ONR BAA Announcement # ONR 07-008

BROAD AGENCY ANNOUNCEMENT (BAA)

Command and Control and Combat Systems (C2 and CS)

INTRODUCTION

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2). A formal Request for Proposals (RFP), solicitation, and/or additional information regarding this announcement will not be issued. Request for same will be disregarded.

The Office of Naval Research (ONR) will not issue paper copies of this announcement. The ONR reserves the right to select and fund for award all, some or none of the proposals in response to this announcement. ONR provides no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. It is the policy of ONR to treat all proposals as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

Awards will take the form of contracts. Therefore, proposals submitted as a result of this announcement will fall under the purview of the Federal Acquisition Regulations (FAR).

Potential offerors may obtain information on ONR programs and opportunities by checking the ONR website at http://www.onr.navy.mil. Specific information about BAAs along with amendments and updates to this BAA will be found at that site under the heading “BAAs”.

I. GENERAL INFORMATION

1. Agency Name -

Office of Naval Research

2. Research Opportunity Title

Command and Control and Combat Systems (C2 and CS) Applied Research

3. Program Name

Command and Control and Combat Systems (CS and CS) Applied Research

4. Research Opportunity Number

BAA 07-008

5. Response Date

White Papers: 12 March 2007 not later than 2:00 PM ET

Oral Presentations (if selected): Week of 7 May 2007 – exact date, time and location TBD

Full Proposals: 15 June 2007 not later than 2:00 PM ET

6. Research Opportunity Description

Synopsis:

This program addresses current shortfalls in Command and Control and Combat Systems (C2 and CS) resulting from limitations in technology and uncertainty/imprecision of data and information. The Program seeks to develop hardware and software technologies that (1) provide automated approaches for real-time image processing and analysis; (2) identify and integrate informational content from multiple information sources; (3) offer persistent surveillance of the network and its information space; and (4) provide automatic correlation, fusion, and insight to support decision making. This year, a particular emphasis will be on the Automated Information Integration thrust area.

6.1 Operational Requirements

According to DoD definitions, Command and Control (C2) Systems are “the facilities, equipment, communications, procedures, and personnel essential to a commander for planning, directing, and controlling operations of assigned forces pursuant to the missions assigned.”

In current and future operational environments, such as Global War on Terrorism (GWOT) and Maritime Domain Awareness (MDA), warfighters require technologies evolved to support information needs regardless of location and consistent with the user’s level of command or responsibility and operational situation. To support this need, the DoD has developed the concept of Network Centric Warfare (NCW), defined as “military operations that exploit state-of-the-art information and networking technology to integrate widely dispersed human decision makers, situational and targeting sensors, and forces and weapons into a highly adaptive, comprehensive system to achieve unprecedented mission effectiveness.”

FORCEnet is the Department of the Navy's operational construct and architectural framework for Naval Warfare in the Information Age which integrates warriors, sensors, networks, command and control, platforms and weapons into a networked, distributed combat force, scalable across the spectrum of conflict from seabed to space and sea to land. The underlying premise of FORCEnet is ready access to information and knowledge, allowing distributed forces to make rapid, accurate decisions leading to desired outcomes. FORCEnet will provide the architecture and building blocks that interconnect sensors, networks, decision aids, weapons, warriors, and supporting systems into a highly adaptive human-centric, comprehensive system. FORCEnet will achieve this in part by relying on pillar Enabling Capabilities products and longer-term Discovery and Invention (D&I) projects.

Net-centric operations include communications and information assurance capabilities to enable all-source data access, multi-source processing, and tailored dissemination to C2 and Intelligence, Surveillance, and Reconnaissance (ISR) users across the network. The operational benefits sought are an increased speed, accuracy and precision of command; distributed self-synchronization; flexibility and adaptability to an operational situation; and decision superiority.

In emerging operational environments, the promise of net-centricity and the potential for persistent and pervasive sensing will create greater demand for (1) techniques to coordinate deployment of multiple diverse sensors; (2) automated processing of large volumes of multi-sensor data; (3) tailored dissemination of information to support decision making to users across the network; and (4) the requirement to securely handle information without exposing intelligence information about the networks or systems to adversaries.

6.2 Technical Background

Current shortfalls in warfighting functionality result from limitations in technology, including:

- Inability to produce a dynamic, comprehensive, and accurate battlespace picture for the warfighter that integrates tactical intelligence data gathered from multiple intelligence sources.
- Automated techniques to integrate data (geolocation, detection, and identification) from multiple intelligence sources, in a consistent and timely manner are not available.
- Automated techniques to support planners in maximizing the information value achievable from multiple deployed sources/sensors are not available.
- Warfighter and intelligence views are not consistent with nor tailored to mission goals.
- Accurate and timely information about battlespace objects and events is not available to support warfighter decision making, (includes reliable location, tracking, combat identification, and targeting information).

Because massive amounts of data will be generated by persistent sensors, warfighters will require technologies that not only integrate information from diverse sources, but also provide indications of information significance in ways that support the user's decision needs regardless of location and operational situation. Assuming that object track and identity information is available, automated decision tools that transform this information into actionable knowledge for the decision maker are required. The tools and technologies to resolve these shortfalls must address data fusion, particularly at the Levels 2/3. The various levels of data fusion are further defined below.

- Level 1 - Level 1 data fusion combines data from single or multiple sensors and sources to provide the best estimate of objects and events in the battlespace in terms of their position, kinematics (e.g. tracks), identity, or identification features. Such Level 1 information may be of high quality particularly when it leverages multiple sensors to provide robustness to spoofing or deception, reliability in the face of sensor malfunctions, and extended space time coverage due to the diversity of observations. This assumes that such high quality information about objects and events is available as a contributor to situation awareness. In general however, such information is

insufficient to provide situation understanding. Human decision makers reason about such information to infer relationships (situation elements) and impacts (threats). In the course of such reasoning humans apply additional contextual information that includes experiences and knowledge of terrain, roads, vehicle or arms capability, past practices, etc.

- Level 2 - Level 2 data fusion focuses on situation assessment. This requires recognition of objects/entities in the regions of interest, as well as recognizing activities of these objects, and inferring their relationships. Issues that must be addressed include: automated target/object recognition; automated activity recognition from multiple sensors and reports collected and stored for historical analyses; inferring relationships of objects in the scene based on their identities or coordinated behaviors and historical analyses; the capability for the automated system to estimate certainties about object identities and activities; and the capability to request human assistance or additional information from sensors or databases to resolve ambiguities.

- Level 3 - Level 3 data fusion, threat assessment, requires inferring intent of objects/entities, or groups of objects, in the regions of interest. Issues that need to be addressed include: methods for constructing and learning a wide variety of models of threat behavior; methods for reasoning with uncertain and incomplete information for assessing threats from object activities; methods for efficient data-mining of databases; automated planning for courses of action (COA) to counter suspected threats; requesting human assistance for cognitively challenging situations; and presentation of information and COA in readily understandable forms to people at a variety of levels of command and responsibility.

