



Broad Agency Announcement Number 11-004

Navigation and Timekeeping Technology

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), other solicitation, or additional information regarding this announcement will not be issued.

The Office of Naval Research (ONR) will not issue paper copies of this announcement. The ONR reserves the right to select for award all, some or none of the proposals in response to this announcement. The ONR reserves the right to fund all, some or none of the proposals received under this BAA. 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.

I. GENERAL INFORMATION:

- 1. Agency Name** - Office of Naval Research
- 2. Research Opportunity Title** - Navigation and Timekeeping Technology
- 3. Program Name** - Navigation and Timekeeping Technology
- 4. Research Opportunity Number** – 11-004
- 5. Response Date** –

White Papers: 12/06/2010

Full Proposals: 04/11/2011

6. Research Opportunity Description -

The Office of Naval Research (ONR) is interested in receiving proposals for Navigation and Timekeeping Technology.

In concert with the guidance promulgated by the Office of the Assistant Secretary of Defense National Information Infrastructure (ASD - NII), concerning Navigation Warfare (NAVWAR), which deals with the mitigation of denial of Positioning, Navigation and Timing (PNT), this effort is concerned with the first two of the three elements: Electronic Protection (EP) and Electronic Support (ES). Please note that this effort does not address Electronic Attack (EA).

Precision navigation and timekeeping are essential for many modern naval and maritime systems, and it is essential that navigation and timekeeping services be made available to platforms and weapons at the highest level of accuracy and with the highest possible confidence at reasonable cost. Lack of precise navigation and timekeeping technologies may jeopardize the success of military operations. For example, the Global Positioning System (GPS) provides highly accurate position/time information at low cost and, due to this, GPS has become the technology of choice for many users. Unfortunately, the GPS signal is a low-power signal that is susceptible to interference. Therefore there is a need for (1) affordable approaches to make GPS more reliable/robust, (2) methods of quantifying threats to GPS performance that may be termed "situational awareness", and (3) affordable and reliable precision navigation/timing alternatives to GPS.

In the past nine (9) years, ONR has been conducting a series of Science and Technology Projects in the following three (3) technology areas; GPS Anti-Jam Technology, Precision Time and Time Transfer Technology, and Non-GPS Navigation Technology.

In FY2012, the ONR Navigation and Timekeeping Technology Program seeks new and innovative navigation technologies that will provide more accurate, reliable, maintainable, and affordable systems for Naval air, surface, subsurface, and ground platforms and forces. The following paragraphs list areas of concentration in this program.

I. GPS Anti-Jam Technology - The following are topics of interest:

a. New concept of GPS Modernized User Equipment (MUE/MGUE) Controlled Radiation Pattern Antennas (CRPA).

b. New concept of GPS MUE/MGUE antenna electronics. Multi-element antenna control, beam-forming/null-steering and associated signal processing techniques such as Space-Time Adaptive Processing/ Space-Frequency Adaptive Processing (STAP/SFAP). Multi-beam-steering antenna electronics may be an aspect of this work.

c. Adaptive polarization nuller.

- d. Cooperative threat geo-location algorithms for multiple-platforms, and networked platforms. May include combining remotely located GPS antennas for cooperative processing.
- e. GPS anti-tamper approaches.
- f. New GPS MUE/MGUE with Electronic Warfare (EW) situational awareness and electronic support measures (ESM). This effort may include GPS device/algorithms to fuse data from multiple sensors/multiple receivers.
- g. Advanced GPS-Inertial Measurement Unit (IMU) integration algorithms.
- h. Special purpose monitoring of M-Code GPS signals with an M-Code receiver (this device would monitor all GPS channels and all GPS frequencies: L1, L 2, L5. Value of this approach may involve greater jam and spoofer immunity, may provide an evaluative tool in field operations, etc.
- i. Advanced Receiver Autonomous Integrity Monitoring (RAIM)-like device for more stringent error bounds for GPS parameters (e.g., time, position, velocity, angle, etc.) than those of existing devices.
- j. Multi-Global Navigation Satellite System (GNSS) (GPS, Galileo, etc.) military receivers; International collaboration with respect to MUE/MGUE.
- k. Personal navigation in enclosed areas such as aircraft carriers, large adversarial vessels (as would be used by boarding parties) and large buildings using various sensors including GPS).
- l. Coherent Signals in Space (SIS) Processing. Signal-in-space consists of clock corrections and orbit data broadcast by satellite. Performance is driven by the stability of a satellite's atomic clock, the fidelity of the clock, orbit estimation and prediction, and the update-frequency of the navigation message uploads.
- m. Consideration given to "two-signal" GPS navigation when navigating platform has independent, miniature atomic clock and accurate knowledge of its altitude. An independent miniature atomic clock will be provided as a GFE to the successful offerors.
- n. Next generation GPS MUE/MGUE for anti-jam/anti-spoof, which handles larger numbers of desired and interference signals; and an updated resource management of multiple trackers and correlators. This effort may include algorithms to detect spoofing during acquisition, tracking, and navigation.
- o. The ability to have GPS receivers handle spot beam signals; the use of automatic gain control and the development of a concept-of-operations (e.g., the notification of initiation and the notice of discontinuation of spot beam use. This effort may include methods of interfacing the GPS MUE/MGUE with enhanced spot-beam power levels.

p. Applications of National Airspace Air Traffic Control Automatic Dependent Surveillance-B (ADS-B) to Naval platforms.

II. Precision Time and Time Transfer Technology - The following are topics of interest:

a. The development of next generation robust, small-size (3 cubic centimeter or less), low power (100 m-Watt or less), atomic clocks of adequate accuracy (Allen Deviation of 10⁻¹¹ to 10⁻¹² in first 10 second integration) for use in GPS timekeeping back-up, GPS signal re-acquire, and for incorporation into inertial navigation systems.

b. The development of a time-scaling/steering approach for the U.S. Naval Observatory (USNO) master clocks.

c. The development of a time-scaling approach for multiple tactical atomic clocks aboard ships and other platforms.

d. A combination of a small atomic clock with short term (24 hours) stability of exp10⁻¹² aided by Rubidium (Rb) atomic clock with long-term stability (100 days) to achieve overall stability of exp10⁻¹².

III. Non-GPS Navigation Technology - The following are topics of interest:

a. High-sensitivity quantum physics-based magnetometer for underwater navigation.

b. Application of the superconducting laboratory magnetometer to navigation.

c. Small, portable quantum physics-based gravimeter/accelerometer for underwater navigation application.

d. Bathymetric underwater navigation device by Sound Navigation and Ranging (sonar) and Light Detection and Ranging (lidar).

e. Precise navigation in littoral sub-surface and surface navigation using various sensors such as sonar, radar and lidar.

f. Navigation capabilities based upon dead-reckoning using tactical grade atomic clocks and small, low cost inertial navigation systems that are GPS independent.

Work funded under a BAA may include basic research, applied research and some advanced technology development (ATD). With regard to any restrictions on the conduct or outcome of work funded under this BAA, ONR will follow the guidance on and definition of "contracted fundamental research" as provided in the Under Secretary of Defense (Acquisition, Technology and Logistics) Memorandum of 24 May 2010. As defined therein the definition of "contracted fundamental research", in a DoD contractual context, includes [research performed under] grants and contracts that are (a) funded by Research, Development, Test, and Evaluation Budget Activity 1 (Basic Research), whether performed by universities or industry or (b) funded by Budget

Activity 2 (Applied Research) and performed on campus at a university. The research shall not be considered fundamental in those rare and exceptional circumstances where the applied research effort presents a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense, and where agreement on restrictions have been recorded in the contract or grant.

Pursuant to DoD policy, research performed under grants and contracts that are a) funded by Budget Category 6.2 (Applied Research) and NOT performed on-campus at a university or b) funded by Budget Category 6.3 (Advanced Research) does not meet the definition of “contracted fundamental research.” In conformance with the USD(AT&L) guidance and National Security Decision Direction 189, ONR will place no restriction on the conduct or reporting of unclassified “contracted fundamental research,” except as otherwise required by statute, regulation or Executive Order. For certain research projects, it may be possible that although the research being performed by the prime contractor is restricted research, a subcontractor may be conducting “contracted fundamental research.” In those cases, it is the *prime contractor’s responsibility* in the proposal to identify and describe the subcontracted unclassified research and include a statement confirming that the work has been scoped, negotiated, and determined to be fundamental research according to the prime contractor and research performer. Normally, fundamental research is awarded under grants with universities and under contracts with industry. ATD is normally awarded under contracts and may require restrictions during the conduct of the research and DoD pre-publication review of research results due to subject matter sensitivity. As regards to the present BAA, the Research and Development efforts to be funded consist of applied research. The funds available to support awards are Budget Activities 2 and 3.

7. Point(s) of Contact -

Questions of a technical nature should be directed to the cognizant Technical Point of Contact, as specified below:

Primary Technical Point of Contact:

Dr. John C. Kim
Program Officer
Electronics, Sensors, and Network Research
Code 312
875 North Randolph Street – Suite 1119
Arlington, VA 22203-1995
E-mail Address: john.c.kim1@navy.mil

Secondary Technical Point of Contact:

Ms. Sheila Richardson
Program Analyst
Electronics, Sensors, and Network Research
Code 312
875 North Randolph Street – Suite W1105D
Arlington, VA 22203-1995
E-mail Address: sheila.richardson@navy.mil

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

Primary Business Point of Contact:
Tommy R. Albrecht
Contract Specialist
Contract and Grant Awards Management
Code BD 251
875 North Randolph Street – Suite W1278B
Arlington, VA 22203-1995
E-mail Address: tommy.albrecht@navy.mil

Secondary Business Point of Contact:
Vera M. Carroll
Acquisition Branch Head
Contract and Grant Awards Management
Code BD 251
875 North Randolph Street – Suite 1279
Arlington, VA 22203-1995
E-mail Address: vera.carroll@navy.mil

Questions of a security nature should be submitted to:

Diana Pacheco
Information Security Specialist
Office of Naval Research
Security Department, Code 43
One Liberty Center
875 North Randolph Street
Arlington, VA 22203-1995
E-mail Address: diana.pacheco@navy.mil

Note: All UNCLASSIFIED communications shall be submitted via e-mail. All questions of an UNCLASSIFIED nature to the Technical Point of Contact (POC) shall be sent via e-mail with a copy to the designated Business POC.

CLASSIFIED questions shall be handled through the ONR Security POC. Specifically, any entity wanting to ask a CLASSIFIED question shall send an email to the ONR Security POC with a copy to both the Technical POC and the Business POC stating that the entity would like to ask a CLASSIFIED question. DO NOT EMAIL ANY CLASSIFIED QUESTIONS. The Security POC will contact the entity and arrange for the CLASSIFIED question to be asked through a secure method of communication.

Questions submitted within two (2) weeks prior to a deadline may not be answered, and the due date for submission of the white paper and/or full proposal will not be extended.

Amendments will be posted to one or more of the following webpages:

- Federal Business Opportunities (FEDBIZOPPS) Webpage - <https://www.fbo.gov/>
- ONR Broad Agency Announcement (BAA) Webpage - <http://www.onr.navy.mil/en/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx>

8. Instrument Type(s) -

Awards will be issued as Contracts. ONR reserves the right to award a different instrument type if deemed to be in the best interest of the Government.

9. Catalog of Federal Domestic Assistance (CFDA) Numbers -

1
2.300

10. Catalog of Federal Domestic Assistance (CFDA) Titles -

Basic and Applied Scientific Research

11. Other Information -

FAR Part 35 restricts the use of the Broad Agency Announcements (BAAs), such as this, to the acquisition of basic and applied research and that portion of advanced technology development not related to the development of a specific system or hardware procurement. Contracts and grants and other assistance agreements made under BAAs are for scientific study and experimentation directed towards advancing the state of the art and increasing knowledge or understanding.

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

II. AWARD INFORMATION

The amount and period of performance of each selected proposal may vary depending on the research area and the technical approach to be pursued by the selected offeror.

