



Proposer Information Package (PIP)

Special Projects Office

BAA 06-02

November 14, 2005

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## **A PROGRAM DESCRIPTION AND GOALS**

DARPA's Special Projects Office (DARPA/SPO) is soliciting proposals for advanced research and development in the following areas: Counter Underground Facilities, Next Generation Space Technologies and Systems, Global Tailored Tactical Surveillance, Defense Against Chemical Biological, and Radiological Weapons, Assured Urban Operations, and GPS-Free Guidance and Navigation. Names and emails of Program Managers are listed below each section. Program Managers should be contacted directly with questions regarding the scope of each Area of Interest and submissions therein.

### **A.1 AREAS OF INTEREST**

#### **A.1.1 COUNTER UNDERGROUND FACILITIES**

Innovative concepts are sought for research efforts to enable U.S. dominance over the proliferating threat posed by our adversary's use of underground structures. Emphasis is on the development and demonstration of technologies to find unknown facilities on both strategic and tactical timescales; to identify facility function, to monitor pace of activity, to determine structural layout or locations of specific vulnerabilities; and to enhance post-attack bomb damage assessment (BDA). Prospective innovations include: exploitation of novel observables or substantially improved methods of detecting/analyzing observables, including active source methods; improved deployable ground and airborne sensors; improved communications across rugged terrain among assets, and for exfiltration uplinks; new methods for sensor and system modeling; exploitation algorithms and signal processing; and new methods for characterizing activities associated with tunnels and caves. These include small and unimproved sites, including those in urban areas. Both close-in and standoff sensor concepts are of interest.

Dr. Gregory Duckworth

E-mail: [gregory.duckworth@darpa.mil](mailto:gregory.duckworth@darpa.mil)

Dr. Monte D. Turner, USAF

E-mail: [monte.turner@darpa.mil](mailto:monte.turner@darpa.mil)

#### **A.1.2 NEXT GENERATION SPACE TECHNOLOGIES & SYSTEMS**

Innovative concepts for space systems, sensors, structures, components and materials are sought to support next-generation tactical space operations including rapid access, space situational awareness, space control, robust anti-jam SATCOM, and persistent tactical grade sensing approaches including extremely large space apertures and structures. Of particular interest are large distributed array remote sensing systems, both space based and ground based, for space object location and identification and concepts that support affordable access –and thus proliferation – of high-performance space control sensors and systems; novel access and propulsion concepts; innovative sensor systems concepts in support of the spectrum of space control applications including extremely large, yet lightweight and stowable aperture technologies; lightweight and low-mass active/passive membranes; large space structures that have extremely small payload volumes (e.g., rigidized inflatables, isogrid composites, etc.); active damping and smart materials for precision control of space structures; self assembly and/or manufacture; novel space-based sensor modalities and systems; high performance micro- and picosat systems; and next generation power generation systems including electrodynamic and momentum tethers, and advanced solar systems.

Dr. Michael Zatman (Novel sensors and aperture concepts, SATCOM)

Email: [michael.zatman@darpa.mil](mailto:michael.zatman@darpa.mil)

Mr. Rob Hauge (novel sensors and micro/picosats)

E-mail: [robert.hauge@darpa.mil](mailto:robert.hauge@darpa.mil)

Dr. Michael Obal (novel propulsion & power, access, tethers, micro/picosats, space control)

Email: [michael.obal@darpa.mil](mailto:michael.obal@darpa.mil)

Dr. Monte D. Turner (novel sensors, and space control)

Email: [monte.turner@darpa.mil](mailto:monte.turner@darpa.mil)

Mr. Tim Clark (novel structures, sensors, and space control)

Email: [tim.clark@darpa.mil](mailto:tim.clark@darpa.mil)

Mr. Brian Horais (novel structures, sensors, and space control)

Email: [brian.horais@darpa.mil](mailto:brian.horais@darpa.mil)