6.3 Program Goals

The goal of the C2 and CS program is to support the FORCEnet vision by developing measurable advances in technology that can directly enable and support ongoing Naval Enterprise capability enhancements. This will be accomplished by supporting science and technology enablers for decision making and mission execution to achieve battlespace superiority. In future operational environments, warfighters will require technologies evolved to support information needs regardless of location and consistent with the user's level of command or responsibility and operational situation. The C2 and CS program focuses on the development of hardware and software technologies that identify and integrate informational content from multiple sources, leading to decision aids that support user-cognitive processes. This program addresses current warfighter functionality shortfalls in C2 and CS resulting from limitations in technology. These shortfalls include:

- Information systems do not understand context of user needs
- Users get little help dealing with information diverse needs
- Tendency toward information overload
- Unable to manage and exploit the image-based data
- Inability to manage user subscription to information in near real time
- Inability to merge information across semantic differences

The C2 and CS program is especially interested in applying innovative concepts, technologies, and techniques as described towards solving operational problems in the areas of asymmetric warfare, urban warfare, guerrilla warfare, and port/base security.

6.4 Program Thrusts

The C2 and CS program is focused on efforts that automate the association of objects and events in the battlespace and automatically transform this information into actionable knowledge (e.g., indications and warnings of intent). C2 and CS is supported by four thrusts:

- Automated Image Understanding
- Automated Information Integration
- Persistent Network and Information Monitoring
- Sensor Management and Allocation for Persistent Surveillance

This year, a particular emphasis will be on the Automated Information Integration thrust area.

6.5 Detailed Thrust Descriptions

6.5.1 Automated Image Understanding

Imageries are important forms of information for understanding the battle-space situation. Automated image understanding using different modalities of imagery provide the battlefield commander with enhanced situational awareness by fully exploiting the capability of reconnaissance/surveillance platforms. Approximately 40% of imageries collected are not screened due to the number of analysts available. This situation will worsen by an order of magnitude as sensor systems are upgraded, more sensors are added and new systems come on line. One of the goals of this thrust is to develop mathematically rigorous and robust automated image understanding algorithms to accurately recognize and classify objects, leading to activity recognition and threat assessment. Another area of interest is to develop system implementation guidelines and automated image understanding algorithms that can operate optimally under dynamic constraints. These guidelines will allow adaptation to evolving systems architectures, time constraints, processors' availability, and communications bandwidth.

This thrust aims to provide enabling capabilities for anti-terrorism and force protection missions in urban/semi-urban areas and in the Maritime Domain. The algorithms should be able to handle urban clutter and occlusions and treat people as one of the objects. In the Maritime Domain, the algorithms should be able to handle multiple objects on dynamic backgrounds, including crowded shipping channels and port areas and to safeguard fleet perimeters.

Of particular interest to this thrust are novel techniques with rigorous mathematical foundation for:

- Extraction and representation of image feature, content, and region of interest
- Creation and management of knowledge base for imageries
- Association and registration of features, contents, and regions of interest from different imaging sensor modalities
- Recognition and classification of objects
- Tracking of objects in different modalities
- Activity recognition

6.5.2 Automated Information Integration

The goal of this thrust is to leverage emerging technologies to manage and exploit sensors and disparate sources of data and to develop approaches and tools for (semi)-automated data integration and reasoning about information from diverse sources in ways that support decision makers with timely, actionable information at operational and tactical levels of command, with an emphasis on missions that are related to GWOT and force protection.

Because massive amounts of data will be generated by sensors (traditional and non-traditional), warfighters require technologies that not only integrate information from diverse

sources, but also provide indications of information significance in ways that support the user's decision needs regardless of location and operational situation. The challenge is to provide tools that collect, fuse, and disseminate enormous quantities of data drawn from Naval forces and correlate this information with other data sources (e.g., joint forces, government agencies, coalition partners, commercial organizations) to understand the behavior of all entities in battlespaces (e.g., littoral zones, high seas, land-based, etc.) and to provide a reliable, persistent picture of the battlespace. Each of these battlespaces has differing requirements, resulting in the need for different technologies that make actionable information available regardless of location, time, physical constraints, and data access limitations. Information Integration is the development of tools and techniques that automate information fusion so that warfighters can make rapid, accurate decisions regardless of the operational environment.

6.5.2.1 Sub-area: Networked Sensors, Multi-Target Detection, Tracking, ID and Tagging

The objective in this sub-area is to pursue advances in achieving an integrated and a consistent target picture in a dynamic evolving multi-target scenario across a network of sensors and platforms, like UAV's, with regard to the demands of the war fighter in real-time and nonreal-time engagements. In networking, the use of the existing algorithms and software, designed for single sensors, on each platform is not sufficient to achieve this objective. In order to establish a unique track, tagging, and ID for each of the multiple targets for persistent surveillance using networked sensors, one is confronted with challenges that arise in integrating data, such as different latency, different sensors and data sources, out-of-order measurements, track breaks, the differing number of targets in the field of view of the sensors, etc. In addition, integration of data from multiple sensors in high clutter/false alarm environments may potentially increase the rate of false tracks at the network level. The aspect-dependent and frequency-dependent sensor detections of most targets and potential land occlusions can lead to sensor dependent probabilities of detection that are unknown to the sensor. Some areas of interest are:

- Develop tracking, ID and tagging approaches that include feature information and approaches in stressed, maneuvering or stationary, densely spaced targets in Navy/Military scenarios as in GWOT, and sensor configuration as in unmanned vehicles. This sub-area is interested in innovative approaches and high fidelity models for the complex phenomenology that impact tracking and tagging.
- Develop signal processing techniques and measures to show gains if multiple disparate sensors are employed and data integrated.
- In coding, develop approaches to enhance and achieve user orthonormality under adverse communication and transmission conditions, as well as performance metrics for analyzing performance improvements achievable in networking.
- Methods for optimally controlling the sensors of a multi sensor network are needed. The major challenge involves ensuring that the feedback to the sensor improves the track, ID and tag quality, both at the individual sensor level and the network level.

6.5.2.2 Sub-area: Uncertainty Management and Data Refinement

This sub-area aims to develop innovative mathematically rigorous methods for combining data from single or multiple sensors and sources to provide the best estimate of objects and events in the battlespace, in terms of their identity, associated error or uncertainty, context, etc. It is understood that such information alone is insufficient to provide threat assessment, but serves as a key enabler for Level 2/3 fusion. Some areas of interest include, but are not limited to the following:

- Multi-source exploitation and integration of data to minimize the uncertainty of information, while preserving data integrity in the face of various information handling and processing factors that may corrupt the fusion operations, rendering the results incorrect and possibly misleading.
- Robust mathematical and statistical techniques for propagating uncertainty through the integration process.

- Algorithms and methods for processing and exploiting massive high-dimensional data sets that may arise from a multitude of disparate sensors and are also comprised of disparate and/or non-traditional data types (e.g., image-based data, text, network-based data, open source, etc.)
- Methods for representing and exploiting context, metadata, network characteristics of the data, and different 'views' of the same information.
- Tools that allow warfighters to access additional, original information on an as-needed basis to re-evaluate information based on their current situation.