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.

The period of performance of the awards typically ranges from one (1) to three (3) years. There will be no option periods. ONR anticipates a budget of \$3,000,000 per year for this program. ONR

plans to fund up to \$500,000 per year per award using Exploratory Development Funds (Budget Category 6.2) and Advanced Technology Funds (Budget Category 6.3). However, lower and higher cost proposals will be considered. The average funding level of past awards was approximately \$400,000 per year. The period of performance for projects may be from one to three years, with an estimated start date on or before 1 October 2011, subject to date of final award and availability of new fiscal year funds.

ONR has funded related technology development under numerous programs. Proposals that build on current or previous DoD work are encouraged. If offerors are enhancing work performed under other ONR or DoD projects, they 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

All responsible sources from academia and industry may submit proposals under this BAA. Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals. However, no portion of this BAA will be set aside for HBCU and MI participation.

Federally Funded Research & Development Centers (FFRDCs), including Department of Energy National Laboratories, are not eligible to receive awards under this BAA. However, teaming arrangements between FFRDCs and eligible principal bidders are allowed so long as they are permitted under the sponsoring agreement between the Government and the specific FFRDC.

Navy laboratories and warfare centers as well as other Department of Defense and civilian agency laboratories are also not eligible to receive awards under this BAA and should not directly submit either white papers or full proposals in response to this BAA. If any such organization is interested in one or more of the programs described herein, the organization should contact an appropriate ONR POC to discuss its area of interest. The various scientific divisions of ONR are identified at <http://www.onr.navy.mil/>. As with FFRDCs, these types of federal organizations may team with other responsible sources from academia and industry that are submitting proposals under this BAA.

Teams are also encouraged and may submit proposals in any and 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. Some topics cover export controlled technologies. Research in these areas is limited to "U.S. persons" as defined in the International Traffic in Arms Regulations (ITAR) - 22 CFR § 1201.1 et seq. (See Section VII, Other Information)

IV. APPLICATION AND SUBMISSION INFORMATION

1. Application and Submission Process - White Papers, Oral Presentation, and Full Proposals

White Papers:

The due date for white papers is no later than 2:00 PM Eastern Standard Time (EST) on 06 December 2010. Each white paper should state that it is submitted in response to this BAA. White papers shall be submitted via the United States Postal Service (USPS) with delivery confirmation or via a commercial carrier (e.g., FedEx or United Parcel Service (UPS)). The white paper must be submitted in a Microsoft Word or .PDF format provided on a CD-ROM. White papers submitted as hard copy and sent by FAX, e-mail, or hand delivery will NOT be accepted. White papers shall be submitted to the Technical Points of Contact listed in Section I. paragraph number 7 of this BAA.

Navy evaluations of the white papers will be issued via e-mail notification on or about 14 January 2011.

Oral Presentations:

Those White Papers that have been identified as being of "particular value" will be the subject of a follow-on Oral Presentation on or about 02 February 2011. This aspect of the selection process will be accomplished in a telephone conference call that will be preceded with a prepared viewgraph presentation provided to the ONR Program Officer, Dr. John C. Kim. A detailed format for the viewgraph presentation will be provided in the e-mail invitation. Offerors whose white papers are selected for Oral Presentation will be notified by e-mail not less than one (1) week prior to the commencement of the oral presentation event. After oral presentations, those successful offerors, whose technology is still considered as having "the particular value" to the Navy, will be encouraged to submit detailed technical and cost proposals. However, such encouragement, after Oral Presentations, does not assure a subsequent award.

Full Proposals:

Any offeror may submit a full proposal even if its white paper was not identified as being of "particular value". However, the Navy's initial evaluation of the white papers should give proposers some indication of whether a later full proposal would likely result in an award.

Full proposals will not be considered under this BAA unless a white paper was received before the white paper due date specified above.