### **A.1.3 GLOBAL TAILORED TACTICAL SURVEILLANCE**

As recent conflicts illustrate, each phase of conflict requires different types of surveillance systems ranging from ubiquitous and persistent tactical-grade global Intelligence Surveillance and Reconnaissance (ISR) in support of Indications and Warnings (I&W) and Intelligence Preparation of the Battlefield (IPB), to close-in systems for both IPB and combat phases including Battle Damage Assessment (BDA) especially of difficult targets such as underground facilities and urban combatants (including building interiors). Innovative sensor system and technology concepts are sought across all phases of conflict. Specific technologies of interest include: highly adaptive remote sensing systems that employ externally and internally cued localized onboard processing (i.e. foveated vision) to optimize bandwidth utilization for high frame rate and time critical persistent surveillance applications; very large, low cost, lightweight, and low power density, active phased arrays applicable to space-, airship-, and ground-based radar systems; highly integrated platform-sensor systems with ultra long endurance and minimal logistics tails; stratospheric airship platforms and support systems for large phased array radars and communication systems; efficient and lightweight solar cell and power storage technologies; station-keeping concepts and technologies; lightweight materials and construction methods including inflatable structures; ultra-wideband (> 10:1) phased arrays and shared aperture architecture concepts; innovative calibration and alignment methods; low-loss packaged RF phase shifters, switches and T/R modules; lightweight beamformer, control, and power distribution concepts; highly integrated, compact sensor systems amenable to low logistics support deployments; close-in deployment schemes including unattended ground and air sensors; through-wall sensing and building interior mapping; self-geolocation and LPI comms; advanced intelligent signal processing methods that maximize sensor performance and robustness in hostile operating environments; real-time exploitation of environmental/situational knowledge bases; novel, knowledge-aided, adaptive waveform methods leveraging the emergence of software programmability especially those amenable to real-time embedded computing architectures; model-based reasoning for deconvolving radar signals; radar operation in high multipath or dispersive environments.

Dr. Michael Zatman (space surveillance, global comms, advanced signal processing)

E-mail: [michael.zatman@darpa.mil](mailto:michael.zatman@darpa.mil)

Dr. Edward Baranoski (building interior sensing, advanced signal processing)  
E-mail: [ed.baranoski@darpa.mil](mailto:ed.baranoski@darpa.mil)

Mr. Timothy Clark (persistent tactical surveillance)  
E-mail: [tim.clark@darpa.mil](mailto:tim.clark@darpa.mil)

Dr. Gregory Duckworth (close-in surveillance)  
E-mail: [gregory.duckworth@darpa.mil](mailto:gregory.duckworth@darpa.mil)

#### **A.1.4 DEFENSE AGAINST CHEMICAL, BIOLOGICAL, RADIOLOGICAL WEAPONS**

Innovative concepts are sought in systems and component technologies to address a variety of chem/bio/rad/nuclear threats, including threats to buildings and urban environments. Technologies of interest include those appropriate to the protection from, detection of, neutralization of, or decontamination of such agents, either during a release (aerosolized agent), after a release (deposited on surfaces) or prior to release (in containers). Systems of particular interest are those that support real-time, dynamic response of buildings; wide-area urban surveillance for pre-symptomatic detection of releases; protection of areas/spaces with high concentrations of people; high-throughput techniques for quantifying residual contamination levels in the wake of a Bio-Warfare Agent (BWA) attack (e.g., on building surfaces, documents, etc.); studies and modeling of protective systems, protective components, or the transport of agents; Advanced lightweight personal protective systems that do not increase the soldier's heat burden; and data collections to support component development, modeling, and system validation.