6.5.2.3 Sub-area: Inference Engines and Knowledge Bases

The goal of this sub-area is to develop mathematically rigorous, and computationally tractable and efficient approaches to Level 2/3 fusion for recognizing activities of agents (objects and people), inferring their relationships, inferring their intentions, and assessing potential threats posed by them. Inferencing methods should be able to utilize disparate information that may include data from networks of (imaging and non-imaging) sensors, human reports, private databases, and open, unstructured sources that may be available on the Web. Inferencing methods should also be able to take into account contextual information such as terrain, roads, weather, communications, doctrine, culture, politics, etc. The technical emphasis of this research is to develop rigorous and efficient methods for building sophisticated Knowledge Bases (KBs), and utilizing KBs in automated reasoning. These include, but are not limited to, the following:

- Extend recent advances in integrating logic and probability for building robust KBs from diverse, uncertain information sources
- Develop reasoning methods, such as case-based reasoning or common-sense reasoning, that can work robustly in time-critical situations with uncertain and probabilistic information, absence of full information, or contradictory data
- Develop modeling and learning methods for building models of activity and intention
- Develop plan recognition methods for inferring intentions from partially observed activities
- Data mining techniques to uncover trends in activity, links among objects, and hidden models of behavior/activity to identify relationships and support intent analyses and course-of-action (COA) alternatives
- Develop methods for formalizing context and approaches to using context to improve recognition and inferencing through constraining plausible hypotheses.

6.5.3 Persistent Network and Information Monitoring

Assuring information integrity and confidentiality in mission critical networks is fundamental for Network Centric Warfare. The goal of this thrust is to move beyond simple techniques such as separating data to sensitive and non-sensitive storage or encrypting transmission channels, to methods that can fully utilize and be afforded by the technologies that comprise the network. There is a need for software tools that can securely handle information integration without exposing intelligence information about the networks or systems to our adversaries.

Trust in data and data sources are essential to timely decision making. Assuring information received has not been corrupted while processed, in transit or at rest is impossible without trust in the systems that are responsible for those tasks. The tactical and operational picture of the battlespace is now formed from a complex combination of information gathered from across varied communications media – electronic and physical. Information sharing requirements continue to increase such that shared information cannot reveal more than is needed to coalition partners, but must be communicated with a level of trust and credibility to maintain its original importance or value. A level of protection from inception to use of that information must be communicated. Establishing a capability of persistent surveillance on our networks and systems as well as that of our allies is desired.

Technologies of interest include

- Algorithms and methods for multipart computation where private data does not need to be disclosed during sharing without losing data relevance.
- Methods for establishing a level of assurance on information integrity of raw data sources, data integration, as well as processed information.
- Techniques for establishing and communicating a level of importance of security properties, such as methods for visualization and communication of data relevance.
- Tools that allow warfighters to establish a level of trust in data without revealing sources and methods of intelligence gathering.
- Methods for constant and consistent monitoring of risk of possible compromise as data transcend system and network boundaries.
- Verification tools for rapid assessment of heterogeneous networked systems.

6.5.4 Sensor Management and Allocation for Persistent Surveillance

Tremendous progress has been made in sensor technology, and as a result, sensors are beginning to proliferate the battlespace. Far less has been done on how to best manage and allocate these sensors. Currently, for the most part, placement and configuration of sensors assets is done manually. These decisions, however, are extremely complicated and are often made in time-critical situations, thus making it likely that even the best operators make suboptimal decisions. Areas of interest include:

- Techniques for comparing the information content provided by disparate sensor types, so as to provide a means for optimizing the tradeoff of higher-level tracking, detection, classification, and identification algorithms as a function of parameters such as range, bandwidth, wavelength, focal length, weather, etc.
- Techniques for determining the optimal number of UXVs needed for a given mission, and their scheduling and routing so as to achieve persistent surveillance. Both pre-mission planning and real-time on-the-fly adjustments need to be addressed.

The goal of this thrust is to develop advanced decision aids that will assist operators in deploying sensor assets in an optimal or near optimal manner. The thrust seeks solution based on mathematically rigorous techniques (e.g., mathematical optimization) that provide optimal or provably near-optimal solutions.

7. Points of Contact

**** Important Notices Regarding Questions ****

- All Questions (of a general programmatic, thrust specific or business nature) shall be submitted in writing by electronic mail.
- Questions presented by telephone call, fax message, or other means will not be responded to.
- There will be no meetings between potential offerors and ONR personnel.
- It is understood that responses are not binding unless the specific Q&A is posted on the C2&CS website.
- Questions regarding **white papers** must be submitted by 2:00 p.m. Eastern Time on Monday, 5 MAR 2007. Questions after this date and time may not be answered and the due date for submission of the white papers will not be extended.
- If invited to present an oral presentation, questions regarding **oral presentations** must be submitted by 2:00 p.m. Eastern Time one week prior to the scheduled presentation. Questions after this date and time may not be answered and the scheduled date and/or time of the oral presentation will not be changed.

- Questions regarding **full proposals** must be submitted by 2:00 p.m. Eastern Time on Thursday, 7 JUN 2007. Questions after this date and time may not be answered and the due date for submission of the proposals will not be extended

Questions of a ***general programmatic nature*** should be directed to the email addresses below.

Dr. Gary Toth
Program Manager
E-Mail: tothg@onr.navy.mil

With a copy of the email sent to:

Dr. Wendy L. Martinez
Program Officer
E-Mail: martinwe@onr.navy.mil

Command and Control and Combat Systems, ONR 311
Office of Naval Research
One Liberty Center
875 North Randolph Street, Suite 1425 *
Arlington, VA 22203-1995

** Important Notes -*

1: This is the Official address for ONR. Deliveries should not be made to this Suite number. For the submission of the white papers, oral presentation materials, and full proposals, please refer to paragraph 5 entitled "Address for the Submission of White Papers, Oral Presentation Materials, and Full Proposals" under Section IV entitled "Application and Submission Information."

2. If the Offeror chooses to use the United States Postal Service (USPS), it needs to use the Official address. Offerors should be aware that they need to allow up to an extra five (5) business days because USPS mail is sent to a central location for special processing before it is delivered to ONR. White papers, proposals, etc. delivered in person, via carrier, or by commercial carriers (e.g. FED-EX) should be sent to the room number identified at the end of Section IV below.

Questions of a **scientific or technical nature should be directed to the appropriate Thrust Manager** as specified below with a copy sent to the following people: Dr. Gary Toth, Program Manager at tothg@onr.navy.mil and Dr. Wendy Martinez, Program Officer, at martinwe@onr.navy.mil.

