

ONR BAA Announcement # ONRBAA14-011



Expeditionary Warfare Data Focused Naval Tactical Cloud (EXWNTC) Table of Content

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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 to authorized personnel for the purpose of evaluation.

I. GENERAL INFORMATION

A. Agency Name - Office of Naval Research

B. Research Opportunity Title - Expeditionary Warfare Data Focused Naval Tactical Cloud (EXWNTC)

C. Program Name - Expeditionary Warfare Data Focused Naval Tactical Cloud (EXWNTC)

D. Research Opportunity Number - 14-011

E. Response Date -

White Papers: 09/12/2014
Full Proposals: 10/24/2014

F. Research Opportunity Description -

The Office of Naval Research is interested in receiving white papers and full proposals for both Applied Research and Advanced Technology Development that will accelerate exploitation of all relevant data for mission planning and execution in the conduct of Expeditionary Warfare (EXW) missions. To achieve this, the Expeditionary Warfare Naval Tactical Cloud (EXWNTC) enabling capability product was approved to address the needed Science and Technology (S&T). Anti-submarine warfare and integrated air missile defense warfighting areas are addressed under a different BAA.

The EXWNTC product will provide innovative and novel Big Data capabilities to improve Amphibious Naval Warfighting activities. Efforts related to EXW are being focused on making advancements in the following four (4) key areas: (1) Development of a robust Naval Data Science foundation that addresses data representations and ontologies required to support the EXW Mission Areas; (2) Identifying, acquiring, ingesting, and indexing Data Sources pertinent to EXW; (3) Development of advanced analytics and decision aids related to the planning and conduct of EXW missions, and (4) Development of information visualization and

replication capabilities. The overall objective is to leverage the unprecedented access to data afforded by cloud systems in order to enable highly capable decision support tools.

A major goal of EXWNTC product is to significantly improve the Naval community's real-time ability to bring together information from all sources and from all levels that is relevant to the essential tasks required to conduct expeditionary missions in an automated means. Emerging technologies (such as Cloud Computing, Big Data, and more effective Cross Domain technologies) are enabling us to overcome many of the technological and infrastructure limitations that limit our ability to integrate and exploit National and tactical data sources. The EXWNTC product seeks to leverage the power of these emerging technologies to develop innovative and ground-breaking analytic capabilities that enhance mission effectiveness.

The subject of this BAA are the EXW related developments required to allow future Naval Tactical Clouds to support amphibious operations for Marine Expeditionary Units (MEUs) and MEU Special Operations Command (SOC) forces along with their supporting Navy assets. The capability will access, leverage, and rapidly provide detailed mission plan templates. These templates will be constructed using a model-based approach and will contain assumptions, generalizations, and information requirements based on the characteristics of the specific mission assignment. The templates will continuously be updated to maintain a common and complete operational picture afloat and ashore.

The EXW mission templates will support expeditionary operations in the mission areas / assignments listed below.

- Amphibious Operations in the conduct of:
 - o Amphibious Assault
 - o Amphibious Raid
 - o Maritime Interception Operations (MIO)
 - o Advance Force Operations

- Expeditionary Support to Other Operations / Crisis Response and Limited Contingency Operations in the conduct of:
 - o Noncombatant Evacuation Operations (NEO)
 - o Humanitarian Assistance (HA)
 - o Stability Operations (SO)
 - o Tactical Recovery of Aircraft and Personnel (TRAP)
 - o Joint and Combined Operations
 - o Aviation Operations from Expeditionary Sea-Based Sites
 - o Support Theater Security Cooperation

- Special Operations in the conduct of:
 - o Direct Action Strikes
 - o Special Reconnaissance

The services and visualizations will be able to improve situational awareness through better exploitation of all relevant data with the ability to meet the information needs and timelines of the specific missions. There will be automatic determination of operational impacts to the EXW plan due to enemy activities and changes to blue force readiness. Additionally, along with the analytics, EXW data

will be ingestable to support other Navy/Marine Corps warfighting areas.

The objectives of the EXWNTC are to 1) develop a set of efficient, effective ingestion capabilities for data in support of broad Naval needs; 2) develop/integrate efficient analytic techniques and algorithms that extract critical insight and present timely indications and warnings from volumes of ingested data; and 3) develop widgets and applications for the cloud environment that provide enhanced Command and Control (C2) capabilities. These will be encapsulated into decision support tools for mission planning and execution.

In order to improve the readiness of our amphibious forces to conduct diverse missions anywhere within large areas on short notice, current capability limitations need to be addressed for mission planning and execution. These are identified as follows:

- Populating generic or area specific mission folders with relevant information for specific missions is not done or is done manually;
- Accuracy and completeness of information for generic mission types is not checked;
- Decision tools that track the relationship between an information state (conditions) and task measures of performance automatically do not exist;
- Information environment is stove-piped and may not be available for advanced team operations;
- Operations in a disaggregated or split manner are not supported by smart data replication; and
- Cloud based analytics are not available to MEU staffs.

Solution Framework:

Decision support tools are needed for the MEUs and MEU SOC forces to operate in the demanding environment and as part of the naval team. The primary challenge of this product is to enable machine understanding of the content and mapping between EXW missions (descriptions are available at: <http://www.marines.mil/Portals/59/Publications/MCO%203120.9C.pdf>), the relevant essential tasks (available at <http://www.mccdc.marines.mil/Units/MarineCorpsTaskList.aspx>), required measures of effectiveness (included in the above reference) and how physical, military and civil conditions (i.e. information requirements) may affect mission execution by affecting the key measures of effectiveness for essential tasks (see <http://static2.docstoccdn.com/docs/121651314/MCTL-Conditions>). It is also critical to note that embarked MEUs rely on data access and computing capabilities provided by Navy C4ISR systems such as Distributed Common Ground System - Navy (DCGS-N). To that end, offerors should become familiar with how the development of the Naval Tactical Cloud is progressing.

Naval Tactical Cloud:

Over the past several years, ONR has developed a Big Data Ecosystem software platform called the Naval Tactical Cloud Reference Implementation (NTC RI) that provides an environment for storing relevant Naval Data sources and for hosting and executing advanced Naval analytics and applications. The intent of this BAA is to leverage the NTC RI as the underlying environment for work performed under

this BAA, acknowledging that interfaces between this system and expeditionary shore based systems will be required. This focus will allow the full resources of this BAA to be focused on Naval Data Science, analytics and decision tool development and not on the development and underlying Big Data and Cloud infrastructure. It is important for proposers to understand that this BAA seeks to develop the capabilities that will enable the Naval Tactical Cloud to be relevant to the planning and conduct of expeditionary missions and not develop infrastructure, systems, tools, or middle-ware. Proposers should ensure that any proposed work under this BAA does not come packaged with unique or proprietary platforms or systems.

It is extremely important for proposers to review and understand the Naval Tactical Cloud Reference Implementation and to clearly show how work proposed under this BAA will be able to run within the Naval Tactical Cloud environment. At a high level, the Naval Tactical Cloud Reference Implementation consists of a utility computing component (Cloudera), a Big Data analytic component (Hadoop Distributed Files System, Accumulo, MapReduce, and Storm), and a Data Storage component (Content Zone). Additional information on the Naval Tactical Cloud Reference Implementation can be found in Attachment Number 1 entitled "Data Focused Naval Tactical Cloud (DF-NTC) ONR Information Package dated June 24 2014". It will be important for efforts proposed under this BAA to clearly show how they can be incorporated within this reference implementation or support interfaces between this architecture and shore based expeditionary C4ISR systems such as the Tactical Service Oriented Architecture (TSOA) program of record.

Example Developments

As an example, a dashboard will provide the measures of effectiveness (MOEs) to the Commander to predict and track the various tasks that are identified for that mission. In other words, a visualization will show impacts to a mission plan due to condition (physical, military, civil) changes (which are observed in cloud enabled data streams). This will also provide the Commander with execution recommendations and associated risks to achieve mission success.

As stated in Expeditionary Force 21 (available at http://www.mccdc.marines.mil/Portals/172/Docs/MCCDC/EF21/EF21_USMC_Capstone_Concept.pdf).

The readiness, rapid responsiveness, flexibility, precision and strategic mobility of naval forces are essential to ensuring continued access and security in the global commons and the littoral regions that border them

In order to accomplish this, EXWNTC product will develop a capability to finalize mission templates and develop decision aids to support mission execution. The following expanded list of services may be considered as development activity:

Mission Finalization Service

This service selects from the existing mission templates the one most relevant to an assigned mission, identifies the assumptions made when the template was produced that are no longer valid, determines information needed to finalize a plan, and identifies metrics needed to assess mission readiness.

Mission Information Processing Service

This will be an advanced analytics based service that will be capable of addressing information requirements for afloat and ashore amphibious mission planning. It may include capabilities as diverse as data ingestion and translation, workflow processes needed to extract key information, information about conditions fulfillment monitoring, entity tracking and prediction, platform readiness, logistics status, and cyber risks. Additionally, it will be equally effective with cloud based and locally held data stores.

Mission Information Visualization Service

This service will present data to all system users (afloat and ashore) in an efficient and effective manner. It should support Course of Action (COA) modeling, timeline replays, daily briefings, and all imagery and video formats. This service could also include voice commands to reduce data entry.