Dr. Wayne Bryden (CBD sensors, building protection)  
E-mail: [wayne.bryden@darpa.mil](mailto:wayne.bryden@darpa.mil)

Mr. Thomas P. McCreery (CBD sensors, radiological decontamination)  
E-mail: [tom.mccreery@darpa.mil](mailto:tom.mccreery@darpa.mil)

#### **A.1.5 ASSURED URBAN OPERATIONS**

New technologies in support of assured urban operations are sought. Particular areas of interest include networked and highly distributed emplaced urban sensor systems that have the potential to provide highly responsive, adaptive and even predictive awareness for urban ops; extremely rapid barrier deployment and removal (both for personnel and vehicle applications, sealing off buildings); non-lethal weapons; persistent and ubiquitous intelligence, surveillance and reconnaissance (including building penetration techniques and standoff detection of explosives); asymmetric weapons countermeasures (such as methods to counter Improvised Explosive Devices or IEDs); detection of weapons caches; and methods for infrastructure protection and rapid replenishment; signature reduction technologies for urban combat; reduction of visible, IR, olfactory, and auditory signatures; novel sensor architectures and innovative algorithms for operating in dense urban clutter. New technologies in support of combat casualty care are sought. Particular areas of interest include battlefield portable high resolution imaging tools; automated tools that allow for the delivery of first aid such as IV's by untrained personnel or by the soldier himself; and advanced methods for treating injuries on the battlefield.

Dr. Edward Baranoski (through-wall sensing, building interior mapping)  
E-mail: [ed.baranoski@darpa.mil](mailto:ed.baranoski@darpa.mil)

Mr. Thomas P. McCreery (rapid barrier deployment/removal, signature reduction, combat casualty care)  
E-mail: [tom.mccreery@darpa.mil](mailto:tom.mccreery@darpa.mil)

#### **A.1.6 GPS FREE GUIDANCE AND NAVIGATION**

Innovative concepts are sought for research efforts that lead to significant military capability improvement in the area of guidance and navigation. Of particular interest are technologies that allow precision navigation in GPS denied scenarios including jamming environments, building interiors, underground facilities, etc. Methods are sought that employ both natural and/or manmade signals of opportunity as well as novel next generation extremely compact INS technologies.

Dr. Gregory Duckworth (close-in surveillance)  
E-mail: [gregory.duckworth@darpa.mil](mailto:gregory.duckworth@darpa.mil)

### **A.2 PROGRAM SCOPE AND FUNDING**

The Government anticipates multiple comprehensive awards in Calendar Year (CY) 2005 and CY 2006. The Government desires to award the optimum combination of proposals which offers the best overall value to the Government. DARPA reserves the right to fund some, all, or none of the proposals received in response to BAA 06-02 and to award without discussions. Further, DARPA may choose to select for negotiation all of a given proposal, or selected portions thereof. For Government programmatic flexibility, all proposers should segment their cost proposals as follows: an initial 12-month (or less) effort followed by one or more optional efforts. The initial efforts should focus on those high-risk items that are key to demonstrating the feasibility of the proposed technology, and evaluating its utility to a warfighter. The Government may incrementally fund any awards under this BAA.

### **A.3 PERIOD OF PERFORMANCE**

Any effort proposed under this BAA shall not exceed five (5) years. This includes base effort and all potential options. It is envisioned that any base effort proposed will not exceed 12 months, and each successive phase or option proposed will not exceed 12 months. Offerors should not propose total efforts exceeding 60 months. Any proposal doing so may be disregarded.

## **B PROPOSAL MANAGEMENT**

### **B.1 GENERAL INFORMATION**

#### **B.1.1 Definition of BAA**

The information provided in this Proposer Information Pamphlet (PIP), in addition to that provided in the FedBizOps BAA 06-02, constitutes a Broad Agency Announcement as contemplated in the FAR 6.102 (d)(2)(i). The FedBizOps announcement and this document are available online at <http://www.darpa.mil/spo/solicitations.htm> .

#### **B.1.2 BAA Correspondence**

DARPA will use electronic mail for all technical and administrative correspondence regarding this BAA. Administrative, technical or contractual questions should be sent via e-mail to BAA06-02@darpa.mil. If e-mail is not available, please fax questions to (703) 516-7360. (Attention: BAA 06-02). All requests must include the name, address, and phone number of a point of contact. Technical and contractual questions should include the originator's full name, email, and postal address in the text.

