

**Defense Advanced Research Projects Agency (DARPA)
Proposer Information Pamphlet (PIP)**

BAA 03-24

Innovative Space Payloads and Capabilities (INSPACE) Design

The information provided in this Proposer Information Pamphlet (PIP), is a supplement to that provided in the INSPACE Design Broad Agency Announcement (BAA) 03-24. The following information is for those wishing to respond to the BAA 03-24. In case of a conflict between this PIP and the BAA 03-24, the instructions in the BAA 03-24 take precedence.

The technical points of contact (POC) are: Dr. Gary Graham, DARPA/TTO, ggraham@darpa.mil and Dr. Joseph Guerci, DARPA/SPO, jguerci@darpa.mil
e-mail all inquiries to: BAA03-24@darpa.mil, FAX: 703/696-2204. The contractual POC is: Ms. Algeria Tate, DARPA/CMO, FAX: 703/248-8033. The POC is: Ms. Ana Santiago, SRS Technologies, (703) 284-7873, ana.santiago@wg.srs.com.

This PIP is organized as follows:

- I. Technical Overview
- II. Program Plan and Acquisition Strategy
- III. Proposal Structure/Format
- IV. Evaluation Criteria
- V. Administrative Information

Key dates:

- September 30, 2003 White Paper due to DARPA by 4:00PM Local Time
- November 17, 2003 Full Proposals for first round due to DARPA by 4:00PM Local Time
- November 24, 2003 Proposers notified of proposal receipt
- January 21, 2004 Proposers notified of selection regarding the proposals
- February 20, 2004 Contract Award

I. Technical Overview:

Space operations greatly enhance national security, yet today's space architecture has significant limitations. Traditional design approaches for satellites lead to highly complex systems assembled on the ground. These systems have high launch costs, and should the launch vehicle fail, the entire system is lost. Due to limitations on launch capability, promising architectures like large aperture sensors in geosynchronous orbit are not feasible. Furthermore, the current lack of the ability to service higher altitude spacecraft can lead to shorted lifetimes or limited performance. New space operational capabilities such as: in-space assembly of large structures, modular on-orbit spacecraft assembly, spacecraft repositioning and rescue services, and highly capable microsattellites could add to the robustness of our space assets and allow for a more flexible and responsive national security system. In an effort to provide opportunity, the Innovative Space Payloads and Capabilities (INSPACE) program was established. The long-term goal of the program is to develop payloads and subsystems that enable new missions and capabilities in space like the ones aforementioned. To get to this goal, the short-term goal is to solicit designs for revolutionary spacecraft, payloads and subsystems. *This PIP is for the design portion only.*

The goal of the INSPACE Design effort is to develop new spacecraft payloads and subsystems. Because DARPA's mission is to develop and demonstrate imaginative, innovative and often high-risk research ideas offering a significant technological impact, proposed technology must be revolutionary.

The systems proposed should be payload technology that enables totally new space capabilities – for example: lightweight and adaptive optics and deployable optical structures, shape determination packages, grasping/manipulating systems, self assembling systems, and inflatable packages or complete spacecraft, or spacecraft bus technology like batteries, thrusters, or processors. The payload/subsystem should be defined in the context of the spacecraft bus, and the requirements on the bus should be described. The revolutionary mission and/or capability addressed should also be described.

II. Program Plan and Acquisition Strategy

Multiple awards are anticipated from FY 2003 funds. The Government plans to make \$2.4M of FY2003 funds available in total for all funded efforts, but the total of all awards may be less than or more than that amount. The amount of funds, if any, for efforts or optional work after FY 2003 has not been decided. For Government programmatic flexibility, all offerors should segment their cost proposals as follows: an initial 12-month or shorter effort to explore and validate the concept followed by one or more optional efforts. The total effort including options should not exceed four years. Successful initial efforts will increase the likelihood that DARPA will make funds available after FY 2003. The work is to be performed throughout a design phase lasting approximately 12 months. Successful offerors will be asked to execute designs of their concepts, culminating in a final design report. The government retains the option to provide additional funding to some, all or none of the designs to move into fabrication. Therefore, the proposal must include provisions to have the flight qualification plan reviewed by an organization with previous experience developing space-qualified hardware.

III. Proposal Structure/Format

All proposals must be in the following page format: single-spaced, not greater than 8.5 by 11 inches, typed single-sided with 1 inch minimum margins, with a font, preferably New Times Roman, size not smaller than 12 point. Smaller fonts are acceptable in figures.

The proposal should be organized as outlined and described below.

- **Title Page** – Include principal investigators: names, phone, fax, and e-mail
- **Executive Summary** (2 pages)
- **Volume I** – Technical and Management
 - Section I – Technical Proposal (50 pages max)
 - Proposed Payload/Subsystem
 - Revolutionary Mission/Capability Addressed
 - Technical Approach to Proposed Effort (with schedule)
 - System Test Plan
 - Section II – Core Competence and Capabilities
 - Core Competence and Capabilities
 - Relevant Prior Work
 - Organizational Structure
 - Management Plan

- Resumes of Key Individuals
- **Volume II** – Cost (Activity Based Cost system preferred)
 - Phase I Cost
 - Phase II Cost
 - Fabrication Cost
 - Test Costs (not including DoD laboratory support)

Use of an activity based cost (ABC) system is preferred, but not required. Activity Based Cost (ABC) is a technique to quantitatively measure the cost and performance of activities, resources and cost objects, including when appropriate, overhead for the technical and management approach offered. Information concerning activity-based cost can be found at URL <http://www.c3i.osd.mil/bpr/bprcd/0201.htm>.

The Government will not be liable for costs associated with the preparation of proposals in response to this BAA. The address and point of contact for this response shall be clearly and prominently identified in the proposal. Within approximately seven (7) business days of receipt, DARPA will acknowledge receipt of the submission and assign a control number that shall be used in all further correspondence regarding the proposal.

IV. Evaluation Criteria:

The following criteria will be applied for the evaluation of the proposals: (1) overall engineering and technical merit (2) potential contribution and relevance to DoD Space missions (3) offeror's capabilities and related experience, and (4) cost realism. The criteria are listed in order of significance. Note: cost realism will only be significant in proposals that have significantly under or over-estimated the cost to complete their effort. Evaluators will be asked to address the following questions under each criterion:

(1) Overall Engineering and Technical Merit

- a. Is the approach technically feasible?
- b. Is the payload/subsystem complex and innovative?
- c. Is the system and test plan well thought out and thorough?
- d. Are the supporting requirements for the spacecraft bus identified?
- e. Can the test plan be implemented at the supporting DoD laboratories?
- f. Have areas of technical challenge and risk been identified and addressed?

g. Is the schedule realistic?

(2) Potential Contribution and Relevance to DoD Space Missions

- a. Does the proposal explain which revolutionary mission is addressed and how?
- b. To what degree is the proposed technology superior to the other approaches for accomplishing this mission?

(3) Capabilities and Related Experience

- a. Does the proposed team have the core competency to complete the design task?
- b. Has the team performed relevant work prior to this effort?
- c. Is the organizational structure and team approach proposed effective?
- d. Does the proposal include an organization with experience developing space-qualified hardware?

(4) Cost Realism

- a. Is the cost proposal based on realistic man-hour estimates?
- b. Has the offeror allotted the appropriate amount of team member support? If external team members are identified, are the estimates for their tasks appropriate, realistic, and fair?
- c. Has the offeror estimated the appropriate amount of Other Direct Charges (ODC)? Are the travel estimates realistic, and are the rates cited within allowable government per diem rates?
- d. Has the offeror accounted for and quantified any funding risks?

Proposals will be evaluated by government technical personnel only. Input on purely technical aspects may be solicited by DARPA from non-Government consultants/experts who are bound by appropriate non-disclosure requirements. Non-Government technical consultants will not have access to submissions that are labeled by the offerors as REVIEW BY GOVERNMENT OFFICIALS ONLY. Restrictive notices notwithstanding, proposals may be handled, for administrative purposes only, by a DARPA support contractor. The Government intends to use SRS Technologies personnel as special resources to assist with the logistics of administering proposal evaluation, and to provide advice on specific technical areas. Personnel of this contractor are restricted by their contracts from disclosing proposal information for any purpose other than these administrative or advisory tasks. Contractor personnel are required to sign the INSPACE Conflict of Interest and Non-Disclosure Agreement. By submission of its proposal, each offeror agrees that proposal information may be disclosed to those selected contractors for the limited

purpose stated above. Any information not intended for limited release to this contractor must be clearly marked and segregated from other submitted proposal material.

