



Human Social Culture Behavior Modeling

INTRODUCTION:

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2), the Department of Defense Grants and Agreements Regulations (DoDGARS) 22.315(a) and 35.016, and DoD's Other Transaction Guide for Prototypes Projects, USD(AT&L), OT Guide, Jan 2001. 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

SPECIAL NOTICE 1: All Grant Applications submitted under this BAA shall be submitted via the Grants.gov "APPLY" function. No other form of paper or electronic submission will be accepted unless the prospective grantee organization applies for and receives a waiver in accordance with Section IV, Application and Submission Information, Paragraph 5 entitled 'Submission of Grant Proposals to Grants.gov' below.

All attachments to grant applications submitted through Grants.gov must be in Adobe Portable Document Format. Proposals with attachments submitted in word processing, spreadsheet, or any format other than Adobe Portable Document Format will not be considered for award.

SPECIAL NOTICE 2: Be advised that Grants.gov applicants have been experiencing system slowness and validation issues which may impact the time required to submit proposals. Due to a large increase in the volume of grant proposals received by the federal government, the Grants.gov portal is struggling to handle the number of proposals being submitted. In addition, after proposals are uploaded to Grants.gov, the applicant receives an e-mail indicating the proposal has been submitted and that Grants.gov will take up to two days to validate the proposal. Grants.gov may reject the proposal during

the validation process. Therefore, applicants are strongly encouraged to submit their proposals electronically at least THREE days before the date and time proposals are due so that it will not be received late and be ineligible for award consideration. Early submission will allow an applicant time to submit its proposal to ONR through an alternative electronic method in the event the proposal is not accepted by Grants.gov. See the special notice on alternate submission under the section IV.5 below in this BAA.

1. Agency Name - Office of Naval Research

2. Research Opportunity Title – Tools for Sharing Socio-cultural modeling data, underwriting models, and model-supported campaign planning

3. Program Name – Human Social Culture Behavior (HSCB) Modeling Program

4. Research Opportunity Number: 09-026

5. Response Date - 08/25/09

6. Research Opportunity Description -

As a result of the Quadrennial Defense Review Report on lessons learned in ongoing Irregular Warfare (IW) and Security, Stability, Transition, and Reconstruction Operations (SSTRO), beginning in Fiscal Year 2008 the Department of Defense created a new R&D program to develop a science base and associated technologies for human, social and culture behavior (HSCB) modeling. The military capability needs being addressed center on enablement of modeling for IW and SSTRO and on using computational models to support operations analysis, intelligence analysis, training and joint experimentation. The overarching goal is to provide DoD and the US Government with the ability to understand and effectively operate in human/social/culture terrains inherent to non-conventional warfare missions. The Office of Naval Research is one of several offices through which the HSCB Program is supporting research and development efforts. Broad Agency Announcements may also be issued by the Counter Terrorism Technology Support Office (CTTSO), the US Army Corps of Engineers Topographic Engineering Center, or possibly other DoD entities. The HSCB Program will also be working through the DoD Small Business Innovation Research (SBIR) program to sponsor projects.

HSCB funded projects are, or will be, focused on:

- Developing an applied science base and general-use, cross-domain capabilities/tools to support all HSCB applications. These shall include collection of social, cultural computational/analytic datasets, development of data models, theory development, and application methodologies and tools using social science knowledge;
- Maturing, hardening, and validating human, social, cultural, and behavior modeling (HSCB) related software for integration into existing programs of

- record architectures, or maturing software via open architectures to allow broad systems integration; and
- Development of computational modeling capabilities, visualization software toolsets, and training/mission rehearsal systems that provide forecasting capabilities for socio-cultural (human terrain) responses at the strategic, operational and tactical levels.

There are many DoD-supported efforts already underway (or about to start) to collect HSCB data and develop and leverage computational models for use in planning, operations, and training. There should be investment now in techniques and tools that will build the DoD's internal capacity to leverage the data and models across user communities, in operational settings, and for multiple HSCB contexts. This requires development of generic capabilities, including:

- Making existing data useable by multiple communities;
- Equipping operational-level personnel with the ability to assess, compare, and contrast models or model-based tools; and
- Converting model outputs to forms that will have greatest impact in the human decision space.