#### **B.1.3 Frequently Asked Questions**

All questions and answers of relevance to the community will be posted to a Frequently Asked Questions (FAQ) accessible at: <http://www.darpa.mil/spo/solicitations.htm> .

#### **B.1.4 Multiple Abstracts/Proposals**

Proposers responding to multiple areas of this BAA should submit one complete abstract and/or proposal per topic. Each proposed effort should stand alone, and not be predicated on the award of any other effort. No technical contributor can be proposed in more than one response.

#### **B.1.5 Contract Types**

Awards are anticipated to be in the form of Procurement Contracts or Other Transactions. Grants or Cooperative Agreements are also possible.

### **B.2 PERIOD OF SOLICITATION**

This BAA will remain open from 15 November 2005 through 14 November 2006. Throughout this period, DARPA will receive and review abstracts and/or proposals on a continuous basis and proposers are encouraged to submit innovative abstracts and/or proposals at any time during this period.

### **B.3 SUBMISSION GUIDELINES**

Proposal abstracts are highly recommended in advance of full proposals. In order to minimize unnecessary effort in proposal preparation and review, proposers are strongly encouraged to submit abstracts in advance of full proposals. DARPA will employ an electronic upload process for abstract/proposal submissions for BAA 06-02. Performers may find guidance for abstract/proposal submission at: <http://www.darpa.mil/spo/solicitations.htm> .

Organizations planning to submit abstracts/proposals must register at <http://www.tfims.darpa.mil/baa>. Only the lead or prime organization should register. One registration per abstract/proposal should be submitted. This means that an organization wishing



to submit to multiple technical topic areas should complete a single registration for each proposal. By registering, the Proposer has made no commitment to submit.

## **B.4 SECURITY**

The Government anticipates that proposals submitted under this BAA will be unclassified. In the event that a proposer chooses to submit a classified proposal or submit any documentation that may be classified, the submitter must first receive permission of the Original Classification Authority (OCA) to use their information in replying to this BAA and submit the applicable OCA classification guide(s) to ensure that the proposal is protected appropriately. Classified information at the Confidential and Secret level may only be mailed, double wrapped, with the inner envelope addressed to:

Defense Advanced Research Projects Agency (DARPA)  
ATTN: BAA06-02, DARPA/SPO  
3701 North Fairfax Drive  
Arlington, VA 22203-1714

And the outer envelope addressed to:

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

Information at other levels of classification (special access, sensitive compartmented) can be accepted. Contact any SPO Program Manager for guidance and instructions for submitting information of this nature.

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.

## **B.5 ORGANIZATIONAL CONFLICTS OF INTEREST**

Certain post-employment restrictions on former federal officers and employees may exist, including special Government employees (Section 207 of Title 18, United States Code). If a prospective proposer believes that such a conflict of interest exists, the situation should be raised to the DARPA Contracting Officer specified in the BAA before time and effort are expended in preparing a proposal. Additionally, proposers and proposed sub-contractors must affirm whether they are providing scientific, engineering, and technical assistance (SETA) or similar support to any DARPA technical offices(s) through an active contract or subcontract. All affirmations must state which office(s) the proposer supports and identify the prime contract number(s). Affirmations shall be furnished at the time of proposal submission (F.1.3). 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.

## **B.6 HUMAN USE**

Proposals selected for funding are required to comply with provisions of the Common Rule (32 CFR 219) on the protection of human subjects in research (<http://www.dtic.mil/biosys/downloads/32cfr219.pdf>) and the Department of Defense Directive 3216.2 (<http://www.dtic.mil/whs/directives/corres/html2/d32162x.htm>). All proposals that involve the use of human subjects are required to include documentation of their ability to follow Federal guidelines for the protection of human subjects. This includes, but is not limited to, protocol



approval mechanisms, approved Institutional Review Boards (IRBs), and Federal Wide Assurances. These requirements are based on expected human use issues sometime during the entire length of the proposed effort.