The due date for receipt of Full Proposals is 2:00 PM. EST on 11 April 2011. The only acceptable methods for submission of full proposals are via the United States Postal Service (USPS) with delivery confirmation or via a commercial carrier (e.g., FedEx or United Parcel Service (UPS)). An electronic copy of the full proposal in Microsoft Word or .PDF format must be provided on a CD-ROM that is sent with the hard copies of the full proposal as outlined earlier in the BAA. Full proposals sent by FAX, e-mail or hand carried will NOT be accepted. Full proposals shall be submitted to the Technical Points of Contact listed in Section I. paragraph number 7 of this BAA.

It is anticipated that final selections will be made within twenty (20) days after proposal submission. As soon as the final proposal evaluation process is completed, each offeror will be

notified via email from the Program Officer of its selection or nonselection for an award. Proposals exceeding the proposed page limit may not be evaluated.

2. Content and Format of White Papers/Full Proposals -

White Papers and Full Proposals submitted under the BAA are expected to be unclassified. However, confidential/classified proposals are permitted. Contracts or other instruments resulting from a classified proposal will be unclassified.

Unclassified Proposal Instructions:

Unclassified White Papers and Full Proposals shall be submitted in accordance with Section IV. Application and Submission Information.

Classified Proposal Instructions:

Classified proposals shall be submitted directly to the attention of ONR's Document Control Unit at the following address and marked in the following manner:

OUTSIDE ENVELOPE (no classification marking):

“Office of Naval Research
Attn: Document Control Unit
ONR Code 43
875 North Randolph Street
Arlington, VA 22203-1995”

The inner wrapper of the classified White Paper and/or Full Proposal should be addressed to the attention of the TPOC, ONR Code 312 and marked in the following manner:

INNER ENVELOPE (stamped with the overall classification of the material)

“Program: Navigation and Timekeeping Technology
Office of Naval Research
ATTN: ONR Program Officer Name
ONR Program Officer Code
875 North Randolph Street
Arlington, VA 22203-1995”

An ‘unclassified’ Statement of Work (SOW) must accompany any classified proposal. Proposal submissions will be protected from unauthorized disclosure in accordance with FAR Subpart 15.207, applicable law, and DoD/DoN regulations. Offerors are expected to appropriately mark each page of their submission that contains proprietary information.

IMPORTANT NOTE: 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 spaced
- Font - Times New Roman, 12 point
- Max. Number of Pages permitted: 10 pages (excluding cover page, resumes, bibliographies, and table of contents)
- Format - one (1) original, plus 2 hard copies and one (1) electronic copy in Adobe PDF format on CD-ROM.

White Paper Content

- **Cover Page:** The Cover Page shall be labeled "WHITE PAPER" and shall include the BAA number, proposed title, technical points of contact, telephone number, facsimile number, and e-mail address.
- **Technical Concept:** A description of the technology innovation and technical risk areas.
The offeror shall provide a description of the technology innovation in one of the following three thrust areas, i.e., GPS AJ, Precision Time and Non-GPS Navigation, and provide discussion on technical risk areas in terms of schedule and technology.
- **Operational Naval Concept:** A description of the project objectives, the concept of operation for the new capabilities to be delivered, and the expected operational performance improvements.
- **Operational Utility Assessment Plan:** A plan for demonstrating and evaluating the operational effectiveness of the Offeror's proposed products or processes in field experiments and/or tests in a simulated environment.

b. FULL PROPOSALS

INSTRUCTIONS FOR CONTRACT, COOPERATIVE AGREEMENTS AND OTHER TRANSACTION AGREEMENTS (Does not include Grants)

NOTE: Submission instructions for BAAs issued after FY2010 have changed significantly from previous requirements. Potential Offerors are advised to carefully read and follow the instructions below. The new format and requirements have been developed to streamline and ease both the submission and review of proposals. Both the Template and the Spreadsheet have

instructions imbedded into them that will assist in completing the documents. Also, both the Template and the Spreadsheet require completion of cost-related information – both documents must be fully completed to constitute a valid proposal.