Warfighting Function Mission Integration Service

This will be capable of integrating all available data feeds (Navy and Marine Corps) relevant to an area and will continuously provide a fused product and confidence assessments about the mission objective. The service will support information exchange between C4ISR and the other warfighting functions including aviation and logistics.

Ashore Mission Execution Service

This will be capable of supporting the bi-directional information exchange between ashore (at all command levels down to a trusted handheld) and afloat systems. The service must accept voice and text inputs. The service must serve the information needs of disaggregated forces and their commanders. The ability to discover mission execution opportunities based on cloud and locally discovered information must be supported.

Dynamic Mission Disaggregation Service

This will dynamically disaggregate a mission package based on the assets being deployed from the Marine Expeditionary Unit/Amphibious Readiness Group (MEU/ARG). The service will disaggregate the information requirements derived from essential tasks and assign them to the cognizant units. The remaining capability of the parent force to execute new mission requirements will be tracked.

Data Replication Service

This will be capable of replicating mission specific information needs across afloat Navy cloud enabled systems, United States Marine Corps (USMC) ashore and USMC afloat systems operating across all echelons.

The S&T issues for EXW DF-NTC are recognized to be:

- Maintaining consistent access to data and sensors while afloat and ashore;

- Seamless movement of information between organic, theater and national sources before, during, after movement ashore; and
- Integrating ISR and C2 systems with an ability to scale to full range of missions relevant to Amphibious Warfare.

The S&T metrics include and are not limited to:

- Increased operational speed and effectiveness enabled by decision tools;
- Increased completeness and accuracy of specific mission folders;
- Increased completeness and accuracy of generic mission folders;
- Reduced manual cross warfighting function data entry;
- Increased exposure of advance team information to the enterprise by 25%; and
- Increased relevance of data replication between afloat and ashore nodes across constrained communication channels.

Integration and Experimentation

ONR intends for all capabilities developed under this BAA to be integrated into the Naval Tactical Cloud Reference Implementation and undergo extensive experimentation to assess performance and operational effectiveness. To ensure successful integration, ONR will make available to all performers a Naval Tactical Cloud Reference Implementation developer package (provided as a set of Virtual Machines). Performers will be expected to use the NTC RI developer environment. Performers will also be expected to bring capabilities developed under this BAA into ONR's Limited Technical Experimentation (LTE) activities to support transition maturation. LTEs are multi-performer events where the developed analytic and decision support capabilities of multiple performers will be integrated and then evaluated in an operationally relevant environment. Performers will be expected to provide support for integrating their capabilities into the experiment and with the capabilities of other Performers. Performers will also be expected to provide additional technical support to facilitate the set up and execution of the LTEs, including planning for the experiment, set up and initialization of the experiment (including instrumentation of the Performer's software deliverable if needed), execution of the experiment, and data collection during the experiment. ONR may provide a separate analysis team to independently assess the experimental articles and results. If so, performers will be expected to support that analysis team as required. All Proposers should include resources and personnel as part of your Proposal to account for these LTE related activities. Additional background on operational context that may frame experimentation design and metrics collection can be found in Appendix H of the document at the following link: (<https://www.mca-marines.org/files/MCWP%205-1%20MCPD.pdf>).

Technology Transition

ONR desires that S&T products that result from this BAA be capable of, and ready for, integration into the Distributed Common Ground System-Navy (DCGS-N) Increment 2 program of record. Where possible, products should use common standards, open architectures, and be extensible for technology advances. ONR expects all work performed under this BAA be made available to the Government with full Government Purpose Data Rights. Innovative S&T that supports these goals will be seriously considered and if selected, ONR will provide assistance in technology transition.

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 Activity 6.2 (Applied Research) and NOT performed on-campus at a university or b) funded by Budget Activity 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.

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.

Under this BAA, the Research and Development efforts to be funded will consist of applied research and advanced technology development. The funds available to support awards are Budget Activity 6.2 and 6.3.

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

G. Point(s) of Contact –

Questions of a technical nature should be submitted to:

Program Manager Name: Martin Kruger
Address: 875 North Randolph Street, Arlington, RM 1160, VA 22203
Code: ONR 30ISR
Phone: (703) 696-5349
Email: martin.kruger1@navy.mil

Questions of a Business nature, and suggestions for improvement, should be submitted to:

Primary Contracting Officer/Contract Specialist Name: Philip Eisenhour
Address: 875 North Randolph Street, RM W1269C, Arlington, VA 22203
Code: ONR BD251
Phone: (703) 696-7173
Email: philip.eisenhour@navy.mil

Any questions regarding this solicitation must be provided to the Technical Point of Contact and Business Point of Contact listed in this solicitation. All questions shall be submitted in writing by electronic mail.