For proposals involving “greater than minimal risk” to human subjects within the first year of the project, performers must provide evidence of protocol submission to a federally approved IRB *at the time of final proposal submission to DARPA*. For proposals that are forecasted to involve “greater than minimal risk” after the first year, a discussion on how and when the proposer will comply with submission to a federally approved IRB needs to be provided in the submission. More information on applicable federal regulations can be found at the Dept. of Health and Human Services – Office of Human Research Protections website, (<http://www.dhhs.gov/ohrp/>).

## **C ABSTRACT/PROPOSAL EVALUATION**

### **C.1 GENERAL CONSIDERATIONS**

Proposers are encouraged to submit concise, but descriptive, abstracts and proposals. The Government reserves the right to select for award all, some, or none of each of the proposals received in response to BAA 06-02 and to award without discussions. All responsible sources capable of satisfying the Government's needs may submit a proposal. Small Disadvantaged Businesses and Historically Black Colleges and Universities (HBCUs)/Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals; however, no portion of this BAA will be set aside for HBCU and MI participation due to the impracticality of reserving discrete or severable areas of technology for exclusive competition among these entities.

It is the policy of DARPA to treat all abstracts/proposals as competitive information and to disclose the contents only for the purposes of evaluation. The Government may use selected support contractor personnel to assist in administrative functions only. For this solicitation, non-Government advisors from various SETA contractors who have signed appropriate non-disclosure and conflict of interest statements, may assist in the proposal administration when their assistance is required. However, they will not participate in the final source selection process.

Proposers are advised that only contracting officers are legally authorized to contractually bind or otherwise commit the Government.

### **C.2 CRITERIA FOR AWARDS**

Each proposal will be evaluated on the merit and relevance of the specific proposal as it relates to the program rather than against other proposals for research in the same general area, since no common work statement exists. In order of importance, the proposal Evaluation Criteria includes:

- (a) Technical Approach;
- (b) Potential Contribution and Relevance to the DARPA Mission
- (c) Relevant Experience
- (d) Approach/Ability to Technology Transition
- (e) Cost Realism.

In accordance with FAR 35.016(e) the primary basis for selecting proposals for award shall be technical, importance to agency programs, and funds availability. Cost realism and reasonableness shall also be considered to the extent appropriate as described herein. Proposals may be evaluated as they are received, or they may be collected and periodically reviewed. The following are descriptions of the above listed criteria:

#### **C.2.1 Technical Approach**

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 product that achieves the goal can be expected as a result of award. Performance metrics that clearly lay out measurable increases in system performance throughout the program must be defined. The proposal identifies major technical risks and planned mitigation efforts are clearly defined and feasible.

## **C.2.2 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 concepts exploiting advanced technologies that provide high payoff capabilities. To that end, SPO will select for higher risk research that bridges the gap between fundamental discoveries and their military use. SPO is not interested in incremental technical advances.

Proposals should be as quantitative as possible in their assessments of military payoff of proposed technical concepts. The proposed system metrics should both intuitive and straightforward to evaluate. Some proposed programs may need to go through a preliminary (or seedling) phase. For those efforts it is usually necessary to re-assess or project the payoff to military effectiveness based on data from early technical experiments. The methodology for performing this assessment needs to be presented in sufficient detail for DARPA to evaluate the credibility of the results.

## **C.2.3 Relevant 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 summarized including identification of other Government sponsors.

## **C.2.4 Approach/Ability to Technology Transition**

The capability to transition the technology to the research, industrial, and operational military communities in such a way as to enhance U.S. defense.

## **C.2.5 Cost Realism**

The objective of this criterion is to establish that the proposed costs are reasonable and realistic for the technical and management approach offered, as well as to determine the proposer's practical understanding of the effort. This will be principally measured by cost per labor-hour and number of labor-hours proposed. The evaluation criterion recognize 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. Cost reduction approaches that will be received favorably include innovative management concepts that maximize direct funding for technology and limit diversion of funds into overhead.

## D ABSTRACT CONTENT

### D.1 GENERAL INFORMATION

In order to minimize unnecessary effort in proposal preparation and review, proposers are strongly encouraged to submit abstracts in advance of full proposals.