*All proposals must use ONR's Technical and Cost Proposal Template and Cost Proposal Spreadsheet. The Template can be found by following this link:
<http://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/cost-proposal.aspx>. Please note that all the attachments listed in Section III.8 of the Template can be incorporated into the Template file for submission.*

The Cost Proposal Spreadsheet can be found by following this link:
<http://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/cost-proposal.aspx>. Click on the “proposal spreadsheet” link and save a copy of the spreadsheet. Instructions for completion have been embedded into the spreadsheet. Any proposed options that are identified in the Technical and Cost Proposal Template, but are not fully priced out in the Cost Proposal Spreadsheet will not be included in any resulting contract or other transaction. If proposing options, they **must** be separately priced and separate spreadsheets should be provided for the base period and each option period.

NOTE: *The planned award date for awards made under this BAA is on or about 01 April 2012 and cost proposals should be priced accordingly.*

For proposed subcontracts or interorganizational transfers over \$150,000, Offerors must provide a separate fully completed Cost Proposal Spreadsheet in support of the proposed costs. This spreadsheet, along with supporting documentation, must be provided either in a sealed envelope with the prime's proposal or via e-mail directly to both the Program Officer and the Business Point of Contact at the same time the prime proposal is submitted. The e-mail should identify the proposal title, the prime Offeror and that the attached proposal is a subcontract, and should include a description of the effort to be performed by the subcontractor. Offerors should also familiarize themselves with the new subcontract reporting requirements set forth in Federal Acquisition Regulation (FAR) clause 52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards. From October 1, 2010 through February 28, 2011, any newly awarded subcontract must be reported if the prime contract award amount is \$550,000 or more. Starting March 1, 2011, any newly awarded subcontract must be reported if the prime contract award amount was \$25,000 or more. The pertinent requirements can be found in Section VII, Other Information, of this document.

Offerors should submit one (1) original, one (1) hard copy, and one (1) electronic copy on a DVD (in Microsoft® Word or Excel 2007 compatible format).

3. Significant Dates and Times –

Event	Date	Time
White Paper Due Date	12/06/2010	2:00 PM Eastern Local Time
Notification of White Paper Evaluation*	01/14/2011	
Oral Presentations*	02/02/2011	
Notification of Oral Presentation Evaluation*	02/23/2011	
Full Proposal Due Date	04/11/2011	2:00 PM Eastern Local Time
Notification of Selection: Full Proposals*	06/10/2011	
Awards*	04/01/2012	

**These dates are estimates as of the date of this announcement.*

NOTE: Due to changes in security procedures since September 11, 2001, the time required for hard-copy written materials to be received at the Office of Naval Research has increased. Materials submitted through the U.S. Postal Service, for example, may take seven days or more to be received, even when sent by Express Mail. Thus any hard-copy proposal should be submitted long enough before the deadline established in the solicitation so that it will not be received late and thus be ineligible for award consideration.

4. Submission of Late Proposals -

Any proposal, modification, or revision, that is received at the designated Government office after the time specified for receipt of proposals is “late” and will not be considered unless it is received before the time specified for receipt of proposals is made, the contracting officer determines that accepting the late proposal would not unduly delay 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 designated for receipt of proposals and was under the Government’s control prior to the time specified 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 stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained at the installation, or oral testimony or statements of Government personnel.

If an emergency or unanticipated event interrupts normal Government processes so that proposals 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 clock date, the time specified for receipt of proposals will be deemed to be extended 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 revisions are received late and must inform the offeror whether its proposal will be considered.

5. Address for the Submission of Full Proposals-

Hard copies of White Papers and Full Proposals for Contracts should be sent to the Office of Naval Research at the following address:

Primary Contact	Secondary Contact
Office of Naval Research Attn: Ms. Sheila Richardson ONR Department Code 312 875 North Randolph Street Arlington, VA 22203-1995	Office of Naval Research Attn: Dr. John C. Kim ONR Department Code 312 875 North Randolph Street Arlington, VA 22203-1995

V. EVALUATION INFORMATION

1. Evaluation Criteria -

Award decisions will be based on a competitive selection of proposals resulting from a scientific and cost review. Evaluations will be conducted using the following evaluation criteria:

1. Overall scientific and technical merits of the proposal;
2. The qualifications, capabilities and experience of the proposed Principal Investigator (PI), team leader and key personnel who are critical in achieving the proposal objectives;
3. The offeror's capabilities, related experience, facilities, techniques or unique combinations of these which are integral factors for achieving the proposal objectives;
4. Potential Naval relevance and contributions of the effort to the agency's specific mission.
5. The realism of the proposed costs and availability of funds.

Overall, the technical factors 1 - 4 above are significantly more important than the cost factor, with the technical factors all being of equal value. The degree of importance of cost 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 proposal's technical superiority to the Government.

The Office of Naval Research is strongly committed to providing meaningful subcontracting opportunities for small businesses, small disadvantaged businesses, woman-owned small businesses, HUBZone small businesses, veteran-owned small business, service disabled veteran-owned small businesses, historically black colleges and universities, and minority institutions through its awards. For proposed awards to be made as contracts (that exceed \$650,000) to other than small businesses, the Offeror is required to submit a Small Business Subcontracting Plan in accordance with FAR 52.219-9. For proposed awards made as contracts to small businesses at any value or to other than Small Businesses that are less than \$650,000, the Offeror shall provide a statement which demonstrates how they intend to provide meaningful subcontracting opportunities to support this policy.

2. Evaluation Panel -

Technical and cost proposals submitted under this BAA will be protected from unauthorized disclosure in accordance with FAR 3.104-4 and 15.207. The cognizant Program Officer and other Government scientific experts will perform the evaluation of technical proposals. Restrictive notices notwithstanding, one or more support contractors may be utilized as subject-matter-expert technical consultants. However, proposal selection and award decisions are solely the responsibility of Government personnel. Each support contractor's employee having access to technical and cost proposals submitted in response to this BAA will be required to sign a non-disclosure statement prior to receipt of any proposal submissions

VI. AWARD ADMINISTRATION INFORMATION

1. Administrative Requirements -

- The North American Industry Classification System (NAICS) code - The NAICS code for this announcement is "541712" with a small business size standard of "500 employees".
- Central Contractor Registration: All Offerors submitting proposals or applications must:
 - (a) be registered in the Central Contractor Registration (CCR) prior to submission;
 - (b) maintain an active CCR registration with current information at all times during which it has an active Federal award or an application under consideration by any agency; and
 - (c) provide its DUNS number in each application or proposal it submits to the agency.
- Subcontracting Plans: Subcontracting Plans shall be submitted by all but small business concerns for proposals that exceed \$650,000 in accordance with FAR Part 19 and clause 52.291-9.

VII. OTHER INFORMATION

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

Government research facilities and operational military units are available and should be considered as potential government-furnished equipment/facilities. These facilities and resources are of high value and some are in constant demand by multiple programs. It is unlikely that all facilities would be used for any one specific program. The use of these facilities and resources will be negotiated as the program unfolds. Offerors submitting proposals for contracts, cooperative agreements and Other Transaction Agreements should indicate in the Technical and Cost Proposal Template, Section II, Blocks 8 and 9, which of these facilities are critical for the project's success. Offerors submitting proposals for grants should address the need for government-furnished facilities in their technical proposal.

2. Security Classification

In order to facilitate intra-program collaboration and technology transfer, the Government will attempt to enable technology developers to work at the unclassified level to the maximum extent possible. If access to classified material will be required at any point during performance, the Offeror must clearly identify such need by completing Section II, Block 11, DD 254 – Security Classification Specification.

