BAA 03-23

Information Awareness

Proposer Information Pamphlet

SECTION I: Background Information

SECTION II: Proposer Information

SECTION III: DARPA BAA 03-23

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BAA 03-23 PROPOSER INFORMATION PAMPHLET

The Defense Advanced Research Projects Agency (DARPA) often selects its research efforts through the Broad Agency Announcement (BAA) process. This BAA appears on the FedBizOpps website, http://www.fedbizopps.gov/. The following information is for those wishing to respond to the Broad Agency Announcement.

PROGRAM OBJECTIVES AND DESCRIPTION

DARPA's Information Awareness Office (IAO) is soliciting ideas that will imagine, develop, apply, integrate, demonstrate and transition information technologies and components for possible use in a prototype closed-loop information system to counter asymmetric threats. Program outputs will exploit information to significantly improve preemption capabilities, national security warning, and national security decision-making. The most serious asymmetric threat facing the United States is terrorism, a threat characterized by collections of people loosely organized in shadowy networks that are difficult to identify and define. IAO plans to develop technology that will allow understanding of the intent of these networks, their plans, and potentially define opportunities for disrupting or eliminating the threats. To effectively and efficiently carry this out, we must promote sharing, collaborating and reasoning to convert nebulous data to knowledge and actionable options. IAO will accomplish this by pursuing the development of technologies, components, and applications that may become integrated into a prototype system.

IAO is seeking proposals that will advance its mission to preempt and prevent terrorist acts through the development of innovative information technologies. Proposals should emphasize revolutionary concepts that extend the state of the art. Such efforts may involve high technical risks which if enabled would provide commensurate high payoffs. Offerors should initially be prepared to support the technical feasibility of their concept or idea, then be prepared to demonstrate and discuss successive phases leading toward technology development. As such, proposals should include a base effort supporting the technical feasibility of the offeror's concept or idea and pre-priced options or subsequent phases that further lead toward technology development. It is envisioned that the 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. Proposals that exceed 60 months may be disregarded. Note that exercise of any option is incumbent upon the continued success of the research and availability of funding.

This Proposer Information Pamphlet, in conjunction with the BAA 03-23, constitutes the total BAA. Updates to this BAA, including additional technical topic areas of

specific interest, and other changes as necessary, may be posted throughout the year at the FedBizOpps website: http://www.fedbizopps.gov, and World Wide Web (WWW) at URL http://www.darpa.mil/iao/solicitations.htm. In the event of any discrepancy between the information delineated at http://www.fedbizopps.gov and http://www.darpa.mil/iao/solicitations.htm, the http://www.fedbizopps.gov site takes precedence.

TECHNICAL TOPIC AREAS

Proposals should fall within the scope of the topics described herein in order to be considered acceptable. IAO's goal for this BAA is to solicit revolutionary research and development to preempt terrorist attacks. IAO has no interest in developing information collection technology. Proposals that involve the application of existing commercial products, describe solutions that do not clearly contribute to preemption, or involve collection technology are likely to be considered less favorably than those proposals that more strictly support IAO goals. The following technology topic areas are of primary interest.

- Collaborative Reasoning and Decision Support Technologies
  - Technologies to enable teams of intelligence analysts and operations and policy personnel to be dramatically more effective and efficient in detecting terrorist planning and preparation activities. Applies automation and center-edge collaboration concepts to team processes so critical information-sharing tasks can be accomplished much faster than possible today. Includes development of tools to model current states; estimate plausible futures; support formal risk analysis; automated course-of-action planning; structured argumentation and evidential reasoning; story telling; change detection; and truth maintenance.

- Language Translation Technologies
  - Technologies to enable English-speaking operators and analysts to exploit vast amounts of foreign speech and text than can be exploited by the human alone. Of interest are new capabilities for detection (finding or discovering needed information), extraction (pulling out key information), summarization (substantially shortening what a user must read), and translation (converting foreign language material to English).
  - Development of automatic speech-to-text transcription technologies for English, Chinese, and Arabic languages with an output substantially more

accurate than currently possible. Desirable outcomes in this area include the ability to port applicable technology to new languages within one month.

