



**Office of Naval Research
Broad Agency Announcement Number 11-020**

Protection of Electronics Systems

INTRODUCTION:

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2) and 35.016. 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 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 -** Protection of Electronics Systems
- 3. Program Name -** Protection of Electronics Systems Discovery and Invention (D&I)
- 4. Research Opportunity Number -** 11-020
- 5. Response Date -**

White Papers: 5/31/2011
Full Proposals: 9/28/2011

6. Research Opportunity Description -

The goal of the Protection of Electronics Systems Discovery and Invention (D&I) Program is to develop innovative techniques and technologies to deter the reverse engineering and exploitation of our military's critical technology in order to impede technology transfer and alteration of system capability and prevent the development of countermeasures to U.S. systems.

The Office of Naval Research (ONR) seeks proposals for efforts that will result in robust, long-lived, layered technologies capable of lengthy operation in unattended and un-powered environments. The proposed technologies shall have a very high probability of tamper detection, a very low probability of false alarm, be undetectable in the host system, and provide no indication when a tamper event has been detected.

White papers and subsequent full proposals should focus on only ONE of the research topics listed below:

1. New Approaches to Memory Erasure - Technologies are sought for completely and irreversibly erasing data stored in non-volatile memory. The erasure technology shall not use energetics or produce damage beyond the active portion of the memory device. It is desirable that the erasure technology work with current memory technologies, though erasure technology that works with other memory technologies will be considered. Must be capable of operating reliably in a military environment, including -55°C to $+125^{\circ}\text{C}$ temperature range, for 15 to 20 years using very limited electrical power.
2. Performance Enhancements of High Density 3D Packages - Technologies are sought for enhancing the performance of high density 3D electronics package technology, including enhanced cooling, minimized electromagnetic interference between internal components, and minimized external electromagnetic emissions.
3. High Density 3D Electronics Packaging for Secure Processing - Technologies are sought for high density 3D electronics packaging capable of integrating into a single package the multiple commercial-off-the-shelf (COTS) and custom devices necessary for a complete secure processing system (e.g., COTS Processors, fine-pitch ball grid arrays (FPGAs), dynamic random-access memory (DRAM), static random-access memory (SRAM) and Anti-Tamper (AT) protection measures). The combination of the high density electronics packaging and AT protection measures shall be capable of achieving protection against open-source reverse engineering techniques and processes. Unencrypted data lines shall be minimized and shall be located deep within the interior of the package to prevent/minimize access. It is highly desirable that the package utilize vertical connection technologies such as Through Mold Vias (TMVs) and Through Silicone Vias (TSVs). The package shall utilize a fine-pitch ball grid array (FBGA) (1 mm pitch) for input and output. The package shall incorporate AT volume protection, sensors, and penalties. The package design shall enhance cooling, minimize

electromagnetic interference between internal components, and minimize external electromagnetic emissions. The package must be capable of operating reliably in a military environment, including -55°C to +125°C temperature range, for 15 to 20 years. Three prototype systems shall be produced, tested and delivered to the Government for evaluation.

4. Reliable Physical Unclonable Functions (PUFs) - Techniques are sought for implementing reliable intrinsic Physical Unclonable Functions (PUFs) in FPGAs and then using these PUFs to (1) provide FPGA authentication and (2) generate volatile keys for Advanced Encryption Standards (AES) encryption/decryption. Must be capable of operating reliably in a military environment for 15 to 20 years, including -55°C to +125°C temperature range, and an operating voltage range equal to that of the FPGA.

