

Questions and Answers for BAA 04-016

- **What is the relationship of this BAA (#04-016) to a recent ONR synopsis for RFP N00014-04-R-0012 (Multi Function Electronic Warfare (MFEW) Electronic Surveillance (ES) Technology Demonstration for DDX)?**

Both acquisitions are under the Fleet Force Protection (FFP) Future Naval Capabilities (FNC) and support advance multi-function radio frequency (RF) concepts. ONR will use their best judgment to maximize synergy among different programs and will not fund redundant technical efforts. Questions regarding the RFP should be directed to the individual(s) identified in the synopsis. Offerors may choose to respond to either the BAA or RFP or both.

- **Could ONR provide clarification cost?**

The submission of cost proposals can be found on pages 12-13 of the announcement. A cost realism analysis will be performed to determine if the proposed cost are realistic and reasonable and to determine if the cost are in line with the proposed scope of work. Cost realism analyses have been performed on electronics systems associated with this program and the details of those analyses is proprietary and cannot be disclosed to the public. Costs are dependent upon the system under consideration and offerors should consider technical approaches that may have a dramatic improvement in cost (1/3 goal). For example, increase in capacity or functionality so as to reduce cost per function unit of a given array. In other words, adding simultaneity and/or functionality to an ESA for minimal cost.

During the Industry Day Meeting, a system cost of \$10M was quoted as an example of the kind of savings that are targeted under this program. For clarification purposes, systems costing \$10M and over should be reduced to \$10M. This statement should not be misinterpreted as a commitment by the Government to fund a specific system at any specific level. Offerors may also consider life cycle cost in their assessments.

Another innovative approach might be 'plug and play' modules. High level of integration, scalable designs, are all possible approaches the contractor may wish to consider. Other innovative approaches and 'out of the box' ideas are encouraged.

Technical approaches/proposals MUST have a sound plan to reach TRL as indicated in the BAA.

- **Are photonics, ..., InP, SiGe, GaAs, GaN, ..., etc... specific technologies, architectures, etc... of any interest?**

Yes, they are of interest. In Section 6, the BAA states examples of technologies, components, and material systems which have historically been funded under the program. However, it also states "Other innovative components and technologies not

listed are highly encouraged.....". Offerors should not misconstrue examples given in the BAA and during the presentation as only the technologies of interest.

The Government is not directly specifying which type of material, components, architecture, etc. that must be used. However, proposals must address the overall objectives of the BAA.

- **Does RX or TX have priority?**

The BAA solicits proposals for both RX and TX. The Government has a slightly nearer-term priority for RX

- › Demo Array planned for FY05-FY07 → transition to fleet

The Government has a slightly longer-term priority for TX

- › Demo array is planned for FY08-FY11

Offerors may submit proposals for TX, RX, or both. The decision is entirely up to the offeror to choose which are to be addressed.

- **Clarification of Interface definitions?**

Offerors must consider interface definitions. The Government plans to pursue an open system architecture approach

- › Black box interface for chain must be defined within program execution
- › Top level interfaces to be published to allow for competitive approaches
- › Plug-and-play highly desirable

An open message format is highly preferable and commercial interfaces is highly desirable (e.g., Ethernet, COTs, etc).

Industry/ industry partners may wish to form a working group in order to define interfaces and architectural concepts.

- **Is there an unclassified or classified requirement specification with more definitive metrics than what appears in the BAA?**

No, there is not an unclassified or classified requirement specification with more definitive metrics than what appears in the BAA. The Government has presented a somewhat generic overview of the requirements and no classified requirements will either be presented or discussed. A potential suggestion might be to work the problem sets as best as possible and address fundamental issues, and provide a scalable solution that can be easily adapted to specific systems requirements.

- **Can specific numbers be given for RF power versus application, receiver protection level, and tuning speed?**

Assume numbers that are most constant with EW, communications, and radar.

- **Is AMRFS JTRS compliant?**

The focus for this technology effort is not specifically targeted towards JTRS. Although the effort to be funded is not intended to specifically address JTRS compliance, offerors are urged to not pursue any technical approaches that would specifically preclude use of the developed technology to be used in some future JTRS compliant system.

- **How will the conflict between EW and communications JTRS compliance be addressed?**

ONR is not aware of any conflict at this point.

- **What information about the current test bed [e.g., AMRFC] architecture is available?**

Various publications can be found in open literature (IEEE, GOMAC to name a few). The interfaces for the AMRFC program/test bed are available however may contain ITAR restricted data. Points of contact for the AMRFC program are: Greg Tavik, the AMRFC program lead at NRL (tavik@radar.nrl.navy.mil), Keith Krapels – ONR AMRFC test bed manager (krapelk@onr.navy.mil) and William Gottwald the F/FP FNC Transition POC at ONR (GOTTWAW@onr.navy.mil).

- **Do you have a baseline for the number of simultaneous independent beams that use the full aperture that must be supported or are you intending that as an input by the bidders? How many simultaneous independent transmit beams that use the full aperture? (for Radar, Communications, Electronic Warfare)**

Current AMRFC test bed supports 1 transmit beam per section of aperture. ONR desires to lower cost and where possible advance the state of technology so that the transmission of multiple beams (and hence supporting of multiple functions) is possible. The current state of the art in the AMRFC receiver is 4 beams per module. ONR desires to lower cost and where possible advance the state-of-the-art to multiple receive beams per module. The actual number of transmit and receive beams per element or module should be considered in cost performance tradeoff studies.