- Pattern Recognition and Predictive Modeling Technologies
  - Technologies that will automatically extract evidence from vast amounts of unstructured textual data (such as intelligence messages or news reports) and lead to the discovery of additional relevant relationships and patterns of activity that correspond to unusual events, potential threats, or planned attacks. Research in this area will use only data that is legally available and obtainable by the U.S. Government or is synthetically generated.
  - Technologies to discover critical information from speech and text of many languages and automatically deliver it in actionable form to military operators and intelligence analysts. Of interest are algorithms that will discern analyst interest from past behavior (actions and reports) and issue critical alerts, reports, and pointers if the data matches an analyst's past interests.
  - Development of threat-specific tools to enable analysts and decision makers to predict terrorist attacks. Research interests span predictive methodologies and technologies that: (i) work within the complex and nonlinear characteristics of today's asymmetric adversaries; (ii) generalize from individuals to groups, from attack behavior to more subtle enabling behaviors and decisions that precede an attack; and (iii) allow analysts to test a projected adversary's actions and reactions to potential intervention strategies.
  - Technologies to dramatically increase the ability to quickly detect a clandestine biological warfare attack. This research should develop disease models to identify abnormal health detectors indicative of a biological attack. Desired outcomes in this area include the ability to analyze hypothesized events to determine indicators useful for the early detection of bioterrorist releases.

- Data Search and Privacy Protection Technologies
  - Technologies that make it easier and more transparent for users to exploit distributed databases, information repositories and sensor feeds as well as technologies that improve the ability to represent uncertainty in structured data. These technologies should enable database integration or interoperation with a fraction of today's design effort and retrieve accurate answers more quickly and with less knowledge of the internal data structure.

- Development of privacy protection technologies. Concepts of interest include immutable audit, self-reporting data, tamper-proof accounting system, anonymization and inferencing techniques, use of filtering and expunging software agents, and selective revelation concepts.

- Biometric Technologies
  - Development of automated, multimodal, biometric technologies to detect, recognize, and identify humans, alone or grouped, in disguise or not, at a distance, day or night, and in all weather conditions. These technologies will provide critical early warning support against terrorist, criminal, and other human-based threats. Other areas of interest include 3D morphable modelling approaches, the feasibility of networking and fusing multiple biometric sensors, and activity recognition monitoring concepts.

Additional technical areas and proposal instructions may be added from time to time via amendments to this BAA.

INFORMATION EVALUATION AND DETERMINATION OF ACCEPTABLE SOURCES

The BAA will remain open for one year. This BAA is primarily directed at soliciting novel ideas. There is no specific amount of funding set aside for or associated with this BAA. However, the BAA may be modified from time to time to announce specific new start program ideas that have a finite proposal period. Contracts will be awarded to those offerors whose proposals are found to be the most advantageous and offer the best value to the Government, availability of funding and other factors considered.

In order to reduce the administrative burden on proposers and the Government, and in an attempt to mitigate unnecessary costs associated with the generation of proposals that are not of interest to DARPA/IAO, described herein is the Government's process for submittal of information for evaluation. Any responsible offeror is encouraged to respond.

STEP 1: White Paper - Initial offeror submissions to the Government should be a One to Three Page White Paper ONLY. The purpose of the white paper is to give the proposer the opportunity to solicit early feedback from the Government as to whether or not the research proposed will be of interest to DARPA/IAO. It is thus in the submitter's best interest to clearly articulate the innovative concept and technology development needed with respect to demonstrable metrics. The submission of the white paper is intended to avoid unnecessary expense in proposal generation for ideas

that will not be selected within this BAA. DARPA/IAO will endeavor to respond to white papers in an expeditious and timely manner. If DARPA/IAO does not have interest in your white paper you will be notified by email. If DARPA/IAO is interested in receiving more information on your submission, you will be notified by both email and a formal letter (if a valid company address is provided) informing you of the Program Manager (PM) to whom your white paper has been assigned. Offerors should then expect to proceed to Step 2, **Full Proposal**, (see below). **Any offeror may submit a full proposal, even if its white paper does not result in a request for a full proposal. However, it is unlikely that a proposal submitted under such circumstances will be selected for award.**

White Paper Format & Submittal Information: The white paper should be clearly marked "WHITE PAPER" and the total length shall not exceed three (3) pages. All pages should be able to be printed on normal-weight 8-1/2 by 11 inch paper with type not smaller than 12 point. The page limitation for white papers includes all point of contact information, figures, tables, and charts. Do not submit additional copies of the same white paper for different technical topic areas. If a white paper applies to more than one area, simply indicate that fact. Proposers must submit their One to Three Page white paper as a paper submission or as an attachment to an email addressed to the administrative point of contact delineated in this BAA. The e-mail attachment must be capable of being readable by Microsoft Word 97 or higher. The subject line of the email should include the following: "White Paper submitted under BAA03-23 by: [INSERT NAME OF COMPANY] for [INSERT IDEA/CONCEPT PROPOSED]. Facsimile submissions will be disregarded. **Classified white papers should be submitted in accordance with the instructions provided in this PIP for classified proposals.**

Final Submission Date for White Papers: This BAA shall be open from 15 April 2003 through 14 April 2004. White papers should be submitted no later than 1600 Eastern Standard Time, 30 January 2004. Proposals must be submitted no later than 1600 Eastern Standard Time, 14 April 2004.

STEP 2: Full Proposal – Submission of a Full Proposal for evaluation. A typical proposal should express a consolidated effort in support of the ideas and/or concepts discussed in the white paper. Disjointed efforts or approaches should not be included in a single proposal. For purposes of this BAA, a "proposal" is a document that consists of both technical elements and cost. Other supporting or background materials submitted with proposals or other such extraneous materials will not be considered part of a proposal for the purpose of a proposal's evaluation. Any total effort, including options, shall not exceed five (5) years. Teaming and cost sharing

are acceptable to the extent that they are meaningful and beneficial to the Government but are not required.

Offerors may be foreign firms or may team with foreign firms as long as the firm meets criteria in this solicitation and the Government is permitted to conduct business with the firm. Offerors may also include foreign personnel as part of their proposed resources as long as these personnel qualify technically and possess the proper security clearances ultimately required.

Historically Black Colleges and Universities (HBCU) and Minority Institutions (MI) are encouraged to submit proposals, and to join others in submitting proposals; however, no portion of this BAA will be set-aside for HBCUs or MIs because of the impracticality of reserving discrete or severable areas of research and development in the technologies sought.

Classified submissions shall be in accordance with the following guidance (you must first receive the permission of the Original Classification Authority to use their information to reply to this BAA):

To Submit Collateral Data: Utilize guidance in DoD 5200.1-R, Information Security Regulation and the National Industrial Security Program Manual (NISPOM) (DoD 5220.22-M) regarding marking and transmission of classified collateral materials. All collateral data (Confidential, Secret) may be mailed* via U.S. Postal Service (USPS) Registered Mail or U.S. Postal Service Express Mail (USPS only; not DHL, UPS or FedEx) to:

Defense Advanced Research Projects Agency (DARPA
Centralized Document Registry (CDR)
Attn: DARPA IAO
Re: BAA03-23
3701 North Fairfax Drive
Arlington, VA 22203-1714

* Double-wrapped with classification markings / warning notices on the inner envelope. Addressee as above on outer envelope.

All Top Secret materials should be hand carried via an authorized, two-person courier team to the DARPA CDR.

To Submit Special Access Program (SAP) Data: Contact the DARPA Program Security Support Center (PSSC) at 703-812-1970 for the correct mailing address and

instructions. All Top Secret SAP materials should be hand carried via an authorized, two-person courier team to the DARPA PSSC.

To Submit Sensitive Compartmented Information (SCI) Data: All SCI should be transmitted through your servicing Special Security Officer (SSO) / Special Security Contact Officer (SSCO). All SCI data must be transmitted through SCI channels only (i.e., approved SCI Facility to SCI facility via secure fax). Contact the DARPA Special Security Contact Office / SCI Facility (SCIF) at 703-812-1978 for the correct SCI courier address and instructions.

Additional guidance concerning classified information may be obtained from iao_info@darpa.mil, (571) 218-4517.

To Submit 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 Offeror's responsibility to clearly define to the Government what is considered proprietary data.

Offerors 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 the policy of DARPA 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 that the formal request is received at this office within 5 days after unsuccessful notification.

Awards made under this BAA are subject to the provisions of the Federal Acquisition Regulation (FAR) Subpart 9.5, Organizational Conflicts of Interest. All offerors and proposed subcontractors must, therefore, 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 offeror supports, and identify the prime contract numbers. Affirmations should be furnished at the time of proposal submission. All facts relevant to the existence or potential existence of organizational conflicts of interest, as that term is defined at FAR 9.501, must be disclosed. The disclosure shall include a description of the action the offeror has taken, or proposes to take, to avoid, neutralize or mitigate such conflict.