With these needs in mind, the Office of Naval Research (ONR) is interested in receiving proposals for work in one more or the following areas:

a. Tools for HSCB data dissemination and use across the DoD user environment

We are seeking proposals that will help the DoD computational modeling community better access and leverage socio-cultural data, and thereby support development and transition of more effective tools to users. Work should identify and develop tools and techniques to organize, structure, store, and share high fidelity, electronic, tagged socio-cultural data. The form of socio-cultural data ranges widely, driven in part by the variety of sources from which data are derived: statistical records, content analysis, polling and surveys, subject matter experts, and focus groups. A common framework for handling data from these sources is the gold standard for success of the proposed effort. Tasks are likely to include:

1. Surveying currently-available data along with ongoing data collection projects, technologies, and activities, and identifying additional data required to support HSCB modeling and tool development for relevant operational scenarios.
2. Joint development with the government to select a set of existing socio-cultural data stores and developing techniques to collect and normalize the data into an intermediate data format to support downstream modeling. This shall include providing data to models, storing data model output, and providing original data and output from the data model runs to other models for use. Specific models shall be selected and tested based on contractor/government interaction.
3. Supporting development of an unclassified cultural data repository, in collaboration with the government, that includes real-time tactical level cultural

data, data-mining, and Subject Matter Expert (SME) inputs in formats useful for both ‘boots-on-the-ground users’ and HSCB modelers. The proposed effort should take into account major relevant datasets and repositories already in place. Examples include:

- Center for Nonproliferation Studies
- Center for the Study of Civil War
- Center for Systemic Peace
- Genocide and Politicide Model Data
- Kof Index of Globalization
- University of Maryland/Minorities at Risk
- Penn State Correlates of War Project
- Quality of Government (QoG)
- RAND Population Research Center -
- RAND Worldwide Terrorism Incident Database -
- Transparency International
- UCLA/Andreas Wimmer, From Empire to Nation-state
- World Health Organization
- World Bank
- World Values Survey

4. Additional challenges related to data management and analysis include:
 - Data needed to account for the complex interactions may be missing or incomplete; a principled method of developing models that can handle problems with missing, poor or incomplete data is needed.
 - Increasing amounts of potentially useful information is available in open source digital form. Automated tools that can compute an appropriate confidence level from this open source data are needed. Facts are often counterbalanced with opinion; research is needed to automatically assess the opinion level/bias of a source as part of reliability scoring.

b. Visualization and related tools for translating model outputs to decision-support products

Given that modeling is used to develop options in support of human decision making, how can model output be translated into information and knowledge products that support the human decision making space? How can the results of models be used to enable desired outcomes, and how can various model results be aggregated and compared as non-competing hypotheses and the desired outcomes rank ordered to indicate the ones most likely to support the desired objective? Do the model results support information seeking behavior by users that is expressed in a multitude of divergent social-science forums (ethnographic, religious, economic, political, etc)?

We are seeking proposals to research and develop technology that would provide end-to-end support for commanders at all levels for operational planning and effects assessment. Preferred work will emphasize delivery of visualization capability. Strategists, planners, field operators, and others would benefit from being able to see and adjust socio-cultural aware Courses of Action (COAs) and impacts, especially in

the form of or relative to geo-spatial features. The proposed technology would enable commanders to:

- collect, validate, visualize, and disseminate data to determine current baselines;
- leverage computational modeling capability to determine trends in an effort to better plan operations in a specific cultural environment;
- develop socio-cultural aware COA designed to support the commander's objectives;
- rank order the COAs as a series of proposed Diplomatic, Information, Military, and Economics (DIME) and Political Military Economic Social Infrastructure Information (PMESII) actions;
- forecast 2nd and 3rd order effects; and
- extract and monitor metrics such that effects can be understood in the relevant operational context.

Proposers should also consider that within DoD there are multiple sources and venues for the creation and distribution of information and data on human, social and cultural behavior. To reuse and represent this data across systems/applications requires the development of new meta-data standards that support visualization/mapping. Also, the dynamic complexity of human behavior, beliefs and cultures means that there will always be some level of uncertainty to forecasting and mapping the human terrain. It is vital to accurately represent this degree of uncertainty in geospatial toolsets, decision aids, etc. We are interested in work that would develop generalized methods/tools for displaying this uncertainty, including in common geospatial tools currently used by DoD.

c. System to assess and select socio-cultural behavior models

Models of human socio-cultural behavior cannot be validated in the traditional military sense. Because of the deep uncertainty associated with the variables that are the focus of these models, they cannot reliably be validated by traditional means (i.e., against physical or historical reality). Instead, they must be assessed for the quality and rigor of their theoretical underpinnings and the integrity of the models' construction. Consequently, putting HSCB models into operational usage will require a regular standardized assessment procedure supported by structured data and information systems. We seek projects that will develop and demonstrate an integrated set of model description data (metadata), information systems, and procedures that will facilitate assessing the software engineering quality of socio-cultural behavior models, their theoretical foundation and the translation of theory into model constructs. Such a system should facilitate assessing the conceptual, computational and theoretical relationships expressed both in isolated models, and for a system of models. In addition, the metadata should also allow users' selection of models based on "granularity" (national, regional, group-level or individual), and the time horizon of projections (hours ... years). The metadata should also incorporate a taxonomy of model-types (e.g., causal, event-driven, agent-based, descriptive, statistical, etc.).

Work funded under this BAA may include 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 26 June 2008. 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 or by industry. ATD is funded through Budget Activity 3. In conformance with the USD(AT&L) guidance and National Security Decision Directive 189, ONR will place no restriction on the conduct or reporting of unclassified fundamental research, except as otherwise required by statute, regulation or Executive Order. 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. Regarding the present BAA, the Research and Development efforts to be funded may consist of applied research or advanced technology development. The funds available to support awards are Budget Activity 2 and 3.

7. Point(s) of Contact –

Questions of a technical nature should be submitted to:

Primary Point of Contact Name: Dr. Ivy Estabrooke
Point of Contact Occupation Title: Program Officer
Department Title: Expeditionary Maneuver Warfare & Combating Terrorism S&T
Department
Department Code: ONR 30
Address: Office of Naval Research
One Liberty Center, OLC 1044D
875 N. Randolph Street
Arlington, VA 22203-1995
E-mail address: ivy.estabrooke@navy.mil

Questions of a business nature should be submitted to:

Procurement Contracting Officer:
Point of Contact Name: R. Brain Bradley
Point of Contact Occupation Title: Branch Head, Code 0253
Division Title: Contract & Grant Awards, Management
Division Code: Code ONR 0253

Business Point of Contact:

Point of Contact Name: Cheryl Middleton

Point of Contact Occupation Title: CACI Support Contractor

Division Title: Contract & Grant Awards, Management

Division Code: Code ONR 0253

Address: Office of Naval Research
One Liberty Center
875 N. Randolph Street
Arlington, VA 22203-1995

Email Address: Cheryl.Middleton.ctr@navy.mil

Questions of a security nature should be submitted to:

Derrick Shack

Information Security Specialist

Address: Office of Naval Research
Security Department, Code 43
One Liberty Center
875 N. Randolph Street
Arlington, VA 22203-1995

Email Address: derrick.shack@navy.mil

Note: All UNCLASSIFIED communications shall be submitted via e-mail. All questions of an UNCLASSIFIED nature to the Technical Point of Contract (POC) or Security POC shall be sent via e-mail with a copy to the designated Business POC. Questions submitted within 2 weeks prior to a deadline may or may not receive a response.

Any 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.

8. Instrument Type(s) -

Awards may take the form of contracts, grants, and other assistance agreements (cooperative agreements and other transaction agreements, as appropriate).

9. Catalog of Federal Domestic Assistance (CFDA) Number - 12.300

10. Catalog of Federal Domestic Assistance (CFDA) Title - DOD Basic and Applied Scientific Research

11. Other Information -

This announcement is restricted to 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 this BAA 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

- Total amount of funding available: ~ \$8M spread over FY10-FY12.
- Anticipated Average Award Value: \$200K to \$1M per year
- Anticipated Number of Awards: One or more awards per area. An Offeror may propose on more than one area.
- Period of Performance: Up to 36 months
- Funding Type: Research and Development Funding of Budget Activity 2 (Applied Research), and Budget Activity 3 (Advanced Technology Development) is available for this effort.

III. ELIGIBILITY INFORMATION

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

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

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

Teams are encouraged to submit proposals in any and all areas. However, Offerors must be willing to cooperate and exchange software, data and other information in an

integrated program with other contractors, as well as with system integrators, selected by ONR.

*Some topics cover export controlled technologies. Research in these areas is limited to “U.S. persons” as defined in the International Traffic in Arms Regulations (ITAR) - 22 CFR § 120.1 et seq. (See Section VII, Other Information).

IV. APPLICATION AND SUBMISSION INFORMATION

1. Application and Submission Process

Full Proposals - The due date for receipt of Full Proposals is 3 p.m. (EDT) on 8/25/09. It is anticipated that final selections will be made by 9/22/09. As soon as the final proposal evaluation process is completed, the Offeror will be notified via email of its selection or non-selection for an award. Proposals exceeding the page limit may not be evaluated.

2. Content and Format of Full Proposals for Contracts

Full proposals submitted under the BAA are expected to be unclassified.

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. The full proposal shall include a severable, self-standing Statement of Work, which contains only unclassified information and does not include any proprietary restrictions.

IMPORTANT NOTE: Titles given should be descriptive of the work they cover and not be merely a copy of the title of this solicitation.

The proposal format and content identified below are applicable to the submission of proposals for contracts.