Comments or questions submitted should be concise and to the point, eliminating any unnecessary verbiage. In addition, the relevant part and paragraph of the Broad Agency Announcement (BAA) should be referenced.

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>

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 to the Technical Point of Contract (POC) 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 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.

H. 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.

Any contract awards resulting from this BAA will incorporate the most current FAR, DFARs, NMCARS, and ONR clauses.

Examples of model contracts can be found on the ONR website at the following link:

<http://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/contract-model-awards.aspx>. ONR Contract specific representations and certifications can be accessed on the following page of the ONR website: <http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Requests-for-Information.aspx>.

II. AWARD INFORMATION

A. Amount and Period of Performance- Estimated Total Amount of Funding Available (\$K):

FY2015	FY2016	FY2017	FY2018	FY2019	Total
\$1234	\$2018	\$2756	\$3037	\$3205	\$12250

Anticipated Number of Awards: Three (3) to six (6).

Anticipated Range of Individual Award Amounts: \$300K to \$600K per year

Anticipated Period of Performance: Up to five (5) years/Awards will not exceed a five (5) year period of performance

III. ELIGIBILITY INFORMATION

All responsible sources from academia and industry may submit proposals under this BAA. Inclusive of Small Business Concerns, Historically Underutilized Business Zone (HUBZone) Concerns, Service-Disabled Veteran-Owned Small Business (SDVOSB) Concerns, Small Disadvantaged Business (SDB) Concerns, Women-Owned Small Business (WOSB) Concerns, Veteran-Owned Small Business (VOSB) Concerns, and Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) are all highly encouraged to submit proposals as prime contractors and as well as join others (e.g., subcontractors) in submitting proposals. However, no portion of this BAA will be set-aside for Small Businesses, HUBZones, SDVOSBs, SDBs, WOSBs, VOSBs or HBCU and MI participation, due to

the desire to seek research ideas from all entities.

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 (UARC) 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 cover export controlled technologies. Research in these areas is limited to "U.S. persons" as defined under the International Traffic in Arms Regulations (ITAR) - 22 CFR § 1201.1 et seq.

IV. APPLICATION AND SUBMISSION INFORMATION

A. Application and Submission Process - White Paper and Full Proposals

White Papers: White papers are required prior to submitting a Full Proposal. The due date for white papers is no later than 3:00 p.m. (Eastern Daylight Time) on 09/12/2014. White papers must be submitted via e-mail to the technical point of contact (POC): Martin Kruger, at martin.kruger1@navy.mil. Initial Navy evaluations of the white papers will be issued via e-mail notification on or about 09/26/2014. White papers must also be uploaded to: <https://onroutside.onr.navy.mil/aspprocessor/isr30a/>.

The principal is the technical point of contact. The document title is your proposal title. The site will send you a confirmation e-mail if your paper has correctly uploaded.

Full Proposals: The due date for receipt of Full Proposals is 3:00 p.m. (Eastern Daylight Time) on 10/24/2014. It is anticipated that final selections will be made by 11/21/2014. Proposals received after the published due date and time may be considered for funding under a separate BAA at a later time, if funding is available. As soon as the final proposal evaluation process is completed, the Offeror will be notified via e-mail of its selection or non-selection for an award. Proposals

exceeding the page limit may not be evaluated. **Full proposal packages are required to be mailed to:**

Office of Naval Research, Attn: Martin Kruger, Room 1160
875 North Randolph Street, Arlington, VA 22203

Full proposals must also be uploaded to:
<https://onroutside.onr.navy.mil/aspprocessor/isr30a/>.

The principal is the technical point of contact. The document title is your proposal title. The site will send you a confirmation email if your proposal has correctly uploaded. All required documents should be submitted together in one zip file.

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

White Papers and Full Proposals submitted under this BAA are expected to be unclassified; however, confidential/classified responses are permitted. If a classified proposal is submitted, the resultant contract 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 White Papers and Full Proposals shall be submitted directly to the attention of ONR's Document Control Unit at the following address:

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 Kruger, Martin (martin.kruger1@navy.mil), ONR Code 30 and marked in the following manner:

INNER ENVELOPE (stamped with the overall classification of the material)
Program: Expeditionary Warfare Data Focused Naval Tactical Cloud (EXWNTC)
Office of Naval Research
Attn: Kruger, Martin
ONR Code: 30, Room 1160
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.

STATEMENT OF WORK

An 'unclassified' SOW must accompany any classified proposal. For both classified and unclassified proposals, a non-proprietary version of the SOW must also be submitted.