3. Organizational Conflicts of Interest

All Offerors and proposed subcontractors must affirm whether they are providing scientific, engineering, and technical assistance (SETA) or similar support to any ONR technical office(s) through an active contract or subcontract. All affirmations must state which office(s) the offeror supports and identify the prime contract numbers. Affirmations shall be furnished at the time of proposal submission. All facts relevant to the existence or potential existence of organizational conflicts of interest (FAR 9.5) must be disclosed. The disclosure shall include a description of the action the offeror has taken or proposes to take to avoid, neutralize, or mitigate such conflict. In accordance with FAR 9.503 and without prior approval, a contractor cannot simultaneously be a SETA and a research and development performer. Proposals that fail to fully disclose potential conflicts of interests or do not have acceptable plans to mitigate identified conflicts will be rejected without technical evaluation and withdrawn from further consideration for award. If a prospective offeror believes that any conflict of interest exists or may exist (whether organizational or otherwise), the offeror should promptly raise the issue with ONR by sending his/her contact information and a summary of the potential conflict by e-mail to the Business Point of Contact in Section I, item 7 above, before time and effort are expended in preparing a proposal and mitigation plan. If, in the sole opinion of the Contracting Officer after full consideration of the circumstances, any conflict situation cannot be effectively avoided or mitigated, the proposal may be rejected without technical evaluation and withdrawn from further consideration for award under this BAA.

4. Project Meetings and Reviews

Individual program reviews between the ONR sponsor and the performer may be held as necessary. Program status reviews may also be held to provide a forum for reviews of the latest results from experiments and any other incremental progress towards the major demonstrations. These meetings will be held at various sites throughout the country. For costing purposes, offerors should assume that 40% of these meetings will be at or near ONR, Arlington, VA and 60% 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.

5. Executive Compensation and First-Tier Subcontract Reporting

Section 2(d) of the Federal Funding Accountability and Transparency Act of 2006 (Pub. L. No. 109-282), as amended by section 6202 of the Government Funding Transparency Act of 2008 (Pub. L. 110-252), requires the Contractor to report information on subcontract awards. The law requires all reported information be made public, therefore, the Contractor is responsible for notifying its subcontractors that the required information will be made public.

Unless otherwise directed by the Contracting Officer, by the end of the month following the month of award of a first-tier subcontract with a value of \$25,000 or more, (and any modifications to these subcontracts that change previously reported data), the Contractor shall report the following information at <http://www.fhrs.gov> for each first-tier subcontract:

- (a) Unique identifier (DUNS Number) for the subcontractor receiving the award and for the subcontractor's parent company, if the subcontractor has one.
- (b) Name of the subcontractor.
- (c) Amount of the subcontract award.
- (d) Date of the subcontract award.
- (e) A description of the products or services (including construction) being provided under the subcontract, including the overall purpose and expected outcomes or results of the subcontract.
- (f) Subcontract number (the subcontract number assigned by the Contractor).
- (g) Subcontractor's physical address including street address, city, state, and country. Also include the nine-digit zip code and congressional district.
- (h) Subcontractor's primary performance location including street address, city, state, and country. Also include the nine-digit zip code and congressional district.
- (i) The prime contract number, and order number if applicable.

- (j) Awarding agency name and code.
- (k) Funding agency name and code.
- (l) Government contracting office code.
- (m) Treasury account symbol (TAS) as reported in FPDS.
- (n) The applicable North American Industry Classification System (NAICS) code.

By the end of the month following the month of a contract award, and annually thereafter, the Contractor shall report the names and total compensation of each of the five most highly compensated executives for the Contractor's preceding completed fiscal year at <http://www.ccr.gov>, if –

- (a) In the Contractor's preceding fiscal year, the Contractor received –
 - (i) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and
 - (ii) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and
- (b) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>).

Unless otherwise directed by the Contracting Officer, by the end of the month following the month of a first-tier subcontract with a value of \$25,000 or more, and annually thereafter, the Contractor shall report the names and total compensation of each of the five most highly compensated executives for each first-tier subcontractor for the subcontractor's preceding completed fiscal year at <http://www.fsr.gov>, if –

- (a) In the subcontractor's preceding fiscal year, the subcontractor received –
 - (i) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and
 - (ii) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and
- (b) The public does not have access to information about the compensation of the

executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>).

If the Contractor in the previous tax year had gross income, from all sources, under \$300,000, the Contractor is exempt from the requirement to report subcontractor awards. Likewise, if a subcontractor in the previous tax year had gross income from all sources under \$300,000, the Contractor does not need to report awards to that subcontractor.

6. Disclosure of Information

Awards made under this BAA will include DFARS Clause 252.204-7000 entitled “Disclosure of Information”.