Offerors should use their best judgment and may consider various tradeoffs of cost/performance of overall array and associated electronics.

- **Can you come up with a crude pie chart of costs so one can judge where the effort should be focused?**

It will be very difficult for the Government provide a generalized cost pie chart for this effort. Estimated costs may depend on the architectural and component approach, which may well be quite varied among different offerors.

- **Are you interested in a highly integrated, scalable approach that is not "modular" through the entire signal path?**

The Government is interested in highly integrated, scalable approaches that can provide a cost / performance benefit as described in the announcement. The Government is not defining exactly what constitutes a 'module' per se.

- **What are the volumes that are needed for this system?**

Volumes will be depended on the type of system, which is not precisely specified in this announcement.

- **Can we think of these demos as ATDS or ACTDs?**

Array demos for both transmit and receive are planned. ONR plans to transition the results to various acquisition programs. The presentation material provided by William Gottwald provides some planning information and may be referred to.

- **Will the integration cost be considered part of the interface definitions cost?**

Offerors should state any assumptions used in arriving at the cost reduction argument. This may include integration and life cycle cost where appropriate. It is the offeror's responsibility to clarify any assumptions in their white paper and full proposal submissions.

- **Can we put conops onto the website?**

The CONOPS contains ITAR restricted and classified data and therefore can not be posted on the website.

- **Could the government comment on the original concept of operations (CONOPs) vs. current concept of operations?**

The Government's approach is to move away from stove-piped systems to more multifunction approaches.

- **Are the transition efforts just dealing with the fleet?**

The primary objective for this announcement is to address requirements for the fleet.

- **Is the Government considering a large planar array or joint array scattered over surface of ship multistatic or monostatic?**

This BAA is primarily addresses and electronics technology development effort. Offerors should use best judgment in assuming any CONOPS, electronics and related circuit architectural concepts.

- **Will current AMRFC contractors have preference or be given special consideration over a company that is NOT an incumbent on AMRFC?**

Current AMRFC contractors will not have preference or be given special consideration over a company that is not an incumbent on AMRFC. Offerors from outside the ARMFC community are encouraged to contribute to this effort, as well as those who are current AMRFC contractors. Proposals received in response to this announcement will be evaluated and awarded in accordance with the evaluation criteria stated in paragraph V.

- **Is this a “best value” procurement?**

As stated in paragraph II of the BAA, “The Office of Naval Research plans to award three-six (3-6) contracts (particularly cost plus fixed fee (CPFF) type contracts) and possibility some assistance agreements that represent the best value to the Government in accordance with the evaluation criteria set forth in this announcement. The Office of Naval Research is seeking participants for this program that are capable of supporting the goals of this announcement”.

- **Do we go thru Defense Acquisition Board to get approval?**

No, offerors do not have to go through the Defense Acquisition Board.

- **Can a hybrid approach be taken?**

Yes, a hybrid approach maybe taken. Offerors are encouraged to consider innovative approaches/solutions.

- **What is the level of aggressiveness that would be considered?**

Ideally, ONR intends to pursue a well balanced program which could include a range of low risk and moderately aggressive technical approaches. An offeror’s proposed approach must sufficiently address the problem to show there is a path to realizing cost reduction and a clear path to modules. ONR intends to transition the deliverables to Naval Programs (demo array and acquisition systems).

- **Could the other evaluation criteria be used when evaluating metrics/comparison, such as for example G/T or dB etc...?**

The metrics given are normalized to a section of an array as stated in the BAA. ONR would consider other meaningful metrics however the offeror must provide clarification clarity in order to compare various approaches.

- **Please clarify the required TRL levels?**

The minimum Technology Readiness Levels (TRLs) referred to would be the weakest link in the element chain under consideration, for the architecture considered. Therefore the preferred approaches will leave no significant gaps (components) unaddressed in an architectural approach.

- **Is there any desire to have TX and RX chains addressed in separate white papers?**

Offerors may submit multiple white papers. The decision to submit more than one white paper is entirely up to the offeror.

- **Would submission of TX and RX chains in separate white papers by one organization be an acceptable option?**

Submission of TX and RX chains in separate white papers by one organization is an acceptable option.

- **Is there a preferred schedule/time phasing for Phase 1 and Phase 2 tasks?**

Section 7.3 of the BAA does not specify a preferred schedule/time phasing for Phase 1 and Phase 2 tasks. However, the program duration of up to three (3) years may be assumed and offerors should use their best judgment in providing a clear set of objectives and timeline for Phase 1 and Phase 2.

- **Are white papers and proposals due at 1600 EST on May 21 and Aug 11, respectively? Text says 4:00pm EST, but chart on page 14 says 1400.**

The due date for white papers is “no later than 4:00 p.m. (EST) on Friday, 21 May 2004”. The BAA will be modified to correct the date for which proposals are due on page 14 to read “1600” in lieu of “1400”.