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: 10 pages (excluding cover page, resumes, bibliographies, and table of contents)
- Copies - One (1) electronic copy in Adobe PDF or Word 2007 delivered via e-mail. Electronic (e-mail) submissions should be sent to the attention of the technical point of contact (TPOC) at: (E-mail Address of the TPOC, e.g. jane.doe@navy.mil). The subject line of the e-mail shall read "ONR BAA 14-011 White Paper Submission." The white paper must be a Microsoft Word 2007 compatible, or PDF format attachment to the e-mail. There is an e-mail size limit of 5MB per e-mail.

NOTE:

- 1. Do not send hardcopies of White Papers (including Facsimiles) as only electronic submissions will be accepted and reviewed;**
- 2. Do not send .ZIP files; and**
- 3. Do not send password protected files.**

In order to provide traceability and evidence of submission, Offerors may wish to use the "Delivery Receipt" option available from Microsoft Outlook and other e-mail programs that will automatically generate a response when the subject email is delivered to the recipient's email system. Consult the User's Manual for your email software for further details on this feature.

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.

- **White Paper Technical Content:** A description of the technology innovation and technical risk areas.

A five (8) page technical section which clearly describes the objectives of the proposed effort, technical issues to be resolved to accomplish objectives, the technical approach proposed to resolve these issues, an assessment of the proposed new capability over the existing state of the art, and a comparison against competing technological developments. This section should include references.

- **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.
- **Other Requirements:** Rough Order of Magnitude (ROM) for the proposed effort should be included.

b. FULL PROPOSALS

i. INSTRUCTIONS FOR CONTRACTS (Does not include Grants)

NOTE: Submission instructions for BAAs issued after FY 2010 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 the review of proposals.

Proposal Package: The following four documents with attachments comprise a complete proposal package:

- (1) *Technical Proposal Template (pdf)*
- (2) *Technical Content (word)*
- (3) *Cost Proposal Spreadsheet (excel)*
- (4) *Adequacy Checklist for Pre Award Audit (SF 1408) (as applicable)*

These documents can be found at: <http://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/cost-proposal.aspx>. All have instructions imbedded into them that will assist in completing the documents. Also, both the Technical Proposal Template and the Cost Proposal Spreadsheet require completion of cost-related information. Please note that attachments can be incorporated into the Technical Proposal Template for submission.

For proposals below the simplified acquisition threshold (less than or equal to \$150K), the Technical Proposal Template and Technical Content documents, and Cost Proposal Spreadsheet are required. In addition, if a purchase order will be

awarded, the effort will be fixed price. Purchase orders can also contain options, if authorized under the BAA, as long as the total amount of the base and all options does not exceed \$150k.

Intellectual Property: Offerors responding to this BAA must submit a separate list of all technical data or computer software that will be furnished to the Government with other than unlimited rights. The Government will assume unlimited rights if offerors fail to identify any intellectual property restrictions in their proposals. Include in this section all proprietary claims to results, prototypes, and/or deliverables. If no restrictions are intended, then the offeror should state "NONE."

The format requirements for any attachments are as follows:

- Paper Size- 8.5 x 11 inch paper
- Margins – 1 inch
- Spacing- single or double spaced
- Font- Times New Roman, 12 point

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 submit one (1) original, plus 1 hard copy and one (1) electronic copy on CD-ROM as discussed with the cognizant Program Officer, of their proposal package. The electronic copy should be submitted in a secure, pdf-compatible format, except 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 Proposal Template and Content in an electronic file that allows for revision (preferably in Microsoft Word) to facilitate the communication of potential revisions. Should an Offeror amend its proposal, the amended proposal should be submitted following the same hard and electronic copy guidance applicable to the original proposal.

Any proposed options that are identified in the Technical Proposal Template or Technical Content documents, but are not fully priced out in the Cost Proposal Spreadsheet, will not be included in any resulting contract, cooperative agreement, or other transaction. If proposing options, they **must** be separately priced and separate spreadsheets should be provided for the base period and each option. In addition to providing summary by period of performance (base and any options), the Contractor is also responsible for providing a breakdown of cost for each task identified in the Statement of Work. The sum of all costs by task worksheets MUST equal the total cost summary.

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.

Fixed Fees on ONR Contracts: The Government Objective is set in accordance with the DFARS 215.404-71. See the below table for range and normal values:

Contract Risk Factor	Contract Type	Assigned Value (Normal range)	Normal Value
Technical (1)		3% - 7% (2)	5%
Management/Cost Control (1)		3% - 7% (2)	5%
Contract Type Risk	Firm Fixed Price	2% - 6% (3)	3% - 5% (4)
Contract Type Risk	Cost Plus Fixed Fee	0% - 1% (2)	0.5%

1. Assign a weight (percentage) to each element according to its input to the total performance risk. The total of the two weights equal 100 percent.
2. Assign a weighting score relative to the Risk Factor.
3. Depends on the specific Contract Type (With/without financing, performance-based payments, and/or progress payments).
4. Depends on the specific Contract Type.

