

## NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

### FY05.1 SUBMISSION OF PROPOSALS

#### GENERAL INFORMATION

The mission of the National Geospatial-Intelligence Agency (NGA) is to provide timely, relevant, and accurate Geospatial-Intelligence in support of national security. Therefore, NGA pursues research that will help guarantee the information edge over potential adversaries. Information on NGA's SBIR Program can be found on the NGA SBIR website at <http://www.nga.mil/sbir>. Additional information pertaining to the National Geospatial-Intelligence Agency's mission can be obtained by viewing the website at <http://www.nga.mil/>.

Inquiries of a general nature or questions concerning the administration of the SBIR program should be addressed to:

National Geospatial-Intelligence Agency  
Attn: Ms. Kathy Buono, IB, MS: DN-11  
12310 Sunrise Valley Dr. Reston, VA 20191  
Email: [SBIR@nga.mil](mailto:SBIR@nga.mil)

For technical questions about the topic, contact the Topic Authors listed under each topic on the website on or before 14 December 2004. For general inquiries or problems with the electronic submission, contact the DoD Help Desk at 1-866-724-7457 (8AM to 5PM EST).

#### PHASE I PROPOSAL INFORMATION

Read the DoD Program Solicitation at [www.dodsbir.net/solicitation](http://www.dodsbir.net/solicitation) for detailed instructions on proposal format and program requirements.

NGA has developed topics to which small businesses may respond in the fiscal year 2005 SBIR Phase I iteration. These topics are described on the following pages. NGA will accept only unclassified proposals on its topics.

The maximum amount of SBIR funding for a Phase I award is \$100,000 and the maximum period of performance for a Phase I award is 9 months. NGA does not participate in the Fast Track program nor Phase II Enhancement.

Selection of Phase I proposals will be in accordance with the evaluation procedures and criteria discussed in this solicitation (refer to section 4.2 of the program solicitation). NGA will apply the criteria in descending order of importance with the first criterion on soundness, technical merit, and incremental progress toward topic or subtopic solution being the most important. Due to limited funding, NGA reserves the right to limit awards under either topic, and only those proposals of superior scientific and technical quality will be funded.

Federally Funded Research and Development Contractors (FFRDC) and other government contractors may be used in the evaluation of your proposal.

NGA typically provides a firm fixed price level of effort contract for Phase I awards. The type of contract is at the discretion of the contracting officer.

#### **NEW REQUIREMENT: ALL PROPOSAL SUBMISSIONS TO THE NGA SBIR PROGRAM MUST BE SUBMITTED ELECTRONICALLY**

It is mandatory that the entire technical proposal, DoD Proposal Cover Sheet, Cost Proposal, and the Company Commercialization Report are submitted electronically through the DoD SBIR website at <http://www.dodsbir.net/submission>. If you have any questions or problems with the electronic submission contact the DoD SBIR Helpdesk at 1-866-724-7457 (8AM to 5PM EST).

Complete electronic submission includes the submission of the Cover Sheets, Cost Proposal, Company Commercialization Report, the entire technical proposal and any appendices via the DoD Submission site. The DoD proposal submission site <http://www.dodsbir.net/submission> will lead you through the process for submitting your technical proposal and all of the sections electronically. Each of these documents are submitted separately through the website. You are responsible for performing a virus check on each proposal to be uploaded electronically. The

detection of a virus on any submission may be cause for the rejection of the proposal. Your proposal must be submitted via the submission site on or before the 6:00 a.m. EST, 14 January 2005 deadline.

If a vendor occupies space in a NGA activity or has a support contract to provide services outside of an SBIR Phase I, II or III contract award with NGA, they must indicate this on the front of the Proposal Cover Sheet. NGA is concerned with potential conflicts of interest. If a vendor replies yes to either of these questions, and it is determined that their participation in the NGA SBIR program would create a conflict of interest, then the vendor will not be allowed to participate in NGA's SBIR program.

Phase I contracts will include a requirement to produce an interim report not later than 7 1/2 months after award. This report shall include the following sections:

- A summary of the results of the Phase I research to date
- A summary of the Phase I tasks not yet completed, with an estimated completion date for each task
- A statement of potential applications and benefits of the research.

The report shall be no more than 750 words long. The report shall be prepared single spaced in 12 pitch or 11 point Times New Roman font, with at least a one inch margin on top, bottom, and sides, on 8 1/2" by 11" paper. The pages shall be numbered. The interim report shall be evaluated on the same criteria used to evaluate Phase I proposals to decide which Phase I projects will be invited to submit Phase II proposals.

## **PHASE II GUIDELINES**

Phase II proposals are invited by NGA from Phase I projects that have demonstrated the potential for commercialization of useful products and services and achieved success measured against the criteria contained in Section 4.3. The invitation will be issued in writing by NGA.

NGA typically provides a cost plus fixed fee contract as a Phase II award. The type of contract is at the discretion of the Contracting Officer.

Phase II proposals shall be limited to \$500,000 over a two year period, with a \$250,000 base proposal (first year) and a \$250,000 option period (second year). Phase II base and Phase II option costs shall be shown separately in the proposal. A work breakdown structure that shows the number of hours, labor category and name of each person that will work on the SBIR to be assigned to each task and subtask, as well as the start and end dates for each task and subtask, as well as the start and end times for each task and subtask, shall be included. The option shall be included with the base proposal at the time of submission.