The Government intends to use employees and subcontractors of SRS Technologies, Schafer Corporation and CACI to assist in administering the evaluation of the proposals

and to provide advice regarding portions of the technical content of the proposals to the Government evaluators. These personnel will have signed, and will be subject to, the terms and conditions of conflict of interest and non-disclosure agreements. By submission of its proposal, an offeror agrees that its proposal information may be disclosed to employees of SRS Technologies, Schafer and CACI for the limited purpose stated above. Only Government evaluators, however, will make technical evaluations and award determinations under this BAA.

As proposal evaluations are completed, an offeror will be notified that: 1) its proposal will be funded, or 2) its proposal will not be funded. Unless otherwise advised by the offeror at the time of submission, copies of non-funded proposals will be destroyed; however, the original of non-funded proposals will be retained and filed.

Proposals identified for funding may result in a procurement contract, grant, cooperative agreement, technology investment agreement, or other transaction for prototypes. This will depend upon the nature of the work proposed, the required degree of interaction between parties, and other factors. If warranted, portions of resulting awards may be segregated into pre-priced options.

Proposal Format & Submittal Information: All proposals must be in the following format; nonconforming proposals may be rejected without review. Proposals shall consist of one document, bound only in the upper left corner. All pages shall be printed on normal-weight 8-1/2 by 11 inch paper with type not smaller than 12 point, and each page shall be appropriately numbered. Do not add card-stock or protective covers. The page limitation for proposals includes all figures, tables, and charts. The Technical and Management Proposal, may include an attached bibliography of relevant technical papers or research notes (published and unpublished), which document the technical ideas and approach upon which the proposal is based. Copies of not more than three (3) relevant papers can be included with the submission. The bibliography and attached papers are not included in the page counts given below. The submission of other supporting materials along with the proposal is strongly discouraged and will not be considered for review. Except for the attached bibliography or as noted below, the technical proposal shall not exceed twenty (20) pages. Where appropriate, maximum page lengths for particular sections are shown in braces { } below. Otherwise, the number of pages for each section is at the discretion of the proposing organization (so long as the 20 page limit is not exceeded). Each lettered sub-section having a page limitation must start on a new page. Offerors must submit an original paper copy and one (1) electronic copy readable by Microsoft Word 97 or higher.

TECHNICAL AND MANAGEMENT PROPOSAL

Section I. Administrative

A. {1} Cover sheet to include: (1) BAA number; (2) Technical area; (3) Lead Organization Submitting proposal; (4) Type of business, selected among the following categories: "LARGE BUSINESS," "SMALL DISADVANTAGED BUSINESS," "OTHER SMALL BUSINESS," "HBCU," "MI," "OTHER EDUCATIONAL," or "OTHER NONPROFIT"; (5) Contractor's reference number (if any); (6) Other team members (if applicable) and type of business for each; (7) Proposal title; (8) 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); and (9) Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available).

B. {1} Official transmittal letter.

C. Table of Contents. The Table of Contents should be keyed to the page numbers of the proposal sections.

Note: Contents of Section I are not included in the 20 page limit.

Section II. Summary of Proposal

This section provides an overview of the proposed work as well as an introduction to the associated technical and management issues. Further elaboration will be provided in Section III. Offerors should only provide the requested information that is pertinent to their efforts. If an element does not apply, it should be omitted.

A. Innovative claims and technical goals for the proposed research. This section is the centerpiece of the proposal and should succinctly describe the uniqueness and benefits of the proposed approach relative to the current state-of-art and alternate approaches. Define the problem/challenge that this innovative claim will address and the effort's technical goals. Explain in detail how this proposal addresses this problem differently than current approaches and the significant gains due to its uniqueness.

B. Deliverables associated with the proposed research and the plans and capability to accomplish technology transition and commercialization. Include in this section 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. What is envisioned as the transition mechanism and customer (military or dual use)? Is this based on current or evolving doctrinal concepts?

C. Cost, schedule and milestones for the proposed research, including estimates of cost for each task in each year of the effort, total cost and company cost share (if applicable).

D. Technical rationale, technical approach, and constructive plan for accomplishment of technical goals in support of innovative claims and deliverable production. This section should clearly explain: What you are proposing (and how it works); why you are proposing this approach; why you believe it can be done now; and the importance or impact if successful (who will care and why). (In Section III of the full proposal, this section should be supplemented by a more thorough quantitative discussion of relevant technical information and by a more detailed plan).

E. {1} General discussion of other research in this area.

F. {2} A clearly defined organization chart for the program team which includes, as applicable: (1) the programmatic relationship of team members; (2) the unique capabilities of team members; (3) the task responsibilities of team members; (4) the teaming strategy among the team members; (5) the key personnel along with the amount of effort to be expended by each person during each year.