Technology Incentive (TI) is rarely utilized at ONR, because the contracts issued by ONR typically are not eligible for TI (See DFARS 215.404-71-2(c)(2)). Any consideration of TI requires strong and convincing justification in the proposal, which are then subject to negotiation and determination of a fair and reasonable fee, within the context of the specific award. Typically the range of fee is 5% to 7.5% on an ONR awarded contract.

For submission instructions, see sub-section F. Submission of White Papers and Full Proposals for Contracts, Cooperative Agreements, and Other Transaction Agreements.

C. Significant Dates and Times

Event	Date	Time
White Paper Due Date	09/12/2014	3:00 PM Eastern Standard Time
Notification of White Paper Evaluation*	09/26/2014	
Full Proposal Due Date	10/24/2014	3:00 PM Eastern Standard Time
Notification of Selection: Full Proposals*	11/21/2014	
Awards*	05/21/2015	

**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.

D. 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.

E. Address for the Submission of White Papers and Full Proposals for Contracts

White Papers must be e-mailed to Martin Kruger at the following email address: martin.kruger1@navy.mi. Hard Copies of the Full Proposal and the DVD or CD-ROM of the Full Proposal should be sent to the Office of Naval Research as indicated below. All supporting documentation should be submitted with the DVD or CD-ROM of the Full Proposal.

Primary Point of Contact	Secondary Point of Contact
Office of Naval Research Attn: Martin Kruger ONR Department Code: 30 875 North Randolph Street, RM 1160 Arlington, VA 22203-1995	Office of Naval Research Attn: Maya Rubeiz ONR Department Code: 30 875 North Randolph Street, RM xxxx Arlington, VA 22203-1995

Full proposals must also be uploaded to:
<https://onroutside.onr.navy.mil/aspprocessor/isr30a/>.

V. EVALUATION INFORMATION

A. Evaluation Criteria

Awards under this BAA will be made to proposers on the basis of the evaluation criteria listed below, and program balance to provide overall value to the Government. The Government reserves the right to request any additional, necessary documentation once it makes the award instrument determination. The Government reserves the right to remove proposers from award consideration should the parties fail to reach agreement on award terms, conditions, and cost/price within a reasonable time, or the proposer fails to timely provide requested additional information. 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 and the offeror's capabilities, related experience, facilities, techniques or unique combinations of these which are integral factors for achieving the proposal objectives;
3. Naval relevance and contributions of the effort to future expeditionary warfare;

4. Potential to transition to a program of record; and
5. The realism of the proposed costs and availability of funds.

Criteria 1 - 4 above are significantly more important than Criteria 5, and Criteria 1 through 4 are of equal value. The primary basis for selecting proposals for acceptance shall be technical, importance to agency programs and fund availability. Cost realism and reasonableness shall also be considered to the extent appropriate.

The ultimate recommendation for award of proposals is made by ONR's scientific/technical community. Recommended proposals will be forwarded to the ONR contracts department. Any notification received from ONR that indicates that the Offeror's full proposal has been recommended, does not ultimately guarantee an award will be made. This notice indicates that the proposal has been selected in accordance with the evaluation criteria above and has been sent to the contracting department to conduct cost analysis, determine the offeror's responsibility, and take other relevant steps necessary prior to commencing negotiations with the offeror.

B. Commitment to Small Business - (For Contract Awards Only)

The Office of Naval Research is strongly committed to providing meaningful subcontracting opportunities for small businesses, small disadvantaged businesses (SDBs), woman-owned small businesses (WOSBs), historically underutilized business zone (HUBZone) small businesses, veteran-owned small business (VOSBs), service disabled veteran-owned small businesses (SDVOSBs), historically black colleges and universities, and minority institutions, and other concerns subject to socioeconomic considerations through its awards.

For businesses unfamiliar with doing business with the government and require assistance may contact the state-specific Department of Defense (DoD) Procurement Technical Assistance Center (PTAC). DoD PTACs serve as a resource for businesses pursuing and performing under contracts with DoD, other federal agencies, state and local governments and with government prime contractors. Assistance provided by the PTACs is usually free of charge. PTAC support includes registration in systems such as SAM, identification of contract opportunities, understanding requirements and preparing and submitting proposals. The PTACs have a presence in each state, Puerto and Guam. To locate a local PTAC visit: <http://www.dla.mil/SmallBusiness/Pages/ProcurementTechnicalAssistanceCenters.aspx> or <http://www.aptac-us.org/new/>.

