

Amendment 0001
Solicitation Number ONRBAA 13-017
“Exchange of Actionable Information at the Tactical Edge”
Date 23 July 2013

The purpose of Amendment 0001 is to respond to questions submitted through 07/22/2013. Questions received after 07/22/2013 will be addressed in a subsequent amendment.

1. Industry Questions and Answers are provided as follows:

(Q1) For this solicitation, what is your view on using licensed, commercial software in the technical approach?

(A1) Experience has shown that licensing fees are a barrier to technology transition, which is required for enabling capability programs. In this budget constrained environment, solutions that do not require Government to pay recurring licensing fees are preferred. If a solution proposes the use of a licensed, commercial software package it needs to successfully argue that the increased capability significantly exceeds the risk associated with a Program of Record maintaining a willingness and ability to pay that cost. Furthermore, offerors who choose to incorporate license bearing software in their approach should explain why an open source or government owned option was ruled out.

(Q2) For Thrust Areas 1 or 2, is ONR interested in software applications that can automate data collection from disparate sensors/sources and disseminate intelligence reports to users focused in specific warfare mission areas (i.e., ASW, ASuW, MIW, etc.)?

(A2) For Product 2, yes. Product 1 would address report types that a single sensor or node can produce.

(Q3) We are interested in addressing Products 1 and 2. However there seems to be a confusion on how to submit a proposal for those of these products. On one hand in Page 9 on the "Integrated Capabilities" section it strongly encourages proposals that fit multiple product areas. On the other hand in page 14 the following statement is made: "Each white paper and proposal must address only ONE Thrust Area; however, offerors may respond via separate white papers and proposals to multiple Thrust Areas .".

Our Assumption: We will assume that we can create one single architecture that addresses both Products, but we should submit 2 whitepapers addressing the specific aspect of the architecture related to Product 1 on one whitepaper and a second whitepaper addressing parts of the architecture related to Product 2.

(A3) Yes

(Q4) Can we team or subcontract a Government Laboratory under this BAA?

(A4) You may team with a Government Laboratory that can offer expertise not found in the private sector. As stated on page 15 of the BAA under section III, "Eligibility Information", 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. 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.

(Q5) Question: What level of enrichment will be the input for Product 1? Can we assume any pre-processing by other data conditioners or should we assume Product 1 will get the raw data?

(A5) If you assume pre-processing, the application with Government purpose rights capable of the assumed pre-processing should be identified.

(Q6): Product 3 "Network Adaptive Communication Services" discusses a range of network adaptation mechanisms. More details and examples would help us to better understand and address the Navy's needs.

(A6): We are open to multiple methods that deliver needed content in the most efficient manner based on user's needs, priority, the network's ability to deliver, the sensor's and information processing abilities, and timeliness.

(Q7): We are interested in how adaptive wireless links, and applications running over adaptive wireless links, fit into the picture.

(A7): Emerging wireless link technologies can adapt their transmission rate to the given propagation conditions (e.g. SNR, etc). Additionally, tactical edge networks may be comprised of multiple link types operating with different connectivity performance (e.g. data rate, packet loss, delay). Different deployment topologies and mobility in edge systems can result in different and changing connectivity. It is anticipated that applications and network protocols that can adapt to the network state can offer better performance for the user than current off-the-shelf solutions.

(Q8): Are there existing protocols or methods that the Navy uses for configuring adaptive networks that a solution needs to be compatible with?

(A8): We anticipate needing to operate with Internet Protocol (IP) systems using link-state routing protocols. We are also interested in leveraging protocols that provide performance benefits for tactical edge wireless networks including reliable multicast for group communication exchanges that are prevalent in tactical networks. We are also open to other ideas (especially

non-proprietary ones), understanding that we will need to interface with IP networks and standard routers.

(Q9): Or, is the Navy searching for new entirely new techniques to address these problems? For example, one can imagine a system implementing a cross-layer network design that addresses many of the (wireless) network adaptation needs.

(A9): Please see above. Pragmatic approaches to cross-layer network design principles are of interest. This includes radio-to-router interface protocols and approaches that can efficiently monitor, collect, and utilize network state information.

(Q10): One can imagine various devices which act on network adaptation information at the application layer and operate as leaf nodes in a network. One example is a video encoder which automatically adjusts the image to the available network bandwidth to prioritize information in a useful way. How might such a device meet the Navy's needs as described in this BAA?

(A10): The intent of EAITE goes beyond adapting to network conditions to having some understanding of the user's needs in delivering content.

(Q11): On page 5 of the BAA, it says, "Since any solutions must run on-top of existing communications architectures." Can you provide specific information about what existing communication architecture should be assumed from the BN to the squad level? (tactical radios and connected computing resources)

(A11): We anticipate a three-node company-level mobile command post with SATCOM reachback (to the Bn afloat or ashore), T-1 down, 512 kb/s up. The three nodes will be connected via secure WiFi. It will also have HF reachback with rates up to 100kb/s both directions. Branching off the three nodes will be tactical radios ranging from ANW2, SINCGARS, soldier radio waveform, EPLRS and UHF voice. There is multi-hop capability with some of the tactical radios. Sensor feeds will be coming from airborne platforms with links such as TCDL and compact data links with rates of 10s of Mb/s.

(Q12): It is not clear in the BAA on whether or not resumes should be submitted as a non-page count item with the white papers. Should resumes of key personnel be included as part of the white paper submissions?

(A12): The BAA states the following: Max. Number of Pages permitted: 10 pages (excluding cover page, resumes, bibliographies, and table of contents) Yes, include resumes of key personnel.

(Q13): The solicitation shows 2 - 5 years as the performance period. What is the preferred performance duration for a whitepaper at this stage?

(A13): We expect the period of performance for most resulting proposals to be two to five years.

(Q14): For a small business company, will a joint whitepaper with a DoD prime contractor receive better evaluation result?

(A14): The most important evaluation factors are the quality of the technical approach, the company's ability to execute it, and its relevance to our stated problems. Firms are free to team if they think that arrangement will make their offering more competitive.

(Q15): On page 3 of the solicitation, the document says the SWIR sensor is to be compatible with the RQ-21A turret made by InSitu. Do you have actual specifications for SWAP envelope for this turret? Could you direct me to a person that would have this information?

(A15): To write a white paper it should be sufficient to know that the payload weight is limited to <30 pounds and the overall peak power draw must be less than 350W.

(Q16): In the solicitation, section I, page 9, heading "Integrated Capabilities", you've said, "Integrated Capabilities that do not exclusively fit into the three product areas are also strongly encouraged." Then in section II, paragraph 1, you state, "Each white paper and proposal must address only ONE Thrust Area; however, offerors may respond via separate white papers and proposals to multiple Thrust Areas." Can "Integrated Capabilities" be submitted in a single white paper, and if so, should the paper identify the "thrust area" as "Integrated Capabilities", or must we select one of the Thrust Areas as a "primary" Thrust, but still cover the other Thrust Area(s) topics under that single Paper?

(A16): Proposers should identify one thrust area as primary but can explain why that particular offering is relevant to multiple thrust areas. Proposers are also free to submit white papers against multiple thrusts that reference each other.

(Q17): Or, does a solution for "Integrated Capabilities" require multiple white papers be submitted for each Thrust addressed by the integrated capability?

(A17): Proposers are free to submit multiple white papers against different thrusts that discuss benefits to other thrusts.

(Q18): We believe the concept of Information Exchange Requirements (IERs), as described in section I, under Product 1 and Product 2 (pages 6-8) necessarily tightly couples these two products/thrusts. In particular, the S&T Challenge for machine understanding of IER's, in Product 1, and the S&T Challenge to "customize IERs" in Product 2, shows this coupling, and the depth of knowledge that must be conveyed is (we believe) both significantly complex and critical to the solution. Does the Government concur with this assessment?

(A18): We believe there are classes of IERs that can be addressed by one sensor, one machine and classes of IERs that require information from multiple sensors/machines to be fused. A consistent representation for knowledge across the EC is, however, expected to be required.

(Q19): If so, is the Government seeking proposals from bidders that indicate they share a common representation for IERs?

(A19): Prior coordination between bidders is not expected.

(Q20): Should bidders team together to provide cohesive proposals that cover Thrusts 1 and 2, showing a consistent viewpoint about how to use and convey IERs? That is, is the Government more likely to select proposals for a Thrust 1 submission that show a cohesive solution for interacting with a selected proposal from Thrust 2 (and vice versa)?

(A20): Every paper received will be evaluated based on the criteria published in the BAA. Bidders need to decide what teaming arrangements (if any) are needed in order provide the Government the requested capability.