SECTION	PAGE LIMIT	TOPICS
Cover page	1	Offeror identification
Volume (I) Technical Summary	6	Summary of Technical Volume
Volume (II) Cost Summary	1	Summary of Cost Volume

*Table 1. Summary of required abstract contents.*

Abstracts shall describe the problem(s) that will be solved, any existing evidence that the proposed solution(s) will be successful, and the relative impact of such a solution(s), should it or they prove successful. Abstracts must address the military context for the offered system, subsystem, or technology and must identify the transformative impact of a successful technological development upon appropriate military concepts of operation. Abstracts shall contain the following parts: Volume I Cover Sheet of the proposer's planned proposal, a Volume I technical summary, 6 pages maximum, of the proposer's planned proposal; and Volume II cost summary, a one page summary of the proposer's planned proposal.

Abstracts will be submitted via <http://www.tfims.darpa.mil/baa> . SPO will attempt to respond to each abstract within thirty (30) days after its receipt with a recommendation to proposers either encouraging or discouraging submission of full proposals. Regardless of the SPO recommendation based on its review of the abstract, a proposer may submit a proposal and that proposal will be reviewed and evaluated.

### D.2 ABSTRACT FORMAT

All pages shall be printed on 8-1/2 by 11 inch paper; type not smaller than 12 point. The page limitations for abstracts include all figures, tables, and charts. No formal transmittal letter is required. Abstracts should contain neither proprietary nor classified information or data. All submissions must be in English.

## **E PROPOSAL CONTENT**

### **E.1 GENERAL INFORMATION**

Technical and cost proposals must be submitted as separate volumes (Volume I Technical, Volume II Cost), and must be valid for 180 days.

All eligible sources may submit a proposal that shall be considered against the criteria set forth in Section C. Proposals with fewer than the maximum number of pages will not be penalized. Proposals exceeding the page limit will not be reviewed beyond the maximum page limit. Non-cost information incorporated into the unrestricted size Volume II cost proposal will not be considered. Proposers are encouraged to submit concise, but descriptive, proposals.

Proposal questions should be handled according to the process described in Section B. Proposers are advised that only contracting officers are legally authorized to contractually bind or otherwise commit the Government.

Proposers should apply the restrictive notice prescribed in the provision at FAR 52.215-12, Restriction on Disclosure and Use of Data, to trade secrets or privileged commercial and financial information contained in their proposals.

### **E.2 PROPOSAL FORMAT**

All pages shall be printed on 8-1/2 by 11 inch paper with type not smaller than 12 point. The maximum total length of Volume I (technical proposal), Sections I, II and III is forty (40) pages including all figures, tables, and charts. There is no page limitation applicable to Volume II (Cost Proposal). All submissions must be in English. A proposer may submit more than one proposal. Information or data contained in a proposal, deemed proprietary by the proposer, should be clearly marked.

## F TECHNICAL PROPOSAL

There is a (40) page limit for the technical proposal. It should consist of four sections.

SECTION	PAGE LIMIT	TOPICS
Volume I		<b>Section I:</b> Cover Sheet (see F.1)
		<b>Section II:</b> Summary of Proposal (See F.2)
		<b>Section III:</b> Detailed Proposal Information (see F.3) <ul style="list-style-type: none"> <li>▪ A description of the intended results</li> <li>▪ A detailed description of the technical issues</li> <li>▪ Any innovative claims</li> <li>▪ A Statement of Work (SOW)</li> <li>▪ A schedule of the estimated cost</li> <li>▪ A description of the proposed approach to management</li> <li>▪ A description of the experience and capabilities</li> <li>▪ A list of the deliverables</li> <li>▪ A description of plans and capabilities</li> </ul>
		<b>Section IV:</b> <ul style="list-style-type: none"> <li>▪ Conflict of Interest (COI)</li> <li>▪ Bibliography/Research Notes</li> </ul>
	40	<b>Combined page limit for Sections I, II and III</b>

