

Amendment 0002
Solicitation Number ONRBAA 12-018
“USV Payloads for Single Sortie Detect to Engage (SS-DTE) Mine Counter Measures”
Date 6 SEP 2012

The purpose of Amendment 0002 is to amend the BAA and respond to questions submitted.

BAA 12-018 is hereby amended as follows:

1. Questions and Answers are provided as follows:

Question 1: Is there an incumbent providing these same or similar services? If so, could you please provide the incumbent contractor name and contract number?

Answer 1: There is no incumbent for this effort.

Question 2: Access to the web dropbox referenced in ONRBAA-12-018, Section IV.1 <http://onroutside.onr.navy.mil/ASPPProcessor/annual321oe/> results in an error. Is there another way to submit white papers?

Answer 2: The dropbox works correctly now. In addition to submitting your white paper through the dropbox, please email the submission to John Dudinsky at john.dudinsky@navy.mil.

Question 3: Please provide a list of items, schedule of requirements, scope of work, terms of reference, bill of materials required, a soft copy of the tender document through email, names of countries that will be eligible to participate in this tender, information about the tendering procedure and guidelines, estimated budget for this purchase, any extension of bidding deadline, and any addendum or pre bid meeting minutes.

Answer 3: Please see ONRBAA 12-018 and all amendments located on www.fbo.gov and www.onr.navy.mil. Specifically, please see Sections II entitled, “Award Information” and III entitled “Eligibility Information”.

Question 4: I would like to extend my companies capabilities as we are well suited to address your MOSA requirements on this program. Having said that, we would not be supplying the complete end system, but would be able to provide the MOSA components to your organization or one of the potential bidders to build the end system. Is there a forum that would allow for us to brief your technical team on our company and MOSA capabilities? I'm hoping the program allows for Technology Briefing or coupled with an Industry Day so we can properly brief your program team. I also would be very interested to pursue any opportunity to provide a briefing to ONR as we are seeing more and more opportunities request MOSA architectures which is exactly what we do. Does the program allow for a Technology Briefing and/or an Industry Day?

Answer 4: We are working to implement an open computing environment as an overarching goal of the Single Sortie Detect to Engage (SS-DTE) technology development effort. While our primary emphasis is on the application of open architecture concepts to our software development effort, we understand that computing hardware modularization could also be of benefit to our development. Our overall goal is to transition our solutions into next generation USV programs for the Navy, and any products that assist us in this manner are of interest. We are not currently planning to hold an industry day related to the SS-

DTE program. We would be amenable to conducting market research with firms who may brief us on relevant capabilities and products. This brief will not be appropriate until our development team is identified, and our project goals are completely defined. At this point, we feel that a brief by your company would be most productive in late winter or early spring of 2013. We anticipate a need for significant computing hardware resources in order to support the automation, data processing, and subsystem communication requirements of our program.

Question 5: Do you anticipate a USV that can carry 4 - 12 3/4 inch UUVs and "up to 24 neutralizers" at the same time?

Answer 5: We have done some studies based on the designated "footprint" of USV on LCS, as well as permissible L&R weight and other parameters. If we can keep the weight of the Deployment and Recovery system down, it does appear feasible that we can carry the loadout you are enquiring about. We base this statement on an assumed LW UUV weight of 800lbs, and an assumed neutralizer weight of 37lbs. Therefore – such a payload appears possible, however, we by no means think that is THE payload. Ideally, the system concept should enable tailored payloads which might involve more or less N, more or less SCMD, etc. We are estimating a payload capacity of roughly 6,000lbs for a USV that is designed without a high speed tow requirement (it therefore has 1500-2000lbs less running gear than the current USV sweep, and correspondingly more payload capacity), and has been designed to utilize all the space available in an LCS Sea Type 1 (USV) payload space (i.e. - it is slightly larger than the current USV Sweep). Obviously, our estimate is based on the new USV being lightweight - likely a composite build.

Question 6: How does what is sought in Product Area 2 differ from the technology/product solicited in the VESON RFI (N0017412SN030)? Are these solicitations coordinated in any way?

Answer 6: The VESON RFI is focused only on neutralization in VSW region, and does not have a drifting mine requirement. The SS-DTE Product 2 new technology investment is primarily focused on near-surface and drifting mines. The final application of the technology products to the LCS mission requires full spectrum MCM capability (therefore, any technology solution providing a capability near-surface and drifting mines, must not preclude the capability to be effective against bottom/moored targets in shallow water and deep water). The VSW mission is also carried out in a denied environment, with a requirement for near-simultaneous neutralization of a large number of targets. Technology solutions that are tailored for the LCS mission may not necessarily be suitable for use in the VSW (VESON) mission. The VESON/SS-DTE programs are closely coordinated, and we anticipate that SS-DTE program will provide advanced capabilities to the VESON system as the technology developments evolve.

Question 7: Will white papers and proposals be accepted for one of the two product areas only, or is a single system solution that incorporates both product areas required?

Answer 7: White papers may be submitted for any or all of the 8 tasks identified under the BAA. They must be individual papers for each separate task/technology. An additional 'cover' paper may be submitted to show synergy/ interrelation (as being proposed by vendor) between proposed tasks if vendor chooses. The Government is not soliciting an overarching single system solution proposal for either one or both of these product areas, as we reserve the right to select best technology solution for a given task. The MOSA requirement facilitates the ability to integrate multiple vendor solutions.

Question 8: It seems that the white paper requirements for ONR BAA 12-018 do not include requirements to provide costing information (except for GFE) in the white paper. Is this correct?

Answer 8: See answer to question 31 below.

Question 9: I am writing to ask whether my organization would be eligible for funding under ONR BAA 12-018, “USV Payloads for Single Sortie Detect to Engage (SS-DTE) Mine Counter Measures.”

Answer 9: Insofar as the organization submits a white paper that is of particular interest to ONR and that does not involve an ITAR-restricted technology, we can fund the organization's proposal. If the organization submits a white paper that involves an ITAR-restricted technology, but the organization does not need access to any U.S. data regarding that technology, we can likely fund the work. If the organization submits a white paper on an ITAR-covered subject where the organization could not perform the work w/o access to U.S. technical data on the subject, we would likely not be able to fund the work and provide the sensitive data unless there is some exemption that could be identified that could allow a legal release of the data to the organization.

Question 10: Can more details be provided on the Unmanned Surface Vessel (USV) that would be used for the demo?

Answer 10: No. As noted in the BAA reference document, the government is examining options for the test bed demonstration USV platform.

Question 11: Is there a standard payload compartment on the USV that the Deploy and Recovery System (DRS) must utilize?

Answer 11: The SS-DTE payload is intended for operation with the Navy’s envisioned Common USV. That USV has not been designed at this point. Details for demonstration platform interfaces will be determined as a selected approach reaches detailed design phase

Question 12: What are the max size and weight requirements of the DRS?

Answer 12: For size constraints, see answer to question 18 below.

Question 13: How much power is available from the USV for the DRS?

Answer 13: This is unknown at this time. For the demo, DRS may have to provide its own power. These details will be worked if the offered approach makes it to proposal and design stage.

Question 14: What is the USV length, beam and draft?

Answer 14: The LCS compatible envelope is 40’ length, 11.5’ beam, and 10.5’ overall height.

Question 15: What type of propulsion does the USV have (water jets, propeller)?

Answer 15: This is to be determined.

Question 16: What is the navigation capability/controllability/accuracy of the USV?

Answer 17: Assume ‘hold course’ navigation capability and controllable speeds down to 2 knots. The course and cross track are typical of commercial autopilots.

Question 18: Can DRS equipment be mounted external to the USV, or must all equipment remain within the envelope of the USV payload compartment?

Answer 18: The DRS, mounted to USV (non-operational and stowed), must remain inside the LCS allowable envelope (see answer to question 14 above). Operationally (when DRS in use), the DRS components could exceed these dimensions, keeping in mind USV stability and system survivability.