A. FULL PROPOSAL

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

- Paper Size – 8.5 x 11 inch paper
- Margins – 1 inch
- Spacing – single or double-spaced
- Font – Times New Roman, 12 point
- Number of Pages – Volume 1 is limited to no more than twenty (20) pages. Volume 2 has no page limit. The cover page, table of contents, references and resumes are excluded from the page limitations. Full Proposals exceeding the page limit may not be evaluated.

- Copies – For contracts: one (1) original, and one (1) electronic copy on CD-ROM (in Microsoft® Word). For grants and other assistance-type instruments, offerors must use Grants.gov (see section IV. 5).

Full Proposal Content

VOLUME 1: Technical Proposal:

A. Cover Page (not included in page limitation): This should include the words “Technical Proposal” and the following:

- 1) BAA number;
- 2) Title of proposal;
- 3) Identity of prime Offeror and complete list of subcontractors, if applicable;
- 4) Technical contact (name, address, phone/fax, electronic mail address);
- 5) Administrative/business contact (name, address, phone/fax, electronic mail address);
- 6) Duration of effort (differentiate the basic effort from any proposed options, if applicable)
- 7) Relevant Research Area within this BAA

B. Table of Contents (not included in page limitation)

C. Abstract:

- a. Concise (approximately 200 words) abstract of the proposed effort.
- b. Discussion of how the proposed research effort will respond to the objectives of the BAA.

D. Statement of Work:

- a. A description (in sufficient detail to permit evaluation of the proposal) of the scientific background, scope, and objective of the proposed effort, along with appropriate references to the scientific literature. It is anticipated that the proposed SOW will be incorporated as an attachment to any resultant award instrument. To this end such proposals must include a severable, self-standing SOW without any proprietary restrictions, which can be included as an attachment to any resultant contract. Include a detailed listing of the technical tasks/subtasks organized by year. When options are contemplated, the SOW must clearly identify separate optional tasks and their periods of performance.
- b. A description of general and special facilities available for performing the proposed work, and the rationale for requested support of any facilities, equipment, or materials.

- c. Submission of the SOW without restrictive markings is your company's affirmation that the SOW is non-proprietary and releasable in response to Freedom of Information Act (FOIA) requests.
- E. **Project Schedule and Milestones:** A summary of the schedule of events and milestones.
- F. **Assertion of Data Rights and/or Rights in Computer Software:** For a contract award an Offeror may provide with its proposal assertions to restrict use, release or disclosure of any pre-existing data and/or computer software that will be provided in the course of contract performance. The rules governing these assertions are prescribed in Defense Federal Acquisition Regulation Supplement (DFARS) clauses 252.227-7013, -7014 and -7017. These clauses may be accessed at the following web address: <http://farsite.hill.af.mil/VDFDARA.HTM>. The Government may challenge assertions that are provided in an improper format or that do not properly acknowledge earlier federal funding of related research by the Offeror.
- G. **Deliverables:** A detailed description of the results and products to be delivered, along with suggested due dates.
- H. **Management Approach:** A discussion of the overall approach to the management of this effort, including brief discussions of the total organization, use of personnel, project/function/subcontractor relationships, government research interfaces, and planning/scheduling/control practice. Identify which personnel and subcontractors (if any) will be involved. Include a description of the facilities that are required for the proposed effort with a description of any Government Furnished. Equipment/Hardware/Software/Information required, by version and/or configuration. Discuss how the proposed effort might be coordinated with Navy and industrial counterparts.
- I. **Technical Approach -** The offeror shall provide a detailed plan that coherently describes the technical approach proposed for contract performance which demonstrates a technical understanding of the proposed Statement of Work (SOW). The technical approach should address each of the numbered task areas delineated in the SOW, providing specific or unique techniques to be employed and anything else the offeror considers relevant in performing the SOW. The technical approach should indicate how the work will be performed, including the capabilities and resources which will be applied, what problem areas exist, the proposed solutions and a full explanation of the proposed disciplines, procedures and techniques to be followed. Emphasis should be placed upon the extent that the offeror's technical approach ensures timely delivery and successful completion of the tasks outlined by the SOW submission.

- J. **Personnel** - The offeror shall provide resumes of proposed key personnel to be utilized by the contractor/subcontractor in the performance of this contract. The offeror shall ensure that the proposed personnel are fully capable of performing in an efficient, reliable and professional manner.
- K. **Past Performance** - Past performance consists of a description of the offeror's Government and commercial contracts (both prime and major subcontracts) received during the past three years for the performance of work similar to the effort being proposed. The offeror may describe any quality awards or certificates that indicate the offeror possesses a high quality process for providing desired research and development outcomes.

VOLUME 2: Cost Proposal

INSTRUCTIONS FOR CONTRACTS AND OTHER TRANSACTION AGREEMENTS

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

The Cost Proposal shall consist of a cover page and two parts, Part 1 will provide a detailed cost breakdown of all costs by cost category by calendar or Government fiscal year, and Part 2 will provide a cost breakdown by task/sub-task corresponding to the task numbers in the proposed Statement of Work. Options must be separately priced.

Cover Page: The use of the SF 1411 is optional. The words "Cost Proposal" should appear on the cover page in addition to the following information:

- BAA number
- Title of Proposal
- Identity of prime Offeror and complete list of subcontractors, if applicable
- Technical contact (name, address, phone/fax, electronic mail address)
- Administrative/business contact (name, address, phone/fax, electronic mail address) and
- Duration of effort (separately identify basic effort and any proposed options)

Part 1: Detailed breakdown of all costs by cost category by calendar or Government fiscal year:

- Direct Labor – Individual labor categories or persons, with associated labor hours and unburdened direct labor rates. Provide escalation rates for out years;
- Indirect Costs – Fringe Benefits, Overhead, G&A, COM, etc. and their applicable allocation bases. If composite rates are used, provide the calculations used in deriving the composite rates.
- Travel –The proposed travel cost should include the following for each trip: the purpose of the trip, origin and destination if known, approximate duration, the number of travelers, and the estimated cost per trip must be justified based on the organizations historical average cost per trip or other reasonable basis for estimation. Such estimates and the resultant costs claimed must conform to the applicable Federal cost principals.
- Subcontracts – A cost proposal as detailed as the Offeror’s cost proposal will be required to be submitted by the subcontractor. The subcontractor’s cost proposal can be provided in a sealed envelope with the Offeror’s cost proposal or may be sent directly to the Government. Subcontractor proposals must be received and reviewed prior to contract award. The prime contractor should perform and provide a cost/price analysis of each subcontractor’s cost proposal.*

***Note:** DoD Federal Acquisition Regulation provision 252.215-7003 (48 CFR §252.215-7003) is incorporated into this solicitation by reference. The offeror is to exclude excessive pass-through charges from subcontractors. The offeror must identify in its proposal the percentage of effort it intends to perform and the percentage to be performed by each of its proposed subcontractors. If more than 70 percent of the total effort will be formed through subcontractors, the offeror must include the additional information required by the above-cited clause.

- Consultants – Provide a breakdown of the consultant’s hours, the hourly rate proposed, any other proposed consultant costs, a copy of the signed Consulting Agreement or other documentation supporting the proposed consultant cost, and a copy of the consultant’s proposed statement of work if it is not already separately identified in the prime contractor’s proposal.
- Materials & Supplies – Provide an itemized list of all proposed materials and supplies including quantities, unit prices, proposed vendors (if known), and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists).
- Contractor Acquired Equipment or Facilities – Equipment and/or facilities are normally furnished by the Contractor. If acquisition of equipment and/or facilities is proposed, a justification for the purchase of the items must be provided. Provide an itemized list of all equipment and/or

facilities costs and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists).

- **Other Direct Costs** – Provide an itemized list of all other proposed other direct costs and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists).
- **Options** – The Base Period of Performance and Option Periods must be priced at the submission of the proposal. Unpriced options will not be included in any resulting contract or agreement.
- **Fee/Profit (Contract Proposals Only)** – Profit or fee is not allowed on direct costs for facilities or in cost-sharing contracts.

Note: Indicate if you have an approved Purchasing/Estimating System and/or describe the process used to determine the basis of reasonableness (e.g., competition, market research, best value analysis) for subcontractors, consultants, materials, supplies, equipment/facilities, and other direct costs.

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

INSTRUCTIONS FOR GRANTS, COOPERATIVE AGREEMENTS, AND NON-845 OTHER TRANSACTION AGREEMENTS.

The offeror must use the Grants.Gov forms from the application package template associated with the BAA on the Grants.Gov web site located at <http://www.grants.gov/> . Elements of the budget should include:

- **Direct Labor** – Individual labor categories or persons, with associated labor hours and unburdened direct labor rates or percentage of effort or total man-years. Provide escalation rates for out years. Justify in Field K
- **Indirect Costs** – Fringe Benefits, Overhead, F&A, G&A etc. and their applicable allocation bases. If composite rates are used, provide the calculations used in deriving the composite rates. Justify in Field K
- **Travel** – The proposed travel cost should include the following for each trip: the purpose of the trip, origin and destination if known, approximate duration, the number of travelers, and the estimated cost per trip must be justified based on the organizations historical average cost per trip or other reasonable basis for estimation. Such estimates and the resultant costs claimed must conform to the applicable Federal cost principals. Justify in Field K.
- **Sub-awards** - Cost proposal as detailed as the recipient's cost proposal will be required to be submitted by the sub-recipient. The sub-awardees' or sub-recipient's cost proposal can be provided in a sealed envelope with the

recipient's cost proposal or may be sent directly to the Government. Sub-awardees proposals must be received and reviewed prior to award.

- Consultants – Provide a breakdown of the consultant's hours, the hourly rate proposed, any other proposed consultant costs and a copy of the consultant's proposed statement of work if it is not already separately identified in the prime recipient's proposal. Strong justification must be provided, and consultants are to be used only under exceptional circumstances where no equivalent expertise can be found at a participating university. Justify in Field K.
- Materials & Supplies – Provide an itemized list of all proposed materials and supplies including quantities, unit prices, proposed vendors (if known), and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists). Justify in Field K.
- Recipient Acquired Equipment or Facilities – Equipment and/or facilities are normally furnished by the Recipient. If acquisition of equipment and/or facilities is proposed, a justification for the purchase of the items must be provided. Provide an itemized list of all equipment and/or facilities costs and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists). For computer/laptop purchases include a statement indicating the computer/laptop will be integrated into the program or used as an integral part of the research effort. Justify in Field K.
- Other Direct Costs – Provide an itemized list of all other proposed other direct costs such as Graduate Assistant tuition, laboratory fees, report and publication costs, and the basis for the estimates (e.g., quotes, prior purchases, catalog price lists). Justify in Field K.

NOTE: If the grant proposal is for a conference, workshop, or symposium, the proposal should include the following statement: "The funds provided by ONR will not be used for food or beverages."

- Options – The Base Period of Performance and Option Periods must be priced at the submission of the proposal. Any proposal containing unpriced options will not be included in the award.
- Fee/Profit - Fee/profit is unallowable.

INSTRUCTIONS FOR CONTRACTS, GRANTS, AND OTHER ASSISTANCE AGREEMENTS THAT WILL REQUIRE INSTITUTIONAL REVIEW BOARD (IRB) REVIEW AND COMPLIANCE WITH HUMAN SUBJECT PROTECTIONS

If the proposed work requires the use of human subjects, proposers should familiarize themselves with Navy Human Subject Protections policies and requirements (http://www.onr.navy.mil/sci_tech/34/343). Additionally, tasks that require human subjects should be separated from those that do not require human subjects in the proposal. Budgets should reflect this separation of tasks.

3. Significant Dates and Times –

Anticipated Schedule of Events

<u>EVENT</u>	<u>DATE</u>	<u>TIME (EASTERN TIME)</u>
Full Proposals Due	August 25, 2009	3:00 pm
Notifications of Selection for Award*	September 22, 2009	
Estimated Award (Grants)*	November 1, 2009	
Estimated Award (Contracts)*	January 1, 2010	

*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. Submission of Grant and Assistance Agreement Proposals through Grants.gov

Detailed instructions entitled “Grants.Gov Electronic Application and Submission Information” on how to submit a grant or cooperative agreement proposal through Grants.gov may be found at the ONR website listed under the ‘Acquisition Department – Contracts & Grants Submitting a Proposal’ link at:

http://www.onr.navy.mil/02/how_to.asp

Grant and other assistance agreement proposals shall be submitted through [Grants.gov](http://www.grants.gov) using the [Grants.gov](http://www.grants.gov) forms from the application package template associated with the BAA on the [Grants.gov](http://www.grants.gov) website. To be considered for award, applicants must include the ONR Department Code in Block 4 entitled ‘Federal Identifier’ of the Standard Form (SF) 424 R&R. Applicants who fail to provide a Department Code identifier may receive notification that their proposal submission has been rejected. Use Code 30 for this award.

By completing Blocks 18 and 19 the Grant Applicant is providing the certification on lobbying required by 32 CFR Part 28. Refer to Section VI, ‘Award Administration Information’ entitled “Certifications” for further information.

For electronic submission of grant and cooperative agreement full proposals, several one-time actions must be completed in order to submit an application through Grants.gov. These include obtaining a Dun and Bradstreet Data Universal Numbering System (DUNS) number, registering with the Central Contract Registration (CCR), registering with the credential provider, and registering with Grants.gov. See www.grants.gov, specifically www.grants.gov/GetStarted.

Use the Grants.gov Organization Registration Checklist at http://www.grants.gov/applicants/register_your_organization.jsp which will provide guidance through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called ‘MPIN’ are important steps in the CCR registration process. Applicants who are not registered with CCR and Grants.gov should allow at least 21 days to complete these requirements. The process should be started as soon as possible. Additionally, in order to download the application package, applicants will need to install [PureEdgeViewer](#). This small, free program will allow applicants to

access, complete and submit applications electronically and securely. For a free version of the software, visit the following website: www.grants.gov/DownloadViewer. Any questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov.

Process to Obtain a Waiver from the Use of Grants.Gov for Submission of Full Grant Proposals: If a prospective grantee is unable to comply with the requirement to use Grants.Gov “APPLY” for submission of a grant application under this BAA or finds it would be an excessive burden to comply with this requirement, a waiver request may be submitted not less than 30 calendar days prior to the closing date for receipt of Full Proposals. Such request should be submitted by the Electronic Business Point of Contact listed in the CCR for the organization and should contain the Organization/Individual’s name, address, telephone number, and email address. The request should state the reason for the request in sufficient detail so a decision can be made. The Waiver Request should be submitted to the ONR Acquisition Department point of contact or Grants Officer listed in the BAA. Such request can be sent by registered mail or email. The “postmark” stamp on the envelope or the time annotated on the email will be used to determine timeliness of the request. A decision and response will be issued within 14 calendar days of receipt of the request by ONR. Foreign Grantees who are not registered in CCR may request a waiver on that basis since CCR registration is integral to the Grants.Gov application process.

Special Notice on Alternate Submission

The following alternative to submitting proposals to the grants.gov website is provided for use under this BAA. Proposals using the alternative submission process will be accepted only if grants.gov is not accepting the proposal and the offeror has called the grants.gov helpline and received a case ticket number. If grant.gov has not within two days by return email validated your proposal submission, call Grants.gov (1-800-518-4726) to obtain a case ticket number. An email from Grants.gov indicating rejections of the grant proposal will not be accepted in place of a Grants.gov case ticket number.

a. Upload the proposal using the form on the following website:

<http://onroutside.onr.navy.mil/aspprocessor/BAAPE/>

b. Use this form to upload your grant proposal directly to the Office of Naval Research. All fields in the form are required to be completed, including the assigned Grants.gov case ticket number. Your completed package should also include a signed scanned proposal cover sheet with the signature of your authorized organizational representative as part of the ‘Attached Form’. Submit one file per proposal in PDF format. **DO NOT submit any parts of the proposal separately. Technical proposals, endorsements, etc. should be on the Grants.gov ATTACHMENTS form.**

c. Use the naming convention below for all uploaded proposals.

*Convention: (ONRBAA09-XXX_Topic_LeadPI_University.pdf)

*Example: ONRBAA09-012_NOPP_MSMITH_UNIVRESEARCH.PDF

d. Once a document has been submitted, a “Thank You” page will appear and an email will be sent to the address provided. If you do not receive an email confirmation, your file has not been properly received. You should immediately contact the business point of contact listed in the BAA or the ONR Grants BAA Administrator.

6. Address for the Submission of Full Proposals for Contracts

Office of Naval Research
One Liberty Center
875 North Randolph Street
Attn: Ms. Felicia Bush, ONR-30, OLC 1151A
Arlington, VA 22203-1995

FULL PROPOSALS SENT BY FAX OR EMAIL WILL NOT BE CONSIDERED

V. EVALUATION INFORMATION

1. Evaluation Criteria –

The following evaluation criteria apply to the Full Proposals. Proposals will be selected through a technical/scientific/business decision process with technical and scientific considerations being more important than cost. Criteria A-D are listed in descending order of priority. Any sub-criteria listed under a particular criterion are of equal importance to each other.

- A. Overall scientific and technical merits of the proposal
 - 1. The degree of innovation
 - 2. The soundness of technical concept
 - 3. The offeror’s awareness of the state of the art and understanding of the scope of the problem and the technical effort needed to address it.

- B. Relevance to the goals of the program and contributions of the effort to the agency’s specific mission.

- C. Offeror’s capabilities, related experience, and past performance, including the qualifications, capabilities and experience of the proposed principal investigator and other key personnel.
 - 1. The quality of technical personnel proposed
 - 2. The offeror’s experience in relevant efforts with similar resources
 - 3. The ability to manage the proposed effort.

- D. The realism of the proposed costs.

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

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

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

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

VI. AWARD ADMINISTRATION INFORMATION

1. Administrative Requirements –

- The North American Industry Classification System (NAICS) code – The North American Industry Classification System (NAICS) code for this announcement is “541712” with a small business size standard of “500 employees”.
- Central Contractor Registry (CCR) - Successful Offerors not already registered in the CCR will be required to register in CCR prior to award of any grant, contract, cooperative agreement, or other transaction agreement. Information on CCR registration is available at <http://www.onr.navy.mil/02/ccr.htm>.

- Subcontracting Plans - Successful contract proposals that exceed \$550,000, submitted by all but small business concerns, will be required to submit prior to award a Small Business Subcontracting Plan in accordance with FAR 52.219-9.
- Certifications – Proposals for contracts and assistance agreements should be accompanied by a completed certification package.

Contracts Proposals:

For contracts, in accordance with FAR 4.1201, prospective contractors shall complete and submit electronic annual representations and certifications at <http://orca.bpn.gov>. In addition to completing the Online Representations and Certifications Application (ORCA), proposals must be accompanied with a completed DFARS and contract specific representations and certifications. These "DFARS and Contract Specific Representations and Certifications", i.e., Section K, may be accessed under the Contracts and Grants Section of the ONR Home Page at http://www.onr.navy.mil/02/rep_cert.asp.

Grants and Other Assistance Agreements:

Grant and Cooperative Agreement awards greater than \$100,000 require a certification of compliance with a national policy mandate concerning lobbying. Grant applicants shall provide this certification by electronic submission of SF424 (R&R) as a part of the electronic proposal submitted via Grants.gov (complete Blocks 18 and 19); The following certification applies to each applicant seeking federal assistance funds exceeding \$100,000:

CERTIFICATION REGARDING LOBBYING ACTIVITIES

(1) No Federal appropriated funds have been paid or will be paid by or on behalf of the applicant, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the applicant shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The applicant shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Grants and Cooperative Agreements not through Grants.gov:

Proposers seeking grants or cooperative agreements who have received Grants.gov waiver approval for awards greater than \$100,000 shall complete and submit electronic representations and certifications at the Contracts and Grants Section of the ONR Home Page at http://www.onr.navy.mil/02/rep_cert.asp .

2. Reporting -

The following are samples of data deliverables that are typically required under a research effort:

- Technical and Financial Progress Reports
- Presentation Materials
- Other documents or reports
- Final Report

Additional data deliverables may be proposed and finalized during negotiations. Research performed under contracts may also include the delivery of software, prototypes, and other hardware deliverables.

VII. OTHER INFORMATION

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

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

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 should

explain as part of their proposals which of these facilities are critical for the project's success.

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 prominently in its proposal.

3. Use of Animals and Human Subjects in Research

If animals are to be utilized in the research effort proposed, the Offeror must complete a DOD Animal Use Protocol with supporting documentation (copies of AALAC accreditation and/or NIH assurance, IACUC approval, research literature database searches, and the two most recent USDA inspection reports) prior to award. For assistance with submission of animal research related documentation, contact the ONR Animal/Human Use Administrator at (703) 696-4046.

Similarly, for any proposal for research involving human subjects the Offeror must submit prior to award: documentation of approval from an Institutional Review Board (IRB); IRB-approved research protocol; IRB-approved informed consent form; proof of completed human research training (e.g., training certificate or institutional verification of training); an application for a DoD Navy Addendum to the Offeror's DHHS-issued Federal-wide Assurance (FWA) or the Offeror's DoD Navy Addendum number. In the event that an exemption criterion under 32 CFR.219.101(b) is claimed, provide documentation of the determination by the Institutional Review Board (IRB) Chair, IRB Vice Chair, designated IRB administrator or official of the human research protection program. Information about assurance applications and forms can be obtained by contacting ONR_343_contact@navy.mil. If the research is determined by the IRB to be greater than minimal risk, the Offeror also must provide the name and contact information for the independent medical monitor. [Note: for research involving human subjects that is greater than minimal risk, administrative procedures to protect human subjects from medical expenses (not otherwise provided or reimbursed) that are the direct result of participation in a research project must be addressed. Additional supporting documentation may be requested. For additional information on this topic, email ONR_343_contact@navy.mil.] For assistance with submission of human subject research related documentation, contact the ONR Animal/Human Use Administrator at (703) 696-4046.

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 other 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. Protection of Proprietary and Sensitive Information

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

7. Project Meetings and Reviews

Individual program reviews between the ONR sponsor and the performer will be held as necessary, but not less than quarterly. 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. Submission of Questions

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

- All Questions shall be submitted in writing by electronic mail.
- Questions and responses will be posted on the ONR web site at onr.navy.mil.
- ***No direct e-mail response will be provided.***
- Questions presented by telephone call, fax message, or other means will not be responded to.
- There will be no meetings between potential offerors and ONR personnel.

Questions regarding **full proposals** must be submitted by 3:00 P.M. Eastern Time on 8/25/09. Questions after this date and time may not be answered, and the due date for submission of the proposals will not be extended.

9. Other Guidance, Instructions, and Information

None