Thrust Description	Subarea	BAA Paragraph Reference	Thrust Manager	Email
Automated Image Understanding	N/A	6.5.1	Dr. Behzad Kamgar-Parsi	kamgarb@onr.navy.mil
Automated Information Integration	N/A	6.5.2	Dr. Gary Toth	tothg@onr.navy.mil

Thrust Description	Subarea	BAA Paragraph Reference	Thrust Manager	Email
Automated Information Integration	Networked Sensors, Multi-Target Detection, Tracking, ID & Tagging	6.5.2.1	Dr. Rabinder Madan	madanr@onr.navy.mil
Automated Information Integration	Uncertainty Management & Data Refinement	6.5.2.2	Dr. Wendy Martinez	martinwe@onr.navy.mil
Automated Information Integration	Inference Engines and Knowledge Bases	6.5.2.3	Dr. Behzad Kamgar-Parsi	kamgarb@onr.navy.mil
Persistent Networking and Information Monitoring	N/A	6.5.3	Ms. Louise Davidson Dr. Ralph Wachter	davidsl@onr.navy.mil wachter@onr.navy.mil
Sensor Management and Allocation for Persistent Surveillance	N/A	6.5.4	Dr. Donald Wagner	wagnerd@onr.navy.mil

Questions of a ***business nature*** shall be directed to the cognizant Contract Specialist, as specified below:

Primary Point of Contact

Ms. LaQuia Geathers
Contract Specialist
Contracts and Grant Awards Management, Code 0251

Office of Naval Research
One Liberty Center
875 North Randolph Street, Suite 1425
Arlington VA, 22203-1995

Email: geathel@onr.navy.mil

Secondary Point of Contact

Ms. Vera M. Carroll
Contracting Officer/Branch Head
Contract and Grants Awards Management, Code 0251

Office of Naval Research
One Liberty Center
875 North Randolph Street, Suite 1425
Arlington VA, 22203-1995

Email: carrolv@onr.navy.mil

8. Instrument Type

Awards resulting from this solicitation will be in the form of contracts.

9. Catalog of Federal Domestic Assistance (CDFA) Number

N/A

10. Catalog of Federal Domestic Assistance (CDFA) Title

N/A

11. Other Information

This announcement is restricted to work relating to basic and applied research and that portion of advanced technology development not related to a specific system or hardware procurement. Contracts made under this BAA are for scientific study and experimentation directed towards advancing the state of the art or increasing knowledge or understanding.

THIS ANNOUNCEMENT IS NOT FOR THE ACQUISITION OF TECHNICAL, ENGINEERING AND OTHER TYPES OF SUPPORT SERVICES.

II. AWARD INFORMATION

The Office of Naval Research (ONR) plans to award multiple technology development contracts (particularly cost plus fixed fee (CPFF) type contracts) that represent the best value to the Government in accordance with the evaluation criteria. The Office of Naval Research is seeking participants for this program that are capable of supporting the goals described in this announcement. Offerors have the opportunity to be creative in the selection of the technical and management processes and approaches to address the thrust areas.

This Program is expected to last for three years. The Office of Naval Research plans to fund development contracts with a combination of Applied Research and Advanced Technology Development funds (Budget Category 6.2/6.3). It is anticipated that there will be funding available in the amount of $2 million per year. It is anticipated that the average award will typically be in the range of $150,000-$450,000 per year, although lower and higher proposals will be considered. ONR expects to make multiple awards based on its available budget and the responsiveness of the efforts to the program goals. Proposed work should be structured for a one to three year period that shall include a base performance period of twelve months. The proposal may also include one or two 12-month options. The estimated date for contract award is on or about 31 October 2007.

ONR has funded related information technology development under numerous programs. Proposals that build on current or previous DoD work are encouraged. If an offeror is enhancing work performed under other ONR or DoD projects, it must clearly identify the point of departure and what existing work will be brought forward and what new work will be performed under this BAA.

III. ELIGIBILITY INFORMATION

Only U.S. owned firms, U.S. based firms and American universities will be considered for awards under this BAA. Only United States citizens are permitted to work on this effort due to export control restrictions. Performer access to classified data is anticipated. It is likely that a DD Form 254 (Contact Security Classification and Specification) will be incorporated into each of the contract awards.

Historically Black Colleges and Universities (HBCU) and Minority Institutions (MI) 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 C2 and CS along with Network Centric Warfare Technology for exclusive competition among these entities.

Independent organizations and teams are encouraged to submit proposals in any or all areas. However, Offerors must be willing to cooperate and exchange software, data and other information in an integrated program with other contractors, as well as with system integrators, selected by ONR.

Government Entities and Federal Funded Research and Development Centers (FFRDCs) are ineligible to apply to this BAA as prime contractors.

IV. APPLICATION AND SUBMISSION INFORMATION

1. Application and Submission Process

The Application and Submission Process consists of white papers, oral presentations and full proposals. If an Offeror does not submit a white paper before the due date and time, it is not eligible to participate in the rest of the process.

a. Command, Control and Combat Systems Website:

The C2 and CS website (http://www.onr.navy.mil/forcenet_c2csfy08/) is dedicated to this BAA and will be the primary means of publicizing all relevant information that is specific to this BAA. All interested parties are encouraged to visit this website regularly.

b. Industry Day Briefing:

ONR will conduct an Industry Day Briefing for potential offerors. It is scheduled for 29 January 2007. The purpose of the briefing is to provide potential offerors with a better understanding of the program. For the location and time, refer to the C2 and CS website. (http://www.onr.navy.mil/forcenet_c2csfy08/)

Registration: Interested offerors MUST register for the Industry Day Briefing at the C2 and CS website http://www.onr.navy.mil/forcenet_c2csfy08/. The deadline to register is two days PRIOR to the event. No substitutions in the attendee list are allowed after the registration deadline. If requested attendance exceeds capacity, it may be necessary to limit attendance of personnel from each organization, and organizations will be so notified.

If Not Able to Attend: Those not able to attend this briefing should consult the C2 and CS website to see briefing slides and answers to written questions submitted during the event.

c. White Papers:

Submission: The due date for white papers is no later than 2:00 p.m. Eastern Time (ET) MONDAY, 12 MARCH 2007. Each unclassified white paper should state that it is submitted in response to this announcement and: (1) identify the thrust to which the response is applicable; and (2) provide the offeror's phone number and e-mail.

Evaluation/Notification: White papers will be evaluated to determine whether an offeror is selected to make an oral presentation of its white paper to a panel of government evaluators. The process for oral presentations is described below. Oral presentations will be scheduled for those offerors who have been notified by e-mail that their proposed technologies appear to be of "particular value" to the Navy. Selection of white papers considered as being of "particular value" will be announced on or about MONDAY, 2 APRIL 2007. However, any such encouragement does not assure a subsequent award. Those white papers not selected for oral presentations will not be considered further under this announcement.

Notes:

- White papers exceeding the page limitation may not be evaluated.
- Should an offeror's email change after submission, it is the responsibility of the offeror to notify the program manager of the change to ensure receipt of critical process e-mails.

d. Oral Presentations

The purpose of the oral presentation is to better acquaint the Government with the Offeror's proposal, especially in its understanding of how the proposed technology will affect military applications.

Invitation Process: Offerors whose white papers are selected for oral presentations will be invited by e-mail not less than five (5) working days prior to the commencement of the unclassified oral presentation event. This event is tentatively planned for the week of 7 May 2007.

Process: A detailed format for the presentation will be provided in the e-mail invitation. Each presentation will be no longer than twenty (20) minutes in duration. An additional ten (10) minutes will be allowed for questions (if any) from the panel of government reviewers. Offerors will be required to submit their oral presentation materials to the government PRIOR to the presentation as specified in the invitation email.