V. Administrative Information:

The deadline for receipt of full proposals will be November 17, 2003. All proposals received by the appropriate due date will be fully evaluated. The Government plans to make award decisions within approximately 65 days after receipt of full proposals. Final funding determination will be based on best value to the Government. The Government reserves the right to select for award some, none or portions of the proposals received under this solicitation. The Government reserves the right to use contracts or other transaction agreements as instruments for funding the proposals selected for award. Information concerning Other Transactions can be found at URL http://www.darpa.mil/cmo/pages/other_trans.html. *Space-related proposals received under any of the following Broad Agency Announcements (BAA) may be considered under this BAA: Innovative Tactical Technologies (BAA 03-01), SPO Office-wide BAA (BAA 03-14).* Classified and unclassified proposals will be accepted. For unclassified proposals, all bidders are required to submit one original, ten copies, and one electronic copy, on CD or ZIP disk. Unclassified proposals shall be sent to: DARPA, ATTN: BAA 03-24, 3701 North Fairfax Drive, Arlington, VA 22203-1714. Offerors intending to include classified information or data as a part of their proposal shall, in advance of providing their proposal, contact Ms. Ana Santiago, (703) 284-7873, ana.santiago@wg.srs.com, for guidance. Telephone inquiries are strongly discouraged; written inquiries may be sent by e-mail to BAA03-24@darpa.mil. Any inquiries by the potential bidders after the initial due date of proposals will be posted on the solicitation web site <http://www.darpa.mil/DARPA/solicitations.html>. All proprietary material submitted should be clearly marked as such and will be held in strict confidence. All proposals must reference DARPA BAA 03-24. Acceptance of an award under this program shall constitute an acknowledgement that the Government is entitled to unrestricted use of all designs and associated information.

Field Code Changed

ORGANIZATIONAL CONFLICT OF INTEREST

Each cost proposal shall contain a section satisfying the requirements of the following: Awards made under this BAA are subject to the provisions of the Federal Acquisition Regulation (FAR) Subpart 9.5, Organizational Conflict of Interest. All offerors and proposed subcontractors must

affirmatively state whether they are supporting 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 number. Affirmations shall be furnished at the time of proposal submission, and the existence or potential existence of organizational conflicts of interest, as that term is defined in FAR 9.501, must be disclosed. This disclosure shall include a description of the action the offeror has taken, or proposes to take, to avoid, neutralize, or mitigate such conflict. If the offeror believes that no such conflict exists, then it shall so state in this section. It is the policy of DARPA to treat all proposals as competitive information, and to disclose the contents only for the purposes of evaluation. The Government intends to use SRS Technologies personnel as special resources to assist with the logistics of administering proposal evaluation, and to provide advice on specific technical areas. Personnel of this contractor are restricted by their contracts from disclosing proposal information for any purpose other than these administrative or advisory tasks. Contractor personnel are required to sign the Conflict of Interest and Non-Disclosure Agreement. By submission of its proposal, each offeror agrees that proposal information may be disclosed to those selected contractors for the limited purpose stated above. Any information not intended for limited release to this contractor must be clearly marked and segregated from other submitted proposal material. The FedBizOpps notice and this PIP constitute the Broad Agency Announcement as contemplated by FAR 6.102(d)(2). No portion of this BAA will be set aside for Historically Black Colleges and Universities (HBCU) and Minority Institutions (MI) participation due to the impracticality of reserving discrete or severable tasks relating to spacecraft innovative technology, however HBCUs and MIs are encouraged to apply. In cases where evaluation of proposals is substantially equal, preference for award will be given to those proposals that include HBCUs and MIs as participants over those which do not include HBCUs and MIs. No additional information will be made available, nor will a formal RFP or other solicitation regarding this announcement be issued.