7. Point(s) of Contact -

Questions of a technical nature should be submitted to:

Primary Point of Contact:

Ms. Betsy B. DeLong

ONR Code 31

Deputy, Transition & Innovative Naval Prototypes, C4ISR Department

Office of Naval Research

875 N. Randolph Street, Suite 1114

Arlington, VA 22203-1995

Email: betsy.delong@navy.mil

Secondary Point of Contact:

Dave Hollinberger

Naval Surface Warfare Center Crane

300 Highway 361

Building 3395 – Floor 1

Room 138 – Cubicle D15

Crane, IN 47522-5001

Email: david.hollinberger@navy.mil

Questions of a business nature should be submitted to:

Primary Point of Contact:

Rebecca Foster

Contract Specialist

Office of Naval Research

Code BD 0251

875 North Randolph Street, Suite W1272D

Arlington, VA 22203-1995

Email: rebecca.d.foster@navy.mil

Secondary Point of Contact:

Vera M. Carroll
Acquisition Branch Head
Office of Naval Research
Code BD 0251
875 North Randolph Street, Suite 1279
Arlington, VA 22203-1995
Email: vera.carroll@navy.mil

Questions of a security nature should be submitted to:

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

Note: All UNCLASSIFIED communications shall be submitted via e-mail. All questions of an UNCLASSIFIED to the Primary and Secondary Technical Point of Contacts (POCs) shall be sent via e-mail with a copy to the designated Primary and Secondary Business POCs. The subject line of the e-mail shall include the BAA Number and Program Name (i.e., BAA Number 11-020 – Protection of Electronics Systems). Questions should be sent via e-mail and any questions received by any other means will not be responded to. Answers to questions will be answered in the form of an amendment to the announcement.

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 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 web pages:

- 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) - Contracts

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 - Not Applicable.

10. Catalog of Federal Domestic Assistance (CFDA) Titles – Not Applicable

11. Other Information –

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. Non-fundamental research 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 will consist of basic research and applied research. The funds available to support awards are Budget Activity 1 and 2.

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) may 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 research topics.

ONR anticipates a budget of up to \$3,000,000.00 per annum during this program. ONR plans to fund \$500,000.00 to \$1,000,000.00 per year, per award using Discovery and Invention (D&I) (Budget Category 6.1 and 6.2) funds. However, lower and higher cost efforts will be considered. The period of performance for projects may be from one (1) to three (3) years, with an estimated start date of April 2012, subject to date of final award and availability of new fiscal year funds.

ONR has funded related technology development under numerous programs. 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.

For the past three (3) years Congress has placed limits on the percentage of indirect costs that can be paid by the government using basic research (6.1) funds. Currently indirect costs paid under contracts and grants for the performance of basic research may not

exceed 35 percent. It is unknown at present whether a similar indirect cost restriction will apply to 6.1 funds in FY 2011 or thereafter.

In the case of proposals funded as basic research, ONR may utilize peer reviewers from academia, industry, and Government agencies to assist in the periodic appraisal of performance under the awards, as outlined in ONR Instruction 3966.1. Such periodic program reviews monitor the cost, schedule and technical performance of funded basic research efforts. The reviews are used in part to determine which basic research projects will receive continued ONR funding. Peer reviewers who are not U.S. Government employees must sign nondisclosure agreements before receiving full or partial copies of proposals and reports submitted by the basic research performers.

In the case of funded proposals for the production and testing of prototypes, ONR may during the contract period add a contract line item or contract option for the provision of advanced component development or for the delivery of additional prototype units. However, such a contract addition shall be subject to the limitation contained in Section 819 of the National Defense Authorization Act for Fiscal Year 2010.

The award(s) will be made for the full performance period requested. Options will not be utilized.

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.

University Affiliated Research Centers are eligible to submit proposals under this BAA unless precluded from doing so by their Department of Defense UARC contracts.