Notification/Evaluation: Those offerors whose technology is still considered as having "particular value" to the Navy will be encouraged to submit detailed technical and cost proposals. Notice of encouragement to submit full proposals will be issued on or about MONDAY, 28 MAY 2007. However, such encouragement after oral presentations does not assure a subsequent award. If the Offeror receives notification that its technology was not considered as having "particular value" to the Navy, it cannot submit a full proposal. Full proposals will not be considered under this BAA unless both a white paper was received by the due date specified above and a presentation was made during the Oral Presentation event.

Policy Towards Reimbursement of Oral Presentation Costs: The Office of Naval Research will not reimburse preparation costs, travel costs and time for potential bidders to brief their proposals.

Notes:

- Offerors may not be allowed to participate in the oral presentations if materials are received late (as described in the invitation email), and the project will not be considered further.
- Should an offeror's email change after submission, it is the responsibility of the offeror to notify the program manager of the change to ensure receipt of critical process e-mails.

d. Full Proposals

Submission: The due date for receipt of Full Proposals is 2:00 p.m. Eastern Time (ET) FRIDAY, 15 JUNE 2007.

Notification: It is anticipated that final selections will be made on or about MONDAY, 2 July 2007. As soon as the final proposal evaluation process is completed, the offeror will be notified via email of its selection or nonselection for an award.

Notes:

- Full Proposals exceeding their page limitation may not be evaluated.
- Should an offeror's email change after submission, it is the responsibility of the offeror to notify the program manager of the change to ensure receipt of critical process e-mails.

2. Content and Format of White Papers/Full Proposals

White Papers, Oral Presentation Materials and Full Proposals submitted in response to this BAA must be unclassified. However, performance under the awarded contracts may require access to classified data.

White Paper, Oral Presentation, and Full Proposal submissions will be protected from unauthorized disclosure in accordance with FAR 15.207, applicable law, and DoD/DoN regulations. Offerors are expected to appropriately mark each page of their submission that contains proprietary information.

White Papers and Full Proposals exceeding any of the page restrictions may not be reviewed. White Papers and Full Proposals sent by fax or e-mail will not be considered. Oral Presentation materials not conforming to the specifications within the Email notification may not be accepted.

Important Note about Project Titles: Titles given to the White Papers/Full Proposals should be descriptive of the work they cover and not be merely a copy of the title of this solicitation.

a. White Papers

White Paper Format

- *Paper Size* – 8.5 x 11 inch paper
- *Margins* – 1 inch
- *Spacing* – single or double spaced
- *Font* – Times New Roman, 12 point
- *Number of pages* – not to exceed ten (10) pages, as described in the "White Paper Content" section
- *Copies* – one (1) original, five (5) hard copies, and one electronic copy on CD-ROM (in Microsoft® Office Word, Excel or Adobe Acrobat .pdf format)

White Paper Content

- **Cover Page**: The Cover Page shall be labeled "PROPOSAL WHITE PAPER", and shall include the BAA number, proposed title, Offeror's administrative and technical points of contact, with telephone numbers, facsimile numbers, and Internet addresses, and shall be signed by an authorized officer. This shall only be one (1) page.

- **Abstract**: A very brief description of the technology including goals and objectives, and technology/thrust areas to be addressed. This section shall be no more than one (1) page.

- **Technical Concept**: A description of the technology innovation, the Program thrusts addressed (described in Section I paragraphs 6.4 and 6.5), and technical risk areas. This section shall not exceed six (6) pages. Include a detailed listing of the technical tasks/subtasks organized by year. Relate the product that results from the task/subtask, and briefly state metrics that will be met as a result of the task/subtask. In presenting the technical concept, the offeror should explain how the technology proposed is relevant to the operational context.

- **Deliverables:** Deliverables to be available for experimentation and final project deliverables shall be specifically described, including a description of proprietary components and an assertion of any data rights applicable to the deliverables. This section shall be no more than one (1) page in length.

- **Costs:** A one (1) page summary of costs segregated by both task and year.

b. Full Proposals

Full Proposal Format – Volume 1: Technical Proposal and Volume 2: Cost Proposal

- *Paper Size* – 8.5 x 11 inch paper
- *Margins* – 1 inch
- *Spacing* – single or double spaced
- *Font* – Times New Roman, 12 point
- *Number of pages* –
  - Volume 1 is limited to no more than twenty five (25) pages. Limitations within the Technical Proposal are indicated in the individual descriptions as described in the "Full Proposal Content" Section. The cover page, table of contents, abstract, executive summary, and resumes are excluded from the page limitations. Full proposals exceeding the page limitation may not be evaluated.
  - Volume 2 has no page limitations.
- *Copies* – one (1) original, five (5) hard copies, and one electronic copy on CD-ROM (in Microsoft® Office or Excel or Adobe Acrobat .pdf format).

Full Proposal Content

VOLUME 1: Technical Proposal

Volume 1 of the full proposal shall include the following sections, each starting on a new page. Sections not included in the page limitation are annotated below. Please pay attention to the page limitations for each section as described below. The page limitation for the technical proposal is twenty five (25) pages.

- **Cover Page**: *(Not included in page limitations)* This should include the words "TECHNICAL PROPOSAL" and the following:

  (a) BAA Number
  (b) Title of Proposal
  (c) Technology/thrust area to which the proposal is applicable and component of the technology/thrust interest area if the proposal is limited to a component.
  (d) Identity of Prime Contractor and Complete List of Subcontractors, if applicable
  (e) Technical Point of Contact (name, address, phone/fax, & e-mail address)
  (f) Administrative/Business Point of Contact (name, address, phone/fax, & e-mail address)
  (g) Duration of Effort and gross proposed cost by government fiscal year (differentiate basic effort and any options)

- **Table of Contents** *(Not included in page limitations)* This should address the contents of the proposal only, generally by section.
- **Abstract:** *(Not included in page limitation)* A brief description of the proposal including goals and objectives, and technology/thrust areas to be addressed.
- **Executive Summary:** *(Three (3) page maximum)* A brief summarization of the proposal including the primary areas described below. Emphasis is on the technology in support of FORCEnet, Spiral Development, integration, transition, and relation to other current programs. Finally, a brief statement why your organization would provide the best value to the government for the particular project.
- **Statement of Work**: *(Three (3) pages maximum)* A Statement of Work (SOW) clearly detailing the scope and objectives of the effort and the technical approach. It is anticipated that the proposed SOW will be incorporated as an attachment to the

resultant award instrument. To this end, such proposals must include a severable self-standing SOW "**without any proprietary restrictions"**, which can be included as an attachment to any resultant contract. When Options are contemplated, the SOW must clearly identify the tasks by separate optional task areas. Similarly, the SOW must include a section listing all the deliverables such as hardware, software, source code, executable code, pseudo code, etc, along with the reporting requirements.

- **Project Schedule and Milestones:** *(One (1) page maximum)* A summary of the schedule of events and milestones, with experimentation milestones clearly indicated.
- **Assertion of Data Rights and/or Rights in Computer Software:** *(One (1) page maximum)* For a contract award, an Offeror may provide with its proposal assertions to restrict use, release or disclosure of data and/or computer software that will be provided in the course of contract performance. The rules governing these assertions are prescribed in Defense Federal Acquisition Regulation Supplement (DFARS) clauses 252.227-7013, -7014 and -7017. These clauses may be accessed at the following web address:

  http://farsite.hill.af.mil/VFDFARA.HTM/

  The Government may challenge assertions that are provided in improper format or that do not properly acknowledge earlier federal funding of related research by the Offeror.
- **Deliverables**: *(Two (2) pages maximum)* A detailed description of the results and items to be delivered, including experimentation articles inclusive of the timeframe in which they are to be delivered. Reports and technical items resulting from meetings shall be listed as deliverables (see Section VI, paragraph 2 for required reports and meetings).
- **Management Approach:** (*Three (3) pages maximum)* A discussion of the overall approach to the management of this effort, including brief discussions of the total organization, use of personnel; project/function/subcontractor relationships; government research interfaces; and planning, scheduling and control practice. Identify which personnel and subcontractors (if any) will be involved. Include a description of the facilities that are required for the proposed effort with a description of any Government Furnished Equipment/Hardware/Software/Information required. The management plan should show the significant milestones of the technology development process. It should include obligation to provide reporting (Section VI, para 2) and support meetings (Section VII, para 3).
- **Technical Approach:** *(Ten (10) pages maximum)* The offeror shall provide a detailed plan that coherently describes the technical approach proposed for contract performance which demonstrates a technical understanding of the proposed Statement of Work (SOW). The technical approach should address each of the numbered task areas delineated in the SOW providing specific or unique techniques to be employed and anything else the offeror considers relevant in performing the SOW. The technical approach should indicate how the work will be performed, including the capabilities and resources which will be applied, what problem areas exist, the proposed solutions and a full explanation of the proposed disciplines, procedures and techniques to be followed. Emphasis should be placed upon the extent that the offeror's technical approach ensures timely delivery, and successful completion of the tasks outlined by the SOW submission.
- **Personnel:** The offeror shall provide resumes of proposed key personnel to be utilized by the contractor/subcontractor in the performance of this contract. The offeror shall ensure that the proposed personnel are fully capable of performing in an efficient, reliable and professional manner. Upon review of the resumes, if the Government questions the qualifications or competence of any person performing under this contract, the burden of proof to sustain that person's qualifications shall be upon the offeror.

- **Past Performance:** *(Two (2) pages maximum)* Past performance will consist of a description of the offeror's Government contracts (both prime and major subcontracts (those involving 25% or more of the effort)) received during the past three (3) years), which are similar to the effort being proposed. The offeror may describe any quality awards or certificates that indicate the offeror possesses a high quality process for providing desired research and development outcomes.
- **Other Agencies:** *(Not included in page limitation)* Include the name(s) of any other agencies to which the proposal has also been submitted.

VOLUME 2: Cost Proposal

The cost proposal shall consist of a cover page and two parts, Parts 1 and 2. Part 1 will provide a detailed cost breakdown of all costs by cost category and by government fiscal year for the base and each proposed option (if applicable), and Part 2 will provide a cost breakdown by task/sub-task using the same task numbers in the Statement of Work for the base and each proposed option (if applicable). All Options must be separately priced. There is no page limitation on the cost proposal.

Although not required and provided for informational purposes only, detailed instructions, entitled "Instructions for Preparing Cost Proposals for Contracts and Agreements", including a sample template for preparing costs proposals for contracts may be found at ONR's website listed under the 'Acquisition Department – Contracts & Grants Submitting a Proposal' link at:
http://www.onr.navy.mil/02/how_to.asp

Cover Page: The words "COVER PAGE" should appear on the cover page in addition to the following information (the use of SF 1411 is optional):

- BAA Number
- Title of Proposal
- Identity of Prime Offeror and Complete List of Subcontractors/Sub-Recipients (if applicable)
- Technical Point of Contact (name, address, phone/fax, E-mail address) and Business Point of Contact (name, address, phone/fax, E-Mail address)
- Duration of Effort (differentiate basic and options)
- Summary Statement of Proposed Costs; and
- Cognizant DCAA and DCMA Points of Contact, Address, Phone/Fax, E-mail address (if readily available)

Part 1: Detailed breakdown of costs by cost category by offeror's calendar/fiscal year (when options are contemplated, options must be separately identified and priced by calendar/fiscal year)

- *Direct Labor* – Individual labor categories or person with associated labor hours and unburdened direct labor rates;
- *Indirect Costs* – Fringe Benefits, Overhead, G&A, COM, etc. (must show base amount and rate);
- *Proposed government-furnished equipment or facilities* such as satellite transmission time, use of ships, aircraft, or submarines in demonstration or other appropriate experimentation, or use of Naval laboratory or test facilities. Equipment and facilities generally must be furnished by the contractor/recipient. Justifications must be provided when Government funding for such items is sought.
- *Travel* – Number of trips, destinations, durations, etc
- *Subcontracts* – A cost proposal as detailed as the Offeror's cost proposal will be required to be submitted by the subcontractor. The subcontractor's cost proposal can

be provided in a sealed envelop with the Offeror's cost proposal or will be obtained from the subcontractor prior to award;

- *Consultant* – Provide consultant agreement or other documentation which verifies the proposed loaded daily/hourly rate;
- *Materials* – Specifically itemized with costs or estimated costs. An explanation of any estimating factors, including their derivation and application, shall be provided. Include a brief description of the Offeror's procurement method to be used (competition, engineering estimate, market survey, etc.)
- *Other Direct Costs* – particularly any proposed items of equipment or facilities. Equipment and facilities generally must be furnished by the contractor/recipient. (Justifications must be provided when Government funding for such items is sought). Include a brief description of the Offeror's procurement method to be used (competition, engineering estimate, market survey, etc,)
- Proposed Fee/Profit, including fee percentage.

Part 2: Cost breakdown by task/sub-task corresponding to the same task numbers in the proposed Statement of Work. When Options are contemplated, options must be separately identified and priced by task/sub-task.

3. Significant Dates and Times

ANTICIPATED SCHEDULE OF EVENTS		
Event	**Date**	**Time**
Pre-Proposal Conference/Industry Day	29 January 2007	TBD
White Paper Due Date	12 March 2007	2:00 PM ET
Notification of Initial Navy Evaluations of White Papers	2 April 2007 *	N/A
Oral Presentation of White Papers	Week of 7 May 2007, exact date TBD	TBD
Notifications of Navy Evaluations of Oral Presentations	28 May 2007 *	N/A
Full Proposal Due Date	15 June 2007	2:00 PM ET
Notification of Selection for Award	2 July 2007 *	N/A
Contract Awards	31 Oct 2007 *	N/A

** These dates and times are estimates as of the date of this announcement. For the date and times, please refer to the C2 and CS website.*

ET = Eastern Time
TBD = To Be Determined
N/A = Not Applicable

4. Submission of Late Proposals

In accordance with FAR 15.208, any proposal, modification, or revision, that is received at the designated Government office after the exact time specified for receipt of proposals is "late" and will not be considered unless it is received before award is made, the contracting officer determines that accepting the late proposal would not unduly delay the acquisition and

(a) If it was transmitted through an electronic commerce method authorized by the announcement, it was received at the initial point of entry to the Government infrastructure not later than 5:00 P.M. one working day prior to the date specified for receipt of proposals; or

(b) There is acceptable evidence to establish that it was received at the Government installation designed for receipt of proposals and was under the Government's control prior to the time set for receipt of proposals; or

(c) It was the only proposal received.