Section III. Detailed Proposal Information

This section provides the detailed discussion of the proposed work necessary to enable an in-depth review of the specific technical and managerial issues. Specific attention must be given to addressing both risk and payoff of the proposed work that make it desirable to DARPA.

A. Statement of Work (SOW) written in plain English, outlining the scope of the effort and citing specific tasks to be performed and specific contractor requirements.

B. Description of the results, products, transferable technology, and expected technology transfer path enhancing that of Section II.B.

C. Detailed technical rationale enhancing that of Section II.

D. Detailed technical approach enhancing and completing that of Section II.

E. Comparison with other ongoing research indicating advantages and disadvantages of the proposed effort.

F. Discussion of proposer's previous accomplishments and work in this or closely related research areas.

G. Description of the facilities that would be used for the proposed effort. If conducted with operational forces, what agreements/coordination has been made or will be required to meet this requirement.

Detail support enhancing that of Section II, including formal teaming agreements that are required to execute this program and a brief synopsis of all key personnel.

Section IV. Additional Information

A brief bibliography of relevant technical papers and research notes (published and unpublished) which document the technical ideas upon which the proposal is based. Copies of not more than three (3) relevant papers may be included in the submission.

Cost Proposal – {No page limit}

A. A cover sheet to include: (1) Name and address of offeror (*include zip code),* (2) Name, title, and telephone number of Offeror's point of contact, (3) Award instrument requested: cost-plus-fixed-fee (CPFF), cost-contract--no fee, cost sharing contract, or other type of procurement contract (*specify)*; grant; or agreement, (4) Place(s) and period(s) of performance, (5) Total proposed cost separated by basic award and option(s) (if any), (6) Name, address, and telephone number of the Offeror's cognizant Defense Contract Management Agency (DCMA) administration office *(if known)*, and (7) Name, address, and telephone number of the Offeror's cognizant Defense Contract Audit Agency (DCAA) audit office *(if known)*.

B. Detailed cost breakdown to include: (1) total program cost broken down by major cost items (direct labor, subcontracts, materials, travel, other direct costs, overhead charges, etc.) and further broken down by Government Fiscal Year (GFY), (2) major program tasks by GFY, (3) an itemization of major subcontracts (labor, travel, materials and other direct costs) and equipment purchases, (4) a

summary of projected funding requirements by month, and (5) the source, nature, and amount of any industry cost-sharing (if applicable). Where the effort consists of multiple portions that could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each.

C. Supporting cost and pricing information in sufficient detail to substantiate the summary cost estimates in B. 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. If proposed rates are approved by your cognizant DCMA, please provide a copy of the approval documentation.

D. All questions and responses must be in English and all non English inquiries and responses will be disregarded or deleted.

Final Submission Date for Proposals: This BAA shall be open from 15 April 2003 through 14 April 2004. Proposals must be received by DARPA/IAO no later than 1600, Eastern Standard Time, 14 April 2004 in order to receive consideration for funding.

EVALUATION CRITERIA

The evaluation of proposals will be accomplished through a technical review of each proposal using the following criteria, which are listed in descending order of relative importance:

- l) Overall scientific and technical merit of the proposed research approach
  - Is the proposed approach revolutionary?
  - Is the proposed approach technically sound?
  - Is the proposed approach likely to succeed?

- 2) Potential contribution to the DARPA IAO Mission
  - Relevance and contribution to the national technology base

- 3) Offeror's Capabilities and Related Experience to perform the stated work
  - Qualifications of Principal Investigators
  - Range, depth, and mix of expertise of the Offeror’s key personnel

- 4) Approach to Technology Transition and capability to transition the technology to the research, industrial, and operational military communities in such a way as to enhance U.S. defense

- 5) Cost Realism and Reasonableness

    - Is the Offeror's estimate reasonable and realistic for the technical and management approach offered?
    - Does the Offeror have a practical understanding of the effort?

The evaluation criteria recognize that undue emphasis on cost may motivate bidders to propose low-risk ideas with minimum uncertainty and to staff the effort with junior personnel in order to be in a more competitive posture. DARPA/IAO 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.

ADMINISTRATION

The applicable addresses for this BAA are:

Unclassified Information, Data Guidance and All Other Correspondence:
Fax: (703) 527-3783
DARPA/IAO, ATTN: BAA 03-23
3701 North Fairfax Drive
Arlington, VA 22203-1714
Electronic Mail: baa03-23@darpa.mil

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