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 may 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 Paper, Oral Presentation, and Full Proposals

White Papers: The due date for white papers is no later than 2:00 PM Eastern Daylight Time (EDT) on Tuesday, 31 May 2011. White papers (one (1) original, plus one (1) hard copy, and one (1) electronic copy on a CD-ROM) must be submitted via United States Postal Service or a commercial carrier. White papers should be addressed to the attention of Mr. Chuck Cammuse and sent to the address listed in Section IV, Item 5: Address for the Submission of White Papers and Full Proposals. Offerors may also hand deliver their white papers provided they pre-arrange a time and date, at least two (2) business days prior to the date and time for which white papers are due, with Mr. Cammuse at chuck.cammuse@navy.mil. **White papers sent by fax or email will not be considered.** If an Offeror does not submit a white paper before the specified due date and time, it is not eligible to participate in the remaining Full Proposal submission process and is not eligible for Fiscal Year (FY) 2012 funding. Each white paper should state that it is submitted in response to this BAA and cite the specific Research Opportunity Description topic that the white paper is addressing (white papers should focus on only one topic area per paper).

White Paper Evaluation/Notification: Navy evaluations of the white papers will be issued via email notification on or about Wednesday, 13 July 2011. An expanded oral presentation will be subsequently requested from those Offerors whose proposed technologies have been identified as being of "particular value" to the Navy. However, any such request does not assure a subsequent award. Any Offeror whose white paper technology was not identified as being of "particular value" to the Navy is ineligible to make an oral presentation or to submit a full proposal under this BAA.

Oral Presentations: ONR requests that Principal Investigators (PIs) provide expanded presentations of their selected white papers. The purpose of the oral presentation is to provide additional information and address how the proposed technology will affect military applications. The requested oral presentations are tentatively scheduled for Wednesday, 10 August 2011. The time, location, and briefing format of the oral presentations, if requested, will be provided at a later date via email notification.

Oral Presentation Evaluation/Notification: Navy evaluations of the oral presentations will be issued via email notification on or about Friday, 19 August 2011. A full proposal will be subsequently encouraged from those Offerors whose proposed technologies have been identified through the aforementioned email as still being of "particular value" to the Navy. However, any such request does not assure a subsequent award. Any Offeror whose oral presentation was not identified as still being of "particular value" to the Navy is ineligible to submit a full proposal under this BAA.

Full Proposals: The due date for receipt of Full Proposals is 2:00 PM (EDT) on Wednesday, 28 September 2011. It is anticipated that final selections will be made about two (2) months after full proposal submission. As soon as the final full proposal evaluation process is completed, PI's will be notified via email of their project's selection or non-selection for FY12 funding. Full proposals received after the published due date and time will not be considered for funding in FY12.

NOTE: Full proposals (one (1) original, plus one (1) hard copy, and one (1) electronic copy on a CD-ROM) must be submitted via United States Postal Service or a commercial carrier (FedEx and UPS) to the attention of Mr. Chuck Cammuse at the address provided in Section IV, Item 5: Address for the Submission of White Papers and Full Proposals. **Full proposals sent by fax or email will not be considered.** Proposals may, however be hand delivered to Mr. Cammuse provided they pre-arrange a time and date, at least two (2) business days prior to the date and time for which full proposals are due, with Mr. Cammuse at chuck.cammuse@navy.mil.

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 responses are permitted. Contracts or other instruments resulting from a classified proposal will be unclassified.

Classified Proposal Instructions:

Classified White Papers and Full 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
Document Control Unit
ONR Code 43
875 North Randolph Street
Arlington, VA 22203-1995”

The inner wrapper of the classified proposal should be addressed to the attention of the TPOC (Ms. Betsy DeLong) ONR Code 31 and marked in the following manner:

INNER ENVELOPE (stamped with the overall classification of the material)
Program: Protection of Electronics Systems
Office of Naval Research
Attn: Ms. Betsy DeLong
ONR Code: 31
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
- Maximum. Number of Pages permitted: eight (8) pages (excluding cover page, resumes, bibliographies, and table of contents)
- Copies - one (1) original, plus (1) hard copies and one (1) electronic copy in Adobe PDF or Word 2007 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, Offeror's administrative and technical points of contact, with telephone numbers, facsimile numbers, and Internet addresses, and shall be signed by an authorized officer.
- **Technical Concept:** A description of the technology innovation and technical risk areas.
 1. The particular Research Opportunity Description the White Paper is being submitted against
 2. Laboratory Project Manager and/or Principal Investigator
 3. Navy/Marine Corps capability deficiency being satisfied
 4. Technical objective

5. Technical approach
 6. Deliverables
 7. Recent technical breakthroughs that will reduce risk
 8. Project plan showing schedule of individual tasks
 9. Funding plan showing requested funding per task, per fiscal year
- **Future Naval Relevance:** A description of potential Naval relevance and contributions of the effort to the agency's specific mission.
 - **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 CONTRACTS, 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/Contract-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.

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, plus one (1) hard copies and one (1) electronic copy on CD-ROM. Offerors shall follow the Technical and Cost Proposal Template. The electronic Technical and Cost Proposal should be submitted in a secure, pdf compatible format, save for the electronic file for the Cost Proposal Spreadsheet which should be submitted in a Microsoft Excel 2007 compatible format. All attachments should be submitted in a secure, pdf compatible format.

The secure pdf compatible format is intended to prevent unauthorized editing of the proposal prior to any award. A password should not be required for opening the proposal document, but the Government must have the ability to print and copy text, images, and other content. Offerors may also submit their Technical and Cost Proposal in an electronic file that allows for revision (preferably in Microsoft Word) to facilitate the communication of potential revisions. Should an Offeror amend its Technical and Cost Proposal package, the amended proposal should be submitted following the same hard and electronic copy guidance applicable to the original proposal.

The electronic submission of the Excel spreadsheet should be in a "useable condition" to aid the Government with its evaluation. The term "useable condition" indicates that the spreadsheet should visibly include and separately identify within each appropriate cell any and all inputs, formulas, calculations, etc. The Offeror should not provide "value only spreadsheets" similar to a hard copy.

3. Significant Dates and Times -

Event	Date	Time
White Paper Due Date	5/31/2011	2:00 PM Eastern Daylight Time
Notification of White Paper Evaluation*	7/13/2011	
Oral Presentations*	8/10/2011	

Notification of Oral Presentation Evaluation*	8/19/2011	
Full Proposal Due Date	9/28/2011	2:00 PM Eastern Daylight Time
Notification of Selection: Full Proposals*	11/30/2011	
Awards*	4/11/2012	

**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 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 designated 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 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 revision was received late and must inform the offeror whether its proposal will be considered.

5. Address for the Submission of White Papers and Full Proposals.

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

Office of Naval Research
Attn: Mr. Chuck Cammuse
ONR Department Code: 31
875 North Randolph Street – Suite W1116C
Arlington, VA 22203-1995

White papers and full proposals may be submitted by U.S. Postal Service, by commercial carrier (e.g., FedEx) or by hand delivery. Offerors intending to hand deliver their white papers and/or full proposals should make arrangements with Mr. Chuck Cammuse at chuck.cammuse@navy.mil two (2) business days in advance of the due date and time to ensure that their submission(s) is received by the due date and time. **White papers and full proposals sent by fax or email will not be considered.**

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 and
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.

2. Commitment to Small Business

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. As such, Subcontracting Plans will be evaluated to ensure that submissions are compliant with FAR Subpart 19.7.

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 it intends to provide meaningful subcontracting opportunities to support this policy.

3. Partnering

Industry-Academia Partnering - ONR highly encourages partnering among 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 enhances the development of novel S&T advances will be given favorable consideration

4. 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: 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. Subcontracting Plans will be required prior to award.

NOTE: Central Contractor Registry (CCR), Subcontracting Plan requirements, and Certification requirements are all set forth in the ONR Technical and Cost Proposal Template..

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 in the technical and cost proposal template.

3. Use of Animals and Human Subjects in Research

RESERVED

4. Recombinant DNA

RESERVED

5. Department of Defense High Performance Computing Program

The DoD High Performance Computing Program (HPCMP) furnishes the DoD S&T and RDT&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. 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 Government 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.

7. 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.

8. 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.fsrs.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.

8. Disclosure of Information

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

9. Other Guidance, Instructions, and Information

None.