However, a late modification of an otherwise timely and successful proposal that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

Acceptable evidence to establish the time or receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the Government office designated for receipt of proposals by the exact time specified in the announcement, and urgent Government requirements preclude amendment of the announcement closing date, the time specified for receipt of proposals will be deemed to be extend to the same time of day specified in the announcement on the first work day on which normal Government processes resume.

The contracting officer must promptly notify any offeror if its proposal, modifications, or revision was received late and must inform the offeror whether its proposal will be considered.

5. Address for the Submission of White Papers, Oral Presentation Materials, and Full Proposals:

Offerors shall submit the white papers, oral presentation materials and full proposals to the specified address below:

Primary	Secondary
Office of Naval Research One Liberty Center 875 North Randolph Street, Suite 1181 Arlington, VA 22203-1995 Attn: Code 311: Dr. Gary Toth Telephone Number (if required for Deliveries) 703-696-4961	Office of Naval Research One Liberty Center 875 North Randolph Street, Suite 1177 Arlington, VA 22203-1995 Attn: Code 311: Dr. Wendy Martinez Telephone Number (if required for Deliveries) 703-696-4320

Note: If the Offeror is using USPS, please allow an additional five (5) business days for the package to be delivered to this address due to United States Postal Service (USPS) mail being sent to a central location for special processing before it is sent to this address.

NOTE: SUBMISSIONS SENT BY FAX OR E-MAIL WILL NOT BE CONSIDERED.

V. EVALUATION CRITERIA

The Office of Naval Research plans to make multiple awards depending on their value to the Government in accordance with the evaluation criteria listed below. The following evaluation criteria apply to the White Papers, Oral Presentations and the Full Proposals.

Proposals will be selected through a technical/scientific/business decision process with technical and scientific considerations being more important. Even though cost is of less importance than the technical factors combined, it will not be ignored. The degree of its importance will increase with the degree of equality of the proposals in relation to the other factors on which selection is to be based, or when the cost is so significantly high as to diminish the value of the technical superiority to the Government. The technical factors A through D are listed in descending order of importance. The sub-criteria, i.e., the "bullet" items within each of the lettered paragraphs, are of equal importance.

A. *Overall scientific and technical merits of the proposal*

1. The degree of innovation and ability to deliver technology that will improve warfighting capabilities.
2. The soundness of technical concept.
3. The offeror's awareness of the state of the art and understanding of the scope of the problem and the technical effort needed to address it.
4. The extent to which the government will have full intellectual property rights, or at least unlimited government purpose intellectual property rights to the deliverables received. If the proposal includes proprietary restrictions on government use of intellectual property, the proposal shall show how components with restricted intellectual property rights are integrated into a Service Oriented Architecture.

B. *Naval relevance, anticipated contributions of the proposed technology to FORCEnet and network centric warfare operations, and transition potential (to the extent possible)*.

The proposal will also be evaluated on the degree to which it shows the connection between the proposed technology development and the unclassified operational context document described in Section I, paragraph 6.1.

C. *Offeror's capabilities, related experience, and past performance, including the qualifications, capabilities and experience of the proposed principal personnel*.

1. The quality of technical personnel proposed are consistent with the work proposed.
2. The offeror's experience in relevant efforts with similar resources.
3. The ability to manage the proposed effort.

D. *Management Plan.*

The Management Plan is not required in the white paper or for the oral presentations. However, the Management Plan is required for the Full Proposal and will be evaluated in accordance with the following criteria:

1. Plan is in milestone format with succinct factual description of how achievement of milestones will be managed.
2. Relationship between cost and milestone achievement is defined.
3. Estimate of technical, schedule and cost risk is stated with risk management plan provided.

E. *The Realism of the Proposed Cost.*

1. Total cost relative to benefit.
2. Realism of cost levels for facilities and staffing.

Socio-Economic Merits: For proposed awards to be made as contracts to large businesses, the socio-economic merits of each proposal will be evaluated based on the extent of the Offeror's commitment in providing meaningful subcontracting opportunities for small businesses, small disadvantaged businesses, woman-owned small businesses, HUBZone small businesses, veteran-owned small businesses, service disabled veteran-owned small businesses, historically black colleges and universities, and minority institutions.

Industry-Academia Partnering – ONR highly encourages partnering between industry and academia with a view toward speeding the incorporation of new science and technology into fielded systems. Proposals that utilize industry-academic partnering which enhances the development of novel S&T advances will be given favorable consideration.

Industry-Government Partnering - ONR highly encourages partnering among Industry and Government with a view toward speeding the incorporation of new science and technology into fielded systems. Proposals that utilize Industry-Government partnering which result in enhancements of novel S&T, will be given favorable consideration.

Government agencies/laboratories cannot be the prime contractor. Offerors proposing to partner with Government Laboratories or Federally Funded Research and Development Centers (FFRDCs) should provide the "partnering proposal" from the Government or FFRDC entity with its proposal. However these partnering proposals must be severable from the Industry or Academia main proposal since ONR will fund these partnering proposals directly. As such, Industry/Academia cost proposals should not include any direct costs or pass-through fees (indirect costs or fixed fee) associated with the partnering proposal from the Government Laboratory or FFRDC.

Evaluation of Options: The Government will evaluate for award purposes by adding the total cost for all options to the total cost for the basic requirement. The evaluation of options will not obligate the Government to exercise the option(s).

2. Evaluation Panel

White papers, oral presentation materials, and full proposals submitted under this BAA will be protected from unauthorized disclosure in accordance with FAR 3.104-5 and 15.207. Potential Offerors should understand that government technical experts drawn from the Office of Naval Research, the Naval systems commands, Navy warfare centers, the Naval Research Laboratory (NRL), and other Naval and Defense activities/agencies will evaluate the white papers, oral presentations, and full proposals.

The Government may use selected support personnel as subject matter expert technical consultants to assist in providing both technical expertise and administrative support regarding white papers, oral presentation materials, and full proposals resulting from this announcement. Similarly, support contractors may be utilized as subject matter experts in the evaluation of cost proposals. However, proposal selection and award decisions are solely the responsibility of Government personnel. Each support contractor's employee having access to the submissions in response to this BAA will be required to sign a non-disclosure agreement prior to receipt in order to protect proprietary and source-selection information.

VI. AWARD ADMINISTRATION INFORMATION

1. Additional Requirements

- *North American Industry Classification System (NAICS) Code* – The North American Industry Classification System (NAICS) Code for this solicitation is 541710 with a small business size standard of 500 employees.

- *CCR* - Successful Offerors not already registered in the Central Contractor Registry (CCR) will be required to register in CCR prior to award of any grant, contract, cooperative agreement, or other transaction. Information on CCR registration is available at http://www.onr.navy.mil/02/ccr.htm.