Selection of Phase II proposals will be in accordance with the evaluation procedures and criteria discussed in this solicitation (refer to section 4.3 of the program solicitation). Those SBIR participants that are selected to submit Phase II proposals will receive a detailed package of NGA submission requirements, which will include the relevant importance of the evaluation criteria and also may include additional evaluation criteria.

Phase II contracts shall include a requirement to produce an interim report not later than 10 months after contract award. This report shall include the following sections:

- A summary of the results of the Phase II research to date
- A summary of the Phase II tasks not yet completed, including those in the Option year, with an estimate of the completion date for each task
- A statement of potential applications and benefits of the research.

The report shall be no more than 750 words long. The report shall be prepared single spaced in 12 point Times New Roman font, with at least a one inch margin on top, bottom, and sides, on 8 1/2" by 11" paper. The pages shall be numbered. The report shall be evaluated in accordance with this solicitation (refer to section 4.3 of this solicitation).

## NGA PROPOSAL CHECKLIST

This is a Checklist of Requirements for your proposal. Please review the checklist carefully to ensure that your proposal meets NGA SBIR requirements. Failure to meet these requirements will result in your proposal not being considered for review or award. Do not include this checklist with your proposal.

- \_\_\_\_\_ 1. The Proposal Cover Sheet along with the full Technical Proposal, Cost Proposal, and Company Commercialization Report were submitted using the SBIR proposal submission system, which can be accessed directly at <http://www.dodsbir.net/submission>. The Proposal Cover Sheet clearly shows the proposal number assigned by the system to your proposal. Indicate if you are a NGA support contractor.
- \_\_\_\_\_ 2. The proposal addresses a Phase I effort (up to \$100,000 with up to a nine-month duration).
- \_\_\_\_\_ 3. The proposal is limited to only ONE NGA solicitation topic.
- \_\_\_\_\_ 4. The Project Abstract and other content provided on the Proposal Cover Sheets contains no proprietary information and is limited to the space provided.
- \_\_\_\_\_ 5. The Technical Content of the proposal includes the items identified in Section 3.5 of the program solicitation.
- \_\_\_\_\_ 6. The Company Commercialization Report is submitted online in accordance with Section 3.5 d. This report is required even if the company has not received any SBIR funding (This report does not count towards the 25-page limit).
- \_\_\_\_\_ 7. The proposal is 25 pages or less in length (excluding the Company Commercialization Report). Pages in excess of this length will not be considered for review or award.
- \_\_\_\_\_ 8. The proposal contains no type smaller than 12 pitch or 11 point font size (except as legend on reduced drawings, but not tables).
- \_\_\_\_\_ 9. The Cost Proposal has been completed for the Phase I costs. The Cost Proposal has been filled in electronically or included as the last page of the uploaded technical proposal. The total cost should match the amount on the cover pages.
- \_\_\_\_\_ 10. The proposal must be electronically submitted through the online submission site (<http://www.dodsbir.net/submission>) by 6a.m. January 14, 2005

**NGA 05.1 Topic Index**

NGA05-001      Advanced Geospatial Computing

## NGA 05.1 Topic Descriptions

NGA05-001                      TITLE: Advanced Geospatial Computing

TECHNOLOGY AREAS: Information Systems

OBJECTIVE: Research in high-end and distributed computing is required to support critical intelligence community needs and priorities. It is predicted that NGA will process 1 Terabyte of new imagery per day. The agency needs technology devoted to the overhead and optimization of data movement, data processing, and long term data storage in a fault tolerant environment characterized by differing operating systems, constant architectural change, intermittently functional and low bandwidth connectivity, multiple simultaneous users working collaboratively on the same data sets and loosely coupled grids.

DESCRIPTION: Major challenges that must be addressed include: sustained high performance on complex applications, managing dramatically increasing volumes of data, and developing mechanisms for dynamic reconfiguration. Innovative proposals that address all of the following areas are encouraged:

- Distributed, heterogeneous file sharing environments - Enable organizations to share files between geographically diverse sites regardless of the underlying operating systems of clients and servers.
- Dynamic allocation of resources - Resolve and manage data storage, update and retrieve files and/or data based on bandwidth and availability of network components. Avoid overloading authoritative sources by using techniques such as coherent caches, accessing from multiple sources concurrently, etc.
- Dynamic and assured global updating capability - Assurance that when files are modified clients only access the most current available information.

PHASE I: Demonstrate the likelihood that an innovative approach will meet all the following needs: distributed, heterogeneous file sharing environments; dynamic allocation of resources; and dynamic and assured global updating capability.

PHASE II: Present a prototype that will address the following needs: distributed, heterogeneous file sharing environments; dynamic allocation of resources; and dynamic and assured global updating capability.

PHASE III: This application could be used in any military and civilian security application. The application should be integrated in a test environment with multi-int data and diverse sites with varying bandwidth capabilities. The application needs to provide dynamic global updating and reconfiguration capabilities.

KEYWORDS: Distributed heterogeneous environment, Dynamic update, Dynamic reconfiguration