1) Subcontracting Plan - For proposed awards to be made as contracts that exceed \$650,000, large businesses and non-profits (including educational institutions) shall provide a Subcontracting Plan (hereafter known as the 'Plan') that contains all elements required by FAR Subpart 19.704, FAR 52.219-9 and as supplemented by DFARS 252.219-7003.

NOTE: Small businesses are exempt from this requirement.

The Plan should be submitted as an attachment to the "Technical Proposal Template" and will not be included in the page count. If a company has a Master Subcontracting Plan, as described in FAR 19.701 or a Comprehensive

Subcontracting Plan, as described in DFARS 219.702, a copy of the Plan shall also be submitted as an attachment to the "Technical Proposal Template".

Plans will be reviewed for adequacy, ensuring that the required information, goals, and assurances are included. FAR 19.702 require the apparently successful offeror to submit an acceptable Plan. If the apparently successful offeror fails to negotiate a Plan acceptable to the contracting officer within the time limit prescribed by the contracting officer, the offeror will be ineligible for award.

Offerors shall propose a plan that ensures small businesses (inclusive of SDBs, WOSBs, HUBZone, VOSBs and SDVOSBs, etc...) will have the maximum practicable opportunity to participate in contract performance consistent with its efficient performance.

As a baseline, offerors shall to the best extent possible propose realistic goals to ensure small business participation in accordance with the current or most recent fiscal year subcontracting goals found on the DoD Office of Small Business Program website at: <http://www.acq.osd.mil/osbp/>. If proposed goals are below the statutory requirements, then the offeror shall include in the Plan a viable written explanation as to why small businesses are unable to be utilized and what attempts were taken to ensure that small business were given the opportunity to participate in the effort to the maximum extent practicable.

2) Small Business Participation Statement – If subcontracting opportunities exist, all prime Offerors shall submit a Small Business Participation Statement regardless of size in accordance with DFARS 215.304 when receiving a contract for more than the simplified acquisition threshold (i.e., \$150,000). All offerors shall provide a statement of the extent of the offeror's commitment in providing meaningful subcontracting opportunities for small businesses and other concerns subject to socioeconomic considerations through its awards and must agree that small businesses, VOSBs, SDVOSBs, HUBZones, SDBs, and WOSBs concerns will have to the maximum practicable opportunity to participate in contract performance consistent with its efficient performance.

This assertion will be reviewed to ensure that it supports this policy by providing meaningful subcontracting opportunities. The statement should be submitted as a part of the proposal package and will not be included in the page count.

3) Subcontracting Resources - Subcontracting to a prime contractor can be a good way to participate in the contracting process. The following is a list of potential resources that may assist in locating potential subcontracting partners/opportunities:

- Companies Participating in DoD Subcontracting Program Report
- DAU Small Business Community of Practice (SB COP)
- DefenseLink = \$6.5M Award Notices
- DoD OSBP Prime Contractors and Subcontractors with Subcontracting Plans
- Dynamic Small Business Search
- Electronic Subcontracting Reporting System (eSRS)
- Federal Business Opportunities (FEDBIZOPPS)
- Navy SBIR/STTR Search – Website or Brochure
- DoD Procurement Technical Assistance Centers (PTAC)
- Small Business Administration (SBA) Subcontracting Opportunities Directory

- SBA Subnet

For a description and associated websites visit the ONR Office of Small Business webpage at: <http://www.onr.navy.mil/Contracts-Grants/small-business.aspx>. For example, in accordance with FAR Subpart 5.206, entities may transmit a notice to a Government Point of Entry (GPE) to seek competition for subcontracts and to increase participation by qualified HUBZone small business, small, small disadvantaged business, women-owned small business, veteran-owned small business and service-disabled veteran-owned small business concerns is encouraged, and to meet established subcontracting plan goal as follows:

- (a) A contractor awarded a contract exceeding \$150,000 that is likely to result in the award of any subcontracts;
- (b) A subcontractor or supplier, at any tier, under a contract exceeding \$150,000, that has a subcontracting opportunity exceeding \$15,000.

The notices must describe-

- (a) The business opportunity;
- (b) Any prequalification requirements; and
- (c) Where to obtain technical data needed to respond to the requirement.

An example of a GPE is the SBA SUB-Net which is a place in which prime contractors may post solicitations or sources sought notices for small business. The SUB-Net database provides a listing of subcontracting solicitations and opportunities posted by large prime contractors and other non-federal agencies.

C. Options

The Government will evaluate options for award purposes by adding the total cost for all options to the total cost for the basic requirement. Evaluation of options will not obligate the Government to exercise the options during the period of performance.

D. 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

- A. North American Industry Classification System (NAICS) code - The NAICS code for this announcement is "541712" with a small business size standard of "500 employees".

