

**Amendment Number 0003**

**Broad Agency Announcement Number (BAA) 10-018**

**Dynamic Command and Control (C2) for Tactical Forces  
and Maritime Operations Center (MOC) FORCEnet Enabling Capability**

The purpose of this amendment is to provide answers to questions received in response to the BAA.

Q1 Can you clarify the use of Domain Bridge Services? For example, in addition to bridging between IP networks is it meant to bridge data from other networks onto the IP network (or is this part of the Domain Edge), or is a standard method of connectivity assumed and the desire for application-level data management

A1 Domain Bridge Services connect networks within the hull of a ship. As such, they are characterized by high speed connections, but potentially dissimilar service requirements. The initial focus is on connecting the shipboard combat systems network to the shipboard C4I Network.

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Q2 Protocol conversion is mentioned, so is there need for gateway services at the network level or is standard gateway functionality assumed and particular application-level conversions intended, and if the latter do the applications assume a consistent transport mechanism and have a service discovery / handling mechanism such as broader/deeper middleware (such as DDS) integration?

A2 A consistent IP environment is available aboard ship, including security guards between networks of differing security levels. This BAA deals with employment of middleware services (such as DDS, JMS, AMQP, etc.) and application-level services to facilitate information sharing. Similarly, this BAA does not deal with communications, routing or maintaining the IP environment between ships, aircraft and shore sites, but does address middleware and application-level services to facilitate information sharing.

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Q3 Will ONR accept more than one white paper from an offer/company with multiple but separate business operations?

A3 ONR will accept more than one white paper from an offeror/company with multiple separate business operations.

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Q4 If a performer wants to propose in multiple areas, do we write separate white papers?

A4 Offerors are required to submit separate white papