	Required for Government entities only
IT Equipment Purchase Letter		Required for proposers who intend to purchase IT equipment with contract funds. See page 20
Human Use	VI B 2	Required for all research involving human subjects, biological specimens, and human data
Animal Use	VI B 3	Required for all research involving experimentation or testing involving animals
Subcontracting Plan	VI B 6	Required of all proposers intending to employ subcontractors
Patent ownership	VIII 1 c	Proposers asserting rights to patents to be used in the proposed project
SETA Contractor affirmation	V A 1	All proposers, both primes and subcontractors, holding SETA contracts with DARPA

The following items apply after award:

<b>Item</b>	<b>Section</b>	<b>Applicability</b>	<b>Comment</b>
Cost and technical reports	VI C	Required of all awardees as specified in the award document	
Wide Area Work Flow	VI B 9	Required of all awardees	<a href="http://wawf.eb.mil">http://wawf.eb.mil</a>
Patent reporting	VI C 2	Required for all patent applicants	<a href="http://s-edison.info.nih.gov/iEdison/">http://s-edison.info.nih.gov/iEdison/</a>