*Table 2. Summary of required technical proposal contents.*

### F.1 SECTION I – COVER SHEET

This section shall provide the following information:

- Name and address of Proposer (include zip code)
- Title of Proposal
- Name, title, and telephone number of Proposer’s point of contact
- Award instrument requested: cost-plus-fixed-fee (CPFF), cost-contract--no fee, cost sharing contract--no fee, or other type of procurement contract (specify), grant, agreement, or other award instrument
- Place(s) and period(s) of performance
- Name, mailing address, telephone number and Point of Contact of the Proposers cognizant government administration office (i.e., Office of Naval Research (ONR) - if requesting a grant, or Defense Contract Management Agency (DCMA) - if requesting other than a grant) (if known)

## F.2 SECTION II – SUMMARY OF PROPOSAL

This section shall provide a summary of Section III (Table 2).

## F.3 SECTION III – DETAILED PROPOSAL INFORMATION

This section shall provide a detailed discussion of the proposed work to enable an in-depth review of all technical and management issues. This section shall address the risks, approach, and payoffs of the proposed research. Efforts under the second phase of this program must be identified as options. In the manner of the proposer's choosing, this section should provide:

2. Description of the intended results of the proposed work for each phase or option of the effort and the expected benefits compared to the current state-of-the-art and alternative approaches.
3. Detailed description of the technical issues, the proposed approach, its basis, and a comparison with other ongoing research showing both the advantages and disadvantages.
4. Innovative claims for the proposed research including all proprietary claims to results, prototypes, intellectual property, or systems supporting and/or necessary for the use of the research, results, and/or prototype. If there are no proprietary claims, this should be stated.
5. Statement of Work (SOW) for each phase or option that describes the scope of the effort, the specific tasks to be performed, the milestones, and the schedule for the effort.
6. Schedule of the estimated cost for each major task in each phase or option of the effort and a schedule of the proposed company cost share (See Table 3 and Table 4).

COST ELEMENT	GFY 06	GFY 07	GFY 08	GFY 09	GFY 10
Technical labor <sup>1</sup>	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx
Administrative labor <sup>2</sup>	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx
Other direct charges	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx
Indirect charges	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx
Fee	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx
Total	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx

*Table 3. Summary of funding request by cost element.*

<sup>1</sup> Technical labor includes designers, software engineers, analysts, and other staff with degrees in science or engineering who contribute directly to the technical objectives of the program.

<sup>2</sup> Administrative labor includes contractual, financial, secretarial, and other staff with non-technical degrees who support the technical staff.

ORGANIZATION	GFY 06	GFY 07	GFY 08	GFY 09	GFY 10
Prime	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx
Subcontractor A	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx
Subcontractor B	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx
Subcontractor C	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx
Total	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx	\$x,xxx,xxx

*Table 4. Summary of funding request by performing organization.*

7. Description of the proposed approach to management of the project including an organization chart showing reporting relationships, statements of the responsibilities of the team members, and the teaming strategy.
8. Description of the experience and capabilities of the proposer, each team member, and key personnel; a description of their capability to carry out further development and production; and a description of the facilities and equipment that would be used for the proposed effort.
9. List of the deliverables associated with the proposed research.
10. Description of plans and capabilities to accomplish technology transition.

#### **F.4 SECTION IV – CONFLICT OF INTEREST**

This section should contain all affirmations relative to DARPA's Organizational Conflict of Interest requirements.

In addition, this section may provide a bibliography of relevant technical papers and research notes (published and unpublished) that document the technical ideas upon which the proposal is based. This section may also include such papers, however, DARPA is under no obligation to review and evaluate the papers.

## **G COST PROPOSAL**

There is no page limit for the cost proposal. It should contain a cover sheet and three sections.