Question 19: Up to what sea state will the DRS need to deploy, operate, and retrieve?

Answer 19: Sea state 3 is the requirement. Realistically for a final, fielded configuration, it should be operable in sea state 4.

Question 20: What LW UUVs are envisioned for the final in water demo? Make and model? Are they identical? If not, what is different?

Answer 20: REMUS 600s are envisioned for the demo. At this time, there are two variants considered – bottom search configuration (2) and volume search / ID (2).

- The bottom search variant will be configured with Synthetic Aperture Sonar, will have a tri-fin assembly right behind nose section, will be approximately 15 ft long and weigh approximately 700 lbs

- The Volume / ID variant will have a forward looking sonar, be approximately 12-14 feet long and weigh approximately 600-700 lbs.

Question 21: Will all contractor questions/answers be posted on FBO.gov?

Answer 21: Yes, questions and answers will be posted through an amendment.

Question 22: Our company builds mine hunting and classification sonar for surface vessels and UUV's. Is SS DTE white paper request for full USV systems or for any technologies that may be beneficial to this program

Answer 22: The BAA was constructed to solicit technologies (subdivided as discrete tasks) that were components of the SS-DTE mission. Task (6) Low Cost Target Reacquisition Capability would be the area that applies to your technology. The key parameters are laid out in that section. Note specific goals of low cost, near surface performance and small (sonobuoy form factor). The sensors are envisioned to be integrated with the Neutralizer Test Bed (Task 5) for FY 17 Demo.

Question 23: In the “White Paper Content” section of the BAA. The “Other Considerations” bullet asks for requirements and cost of GFE. Is there a particular method we should use for estimating the cost of GFE?

Answer 23: Please inform us of any GFE requirements associated with your proposed approach aside from UUV platforms, and potentially UUV mockups (i.e. the PMS EOD Remus 600 models). The offeror should describe what additional GFE is needed to carry out the proposal (discounting UUV platforms), and the cost of that GFE should not be included in the white paper budget. See Section IV, Paragraph 2, Subparagraph a. entitled, “White Papers” shown below.

Question 24: I was reviewing the SS-DTE BAA and wanted to clarify the due date for the white papers. In the General Information section it indicates that the white papers are due 9/13/2012, however, in section IV it indicates that the white papers are due by 4:00PM September 27th, 2012. Can you clarify which date is correct?

Answer 24: See Amendment 0001.

Question 25: Task (5) Neutralizer Test Bed states that "ONR is soliciting white papers and full proposals that address development of this test bed, as well as overall system concepts focused on the destruction of mine targets located at any point in the water column, from the surface, down to a depth of 600 feet." These appear to be two different and only somewhat related requests, one for a test bed used in the development and demonstration of low cost component technologies and a separate request for a low cost UUV-based neutralizer overall system concept. Does a white paper need to address both? Does the test bed essentially have to reflect an overall low cost neutralization system concept?

Answer 25: The intent of Task 5 is to develop technologies that will enable the capability to neutralize mine targets located at any point in the water column, from the surface, down to a depth of 600 feet, using a low cost UUV-based neutralizer system. As such, the test bed would ideally support this overarching goal. The Neutralizer Test Bed is viewed as a platform demonstrating a low cost approach to a component of a potential future neutralization system. It must also be capable of supporting the integration of sensors (such as described in task 6 & 7). White paper submissions under Task 5 are being solicited to address the development of the underlying technologies required to achieve the desired capability. White papers do not have to address both the test bed development and the overall system concept simultaneously, if not reasonable to do so. Offerors are not limited to one white paper per task.

Question 26: For Task (5) Neutralizer Test Bed, in addition to the capabilities to be developed under Tasks (6) and (7), are there other capabilities desired or envisioned for demonstration using the neutralizer test bed?

Answer 26: Task 6 and Task 7 describe major technology enablers for the desired future capability. White papers that address other enablers not specifically listed, but that would support the development of an inexpensive, lightweight, small, neutralization system capable of being deployed from a wide variety of host platforms, are encouraged. For example, autonomy that would enable a future tetherless approach to neutralization is desired. Additionally, the test bed should by definition utilize an Open Architecture to support future configurations for T&E, which may include various autonomy modules.

Question 27: Under Task (5) Neutralizer Test Bed, the potential warhead, safe and arming unit (SAU), and fuse are not addressed. Will this be a bulk or shaped charge system (or both)? Would it be advantageous for the neutralizer test bed to be able to accommodate different sizes and shapes for the warhead, SAU and fuse (within reason)?

Answer 27: ONR has no intent to address warhead, safe and arming unit (SAU), and fusing issues in this program. The neutralization charge type that will be utilized in the final system to be eventually fielded by the Navy will obviously impact the overall final system design, and any vendor concepts describing benefits of alternate neutralization mechanisms may be described in the white paper. For test purposes, a "dummy" neutralization package will be incorporated into the test bed. The warhead type to be utilized in the final envisioned system is not determined at this time. With respect to addressing the (to be determined) dummy warhead, designing a test bed that can not only place a dummy bulk charge, but also place and orient a dummy shape charge would be most useful for evaluating potential future configurations.

Question 28: Under Task (5) Neutralizer Test Bed, is there a requirement for data acquisition capability on board the neutralizer test bed?

Answer 28: The capability for data acquisition is required only if the platform is intended to be fully autonomous.

Question 29: Under Task (5) Neutralizer Test Bed, does the capability for both tethered and non-tethered operations need to exist in a single test bed configuration or can multiple test beds be proposed?

Answer 29: The capability to operate in both tethered and non-tethered modes is desired, however, multiple test beds can be proposed. While ultimately, a non-tethered configuration is desired, in the spirit of 'crawl, walk, run' the tethered variant will be preferred for our initial development phase, so we can monitor sensor performance in real time.

Question 30: In the BAA for Research Opportunity Number 12-018, I would like to confirm the due dates for both the White Paper and Full Proposal.

White Paper: Due 27 Sep 2012

Full Proposal: Due 13 Dec 2012

There are different dates stated in Section I General Information, of the BAA under "Response Date."

Answer 30: See Amendment 0001.

Question 31: It was unclear in the solicitation of BAA 12-18 if we were to include a cost estimate in our white paper submittal. And if so, is it an estimate to be refined if we are chosen for a full proposal, or is it a firm bid price?

Answer 31: Please provide high level cost estimates for the tasks being proposed under the white paper. In addition, offerors will be able to refine their cost estimates if selected to provide a full proposal. See Section IV, Paragraph 2, Subparagraph a. entitled, "White Papers" shown below.

2. The BAA is hereby amended as follows:

a. Section IV, Paragraph 2, Subparagraph a. entitled, "White Papers" is revised to read as follows:

a. WHITE PAPERS

White Paper Format

- Paper Size - 8.5 x 11 inch paper
- Margins - 1 inch
- Spacing - single spaced
- Font - Times New Roman, 12 point
- Max. Number of Pages permitted: 5 pages (excluding cover page, resumes, bibliographies, and table of contents)
- Copies - One (1) electronic copy in Adobe PDF or Word 2007 delivered via email. Electronic (email) submissions should be sent to the attention of the TPOC at: tom.swean@navy.mil. The subject line of the email shall read "ONR BAA12-018 White Paper Submission."
NOTE: 1) Do not send .ZIP files; 2) 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 email 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.
- Technical Concept: A description of the technology innovation and technical risk areas. The technical section shall state which areas and topics are being addressed and shall consist of clear descriptions of objectives, technical issues and risks which must be resolved to accomplish objectives, approach to resolving these issues, particular prior experience of the offeror in targeted technology area, and a clear description of and schedule for demonstration of the significant aspects of the concept.
- Other Requirements: **Include Government Furnished Equipment (GFE) requirements associated with your proposed approach excluding UUV platforms and UUV mockups. A cost estimate for GFE is not required. In addition, include a high level cost estimate for all costs (except GFE) associated with each task.**