- B. System for Award Management (SAM): All Offerors submitting proposals or applications must:
- a. be registered in the SAM prior to submission;
 - b. maintain an active SAM 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.

The System for Award Management (SAM) is a FREE WEBSITE that consolidates the capabilities you used to find in CCR/FedReg, ORCA, and EPLS. Future phases of SAM will add the capabilities of other systems used in Federal procurement and awards processes.

SAM may be accessed at <https://www.sam.gov/portal/public/SAM/>.

C. Access to your Contract Award

Effective 01 October 2011, hard copies of award/modification documents are no longer mailed to Offerors. All Office of Naval Research (ONR) award/modification documents will be available via the Department of Defense (DoD) Electronic Document Access System (EDA).

EDA is a web-based system that provides secure online access, storage, and retrieval of awards and modifications to DoD employees and vendors. If you do not currently have access to EDA, complete a self-registration request as a "Vendor" via <http://eda.ogden.disa.mil> following the steps below:

Click "New User Registration" (from the left Menu)

Click "Begin VENDOR User Registration Process"

Click "EDA Registration Form" under Username/Password (enter the appropriate data)

Complete & Submit Registration form

Allow five (5) business days for your registration to be processed. EDA will notify you by email when your account is approved.

Registration questions may be directed to the EDA help desk toll free at 1-866-618-5988, Commercial at 801-605-7095, or via email at cscassig@csd.disa.mil (Subject: EDA Assistance)

VII. OTHER INFORMATION

A. Applies to Contracts only:

- i. Government Property/Government Furnished Equipment (GFE) and Facilities
RESERVED
- ii. Use of Arms, Ammunition and Explosives:
RESERVED
- iii. System for Award Management (SAM):
FAR 52.204-7 System for Award Management and FAR 52.204-13 System for Award Management Maintenance are incorporated into this BAA, and FAR 52.204-13 will be incorporated in all awards.
- iv. Employment Eligibility Verification:
As per FAR 22.1802, recipients of FAR-based procurement contracts

must enroll as Federal Contractors in E-verify and use E-verify to verify employment eligibility of all employees assigned to the award. All resultant contracts from this solicitation will include FAR 52.222-54, "Employment Eligibility Verification."

v. FAR / DFARS Clauses:

The following are examples of clauses that may be incorporated into an ONR contract:

#	Clause
52.204-7	System for Award Management
52.215-16	Facilities Capital Cost of Money
52.215-22	Limitations on Pass Through Charges - Identification of Subcontract Effort
52.216-1	Type of Contract
52.216-27	Single or Multiple Awards
52.217-4	Evaluation of Options Exercised at time of Contract Award
52.217-5	Evaluation of Options
52.222-24	Preaward On-Site Equal Opportunity Compliance Evaluation (Applies if exceeds \$10M)
25.226-2	Historically Black College or University and Minority Institution Representation
52.230-7	Proposal Disclosure - Cost Accounting Practice Changes
52.232-15	Progress Payments not included
52.233-2	Service of Protest
52.252-1	Solicitation Provisions Incorporated by Reference
52.252-3	Alterations in Solicitation
52.252-5	Authorized Deviations in Provisions
252.203-7005	Representation Relating to Compensation of Former DoD Officials
252.204-7004	Alternate A, System for Award Management
252.215-7003	Requirements for Submission of Data Other than Certified Cost or Pricing Data - Canadian Commercial Corporation

- vi. Combating Trafficking in Persons
Appropriate language from FAR Clause 52.222-50 will be incorporated in all awards.
- vii. Updates of Information regarding Responsibility Matters
FAR clause 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matter, will be included in all contracts valued at \$500,000 where the contractor has current active Federal contracts and grants with total value greater than \$10,000,000.

B. Applies to all:

- i. 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. Normally, work done under a grant does not require access to classified material. If it is determined that access to classified information will be required during the performance of an award, a

Department of Defense (DD) Form 254 will be attached to the contract; and FAR 52.204-2 - Security Requirements will be incorporated into the contract. The Offeror must clearly identify such need by completing Section II, Block 11, DD 254 – Security Classification Specification, of the Technical Proposal Template. If it is determined that access to classified information will be required during the performance of an award, a Department of Defense (DD) Form 254 will be attached to the contract; and FAR 52.204-2 – Security Requirements will be incorporated into the contract.

- ii. Use of Animals and Human Subjects in Research
RESERVED
- iii. Recombinant DNA
RESERVED
- iv. Department of Defense High Performance Computing Program
RESERVED
- v. Organizational Conflicts of Interest
RESERVED
- vi. Project Meetings and Reviews
RESERVED

C. Other Guidance, Instructions, and Information

None