### **G.1 COVER SHEET**

- Name and address of Proposer (include zip code);
- Name, title, and telephone number of Proposer's point of contact;
- Award instrument requested: cost-plus-fixed-fee (CPFF), cost-contract--no fee, cost sharing contract--no fee, or other type of procurement contract (specify), grant, agreement, or other award instrument;
- Place(s) and period(s) of performance;
- Funds requested from DARPA for the Base Effort, each option and the total proposed cost; and the amount of cost share (if any);
- Name, mailing address, telephone number and Point of Contact of the Proposers cognizant government administration office (i.e., Office of Naval Research (ONR) - if requesting a grant, or Defense Contract Management Agency (DCMA) - if requesting other than a grant) (if known);
- Name, mailing address, telephone number, and Point of Contact of the Proposer's cognizant government audit agency (i.e. Department of Health and Human Services (DHHS) - if requesting a grant, or Defense Contract Audit Agency (DCAA) - if requesting other than a grant) (if known);
- Any Forward Pricing Rate Agreement, other such Approved Rate Information, or such other documentation that may assist in expediting negotiations (if available);
- Contractor and Government Entity (CAGE) Code,
- Dun and Bradstreet (DUN) Number;
- North American Industrial Classification System (NAICS) Number [NOTE: This was formerly the Standard Industrial Classification (SIC) Number]; and,
- Taxpayer Identification Number (TIN).
- All subcontractor proposal backup documentation include the items listed above, as is applicable and available).

### **G.2 SECTION I – DETAILED COST BREAKDOWN**

The detailed cost breakdown is to include:

- Total program cost broken down by months within a government fiscal year (GFY) [Note: Government Fiscal Year runs from October 1<sup>st</sup> to September 30<sup>th</sup>] and Base and Options; further broken down by major cost items (direct labor by category, subcontracts, materials, travel, other direct costs, overhead charges, etc.). See Table 5 below for an example format;
- Costs of major program tasks by year and month; (See example)
- An itemization of major options (labor by category, travel, materials and other direct costs) and equipment purchases by year and month;

- An itemization of major subcontracts (labor by category, travel, materials and other direct costs) and equipment purchases;
- A summary of projected funding requirements by month (see Table 6); and
- The source, nature, and amount of any industry cost sharing, if applicable. Where the effort consists of multiple phases that could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each.

### G.3 SECTION II – SUPPORTING COST AND PRICING INFORMATION

Provide supporting information in sufficient detail to substantiate the cost estimates above. Include a description of the method used to estimate costs and supporting documentation. Provide the basis of estimate for all proposed labor rates, indirect costs, overhead costs, other direct costs and materials, as applicable.

BASE	GFY xx													GFY yy												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	TOTAL	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	TOTAL
Direct Labor - Dollars																										
Direct Labor - Hours																										
Travel																										
Equipment																										
Subcontractors																										
Other ODCs																										
Overhead																										
G&A																										
Fee/Profit																										
Total																										

Table 5. Example Detailed Cost Format

BASE	GFY 04													GFY 05												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	TOTAL	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	TOTAL
OPTION 1																										
OPTION 2																										
Total																										

Table 6. Example Cost Summary Format

### G.4 SECTION III – INTELLECTUAL PROPERTY

#### G.4.1 Noncommercial Items: (Technical Data and Computer Software)

Proposers responding to this BAA 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 “government purposes rights” for a period of five (5) years from the date of award, to all noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, unless otherwise agreed to by the parties. Additionally it is understood that such rights will convert automatically to “unlimited rights” after such five (5) year period, notwithstanding any period of performance extensions that may result after the award instrument is executed, unless otherwise agreed to by the parties. The Government may use the list during the source

selection evaluation 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.”

A sample list for complying with this request follows:

NONCOMMERCIAL			
Technical Data Computer Software to be Furnished with Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

**G.4.2 Commercial Items: (Technical Data and Computer Software)**

Proposers responding to this BAA shall identify all commercial technical data, and commercial computer software that may be embedded in 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 source selection evaluation 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.”

A sample list for complying with this request 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)

## **H 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 may be required to submit a subcontracting plan IAW FAR 19.702(a) (1) and (2) after selection for award. The plan format is outlined in FAR 19.704.