- *Certifications* - In accordance with FAR 4.1201, prospective contractors shall complete and submit electronic annual representations and certifications at http://orca.bpn.gov. The Online Representations and Certifications Application (ORCA) must be supplemented by the DFARS and contract specific representations and certifications found at http://www.onr.navy.mil/02/rep_cert.asp.

- *Subcontracting Plans* – Successful contract proposals that exceed $550,000, submitted by all but small business concerns, will be required to submit a Small Business Subcontracting Plan in accordance with FAR 52.219-9.

2. Deliverables/Reports

The following is a sample of deliverables that could be required under a research effort. The following deliverables, primarily in contractor format, are anticipated as necessary.

- Software
- Software source codes
- Software executable codes
- Application Programming Interface (API)
- User manuals
- Software functional description document
- Software configuration description
- Software installation manuals
- Executable or binaries complete with software libraries
- Execution plan
- Technical Progress reports at regular time intervals (monthly or quarterly, but not both) as specified in the award document, including detailed technical data, algorithms, software (source code, executable code, pseudo code, etc. cross referenced to the applicable deliverable.)
- Financial progress reports at regular time intervals as specified in the award document.
- Presentation Material(s)
- Other Documentation or Reports
- Final Technical Report

However please note that specific deliverables (that may include software and hardware deliverables) should be proposed by each Offeror and finalized during negotiations. Research performed under contracts may also include the delivery of software, prototypes, and other hardware deliverables.

VII. OTHER INFORMATION

1. Government Property/Government Furnished Equipment (GFE) and Facilities

Each Offeror must provide a very specific description of any equipment/hardware that it needs to acquire to perform the work. This description should indicate whether or not each particular piece of equipment/hardware will be included as part of a deliverable item under the resulting award. Also, this description should identify the component, nomenclature, and configuration of the equipment/ hardware proposed to be purchased for this effort. It is the Government's desire to have the contractors purchase the equipment/hardware for deliverable items under their contract. The purchase on a direct reimbursement basis of special test equipment or other equipment that is not included in a deliverable item will be evaluated for allowability on a case-by-case basis. Maximum use of Government integration, test, and experiment facilities is encouraged in each of the Offeror's proposals.

Offerors are expected to provide all facilities (equipment and/or real property) necessary for the performance of the proposed effort. Any direct charge of facilities, not including deliverable items, must be included in the offeror's proposal and approved in advance by the cognizant Government official. After contract award, requests to use integration, test, and experiment facilities will be considered on a case by case basis based on availability and justification of need.

2. Security Classification

ONR will accept only unclassified proposals. The proposal shall include a severable, self-standing Statement of Work, which contains only unclassified information and does not include any propriety restrictions as described in Section IV, paragraph 2.

In order to facilitate intra-program collaboration and technology transfer, the Government will attempt to enable awardees to work at the unclassified level to the maximum extent possible. However, access to and storage of some classified information will be required under this program. Awardees must be specific as to max level of classification and location of work.

If awardees use unclassified data in their deliveries and experimentation regarding a potential classified project, they should use methods and conventions consistent with those used in classified environments. Such conventions will permit the various subsystems and the final system to be more adaptable in accommodating classified data in the transition system.

3. Project Meetings and Reviews

Individual reviews between the ONR sponsor and the performer may be held as necessary. Status reviews may also be held to provide a forum for reviews of the latest results from experiments and any other incremental progress. These meetings will be held at various sites throughout the country. For costing purposes, Offerors should assume that 20% of these meetings will be at or near ONR, Arlington VA and 80% at other contractor or government facilities. Interim meetings are likely, but these will be accomplished via video telephone conferences, telephone conferences, or via web-based collaboration tools.

4. DFARS 252.204-7000 Disclosure of Information and Information Releaseability

DFARS Clause 252.204-7000 entitled "Disclosure of Information" will be incorporated into all resulting contracts under this BAA. Due to the potential sensitivity of the release of unclassified information regardless of the medium used, all information/data must be approved by the C2 and CS Program Officer PRIOR the public release of any and all information generated under resulting contracts and/or related to this program.

5. Department of Defense High Performance Computing Program

The DoD High Performance Computing Program (HPCMP) furnishes the DoD S&T and DT & E communities with use-access to very powerful high performance computing systems. Awardees of ONR contracts, grants, and assistance instruments may be eligible to use HPCMP assets in support of their funded activities if ONR Program Officer approval is obtained and if security/screening requirements are favorably completed. Additional information and an application may be found at http://www.hpcmo.hpc.mil/.

6. Use of Animals and Human Subjects in Research

If animals are to be utilized in the research effort proposed, the Offeror must complete a DOD Animal Use Protocol with supporting documentation (copies of AAALAC accreditation and/or NIH OLAW Animal Welfare Assurance approval letter, IACUC approval, research literature database searches, and the two most recent USDA inspection reports) prior to award. Similarly, for any proposal for research involving human subjects the Offeror must submit prior to award: documentation of approval from an Institutional Review Board (IRB); IRB-approved informed consent form; IRB-approved research protocol; an executive summary of planned research (one-half to one page in length); proof of completed human research training (e.g., training certificate, institutional verification of training, etc.); an application for a DoD Navy Addendum to the Offeror's DHHS-issued Federalwide Assurance (FWA) or the Offeror's DoD Navy Addendum number. The forms for assurance applications can be found at http://www.onr.navy.mil/sci_tech/34/343/. If the research is determined by the IRB to be greater than minimal risk, the Offeror also must provide the name and contact information for the independent medical monitor. [Note: for research involving human subjects that is greater than minimal risk, administrative procedures to protect human subjects from medical expenses (not otherwise provided or reimbursed) that are the direct result of participation in a research project must be addressed. Documentation describing those procedures may be requested. For additional information on this topic please email 343_contact@onr.navy.mil.] For assistance with submission of animal and human subject research related documentation, contact the ONR Animal/Human Use Administrator at (703) 696-4046.

7. Organizational Conflict of Interest

The parties acknowledge that, during performance of the contract resulting from this BAA, the Contractor may require access to certain proprietary and confidential information (whether in its original or derived form) submitted to or produced by the Government. Such information includes, but is not limited to, business practices, proposals, designs, mission or operation concepts, sketches, management policies, cost and operating expense, technical data and trade secrets, proposed Navy budgetary information, and acquisition planning or acquisition actions, obtained either directly or indirectly as a result of the effort performed on behalf of ONR. The Contractor shall take appropriate steps not only to safeguard such information, but also to prevent disclosure of such information to any party other than the Government. The Contractor agrees to indoctrinate company personnel who will have access to or custody of the information concerning the nature of the confidential terms under which the Government received such information and shall stress that the information shall not be disclosed to any other party or to Contractor personnel who do not need to know the contents thereof for the performance of the contract. Contractor personnel shall also be informed that they shall not engage in any other action, venture, or employment wherein this information will be used for any purpose by any other party.

8. Command, Control and Combat Systems S&T Website

The C2 and CS S&T website http://www.onr.navy.mil/forcenet_c2csfy08/ and the ONR website (http://www.onr.navy.mil) provide additional information related to this BAA and will be the primary means of publicizing all relevant information concerning this BAA. All interested parties are encouraged to visit both websites regularly.