

Amendment 0002
Solicitation Number ONRBAA 13-004
“Expeditionary Maneuver Warfare Applied Research and Advanced Technology Development”
Date 4 January 2013

The purpose of Amendment 0002 is to respond to questions submitted from 12/20/2012 through 01/03/2013. Questions received after 01/03/2013 will be addressed in a subsequent amendment.

1. Industry Questions and Answers are provided as follows:

(Q12) What breed of dog is the Navy specifically looking for, GSD, Lab or Malinois? Do they want the dogs initially trained on a specific odor, general basic odors and/or how many odors?

(A12) The Navy has no requirements for trained dogs. ONR is interested in funding scientific studies that provide knowledge products that can be used to establish or enhance working dog performance against a range of missions, threats and environments. As indicated in the BAA, "Preference will be given to proposals that do not require purchase or provision of animals as government furnished equipment but, instead, make animals available for IACUC-approved research while ultimately remaining under the ownership of the proposer."

(Q13) Does Animal Use Protocol and inspections, Contractor's Safety Manual for Ammunition and Explosives, Preaward survey, Physical Security of Sensitive Conventional Arms, Ammunition and Explosives or other required forms need to be submitted with White Paper or will they be required with Full Proposal?

(A13) Those documents are submitted with the full proposal.

(Q14) “Deliveries of bulk fuel and water are particularly problematic” – Is the 55 gal drum considered a standard container for fuel and water deliveries in austere environments?

(A14) 55 gallon drums are definitely a standard container for fuel (in addition to many other bulk liquids). When those drums are used, typically 4 are secured to a single shipping pallet. That isn't the typical method for transporting fuel to an expeditionary environment. More typical is the fuel sixcon, of which two can be attached to the back of an MTVR (Medium Tactical Vehicle Replacement). Water is never shipped in 55-gallon drums. A complete listing of water storage assets is listed here: <http://www.marcorsyscom.usmc.mil/sites/gtes/pmeng/Water.asp>

(Q15) a) How far might dismounted soldiers be required to move supplies such as bulk water and fuel? b) Does the term "dismounted operations" refer to soldiers moving on foot only?

(A15) a) Dismounted soldiers do not move / carry bulk water and fuel. b) yes

(Q16) Would alternative cutting edge technologies that are not LIDAR, RADAR, or SONAR be considered? It is not clear that replacing LIDAR, SONAR, etc. is an acceptable path forward for ONR.

(A16) ONR 30 Maneuver is interested in both EO and IR imagers for lightweight low cost perception systems. If you have a new novel approach to existing sensors/imagers out there or a way to actively fuse their data in a very low CPU burden manner we would be interested in it. For the last few years, our investment has focused on pushing lightweight low cost cameras to their limit with smart processing to be able to identify and classify objects in sufficient time to allow for reaction at tactically appropriate speeds (3-5 MPH off road with dismounted Marines, 55 MPH on road). Beginning in 2012, we are interested in fusing other sensors such as LIDAR, SONAR, or low cost RADAR with our sensing system to fill the gaps that EO sensors have primarily in low visibility and high reflectivity/sunlight (washout) situations.

(Q17) ISR: For the complex analytics area, are you tied to map reduce or are other paradigms acceptable? (e.g. Pregel/BSP for data fusion/analytics on graphs)

(A17) Yes, understanding Pregel supports distributed processing and BSP can be applied over HSFS.

(Q18) ISR: For the STUAS fusion algorithms, is there any information available on the existing sensors and exploitation? How much closed loop control of the sensor and platform is possible?

(A18) Sensor developments applicable to STUAS include a sensor suite (SAR, SIGINT, EO-IR), wide area night and a combined hyperspectral/day WAAS). These are all development programs. Closed loop control should be constrained to sensor tasking (vice platform).

(Q19) We are very interested in Logistics Thrust with a focus on Expeditionary Utilities - Power in the ONR BAA 13-004. Can you please let us know if a high-efficiency unitized regenerative fuel cell (URFC) system is of ONR interest in this solicitation? With its unmatched efficiency, high energy density, compact size, large capacity, quick startup, and low maintenance, such system can be used to store extra energy from the military generators and electric grids, and then it can later provide a constant power supply. This entire portfolio will effectively balance the outputs of the grid, and provide reliable and multiscale energy whenever/wherever needed.

(A19) URFCs would need to demonstrate feasibility in relatively low-power applications (tactical vehicles and small positions). As a rule of thumb, call it 500kW as an absolute maximum.

-It's primary competition is from JP-8 fuel (conventional generator and fuel cell) producing 5-500kW and existing and next-generation conventional battery technology (0-5kW). URFCs would need to demonstrate capability improvement over the next-generation iterations of these technologies.

-Cost will be a primary concern. To fund any system, it will need to demonstrate improved performance or decreased cost; preferably both.

-Concerning the specific application you mention (storing and discharging power from a grid infrastructure), this is a growth area for us. We are investing in microgrids for expeditionary environments, and power storage is a critical enabling technology for those efforts. For this application, you would need to demonstrate that URFCs offer superior performance (at a comparable cost) to next-gen Li-air or hybrid Ultra-Cap power storage techniques.

(Q20) Is CBRN protection excluded from the BAA by design (or) perhaps by oversight?

(A20) CBRN is excluded as it is the purview of the Chem Bio Joint Program Office to address.

(Q21) Will ONR accept and consider papers identifying promising CBRN threat mitigation technologies in response to this BAA?

(A21) No.

(Q22) ...in reviewing the BAA I read it to be focused on ground delivery solutions. I thought it would be best to ask you if ONR is open to air delivery solutions that provide a new solution to the desired capability.

(A22) ONR is open to air-delivery solutions to the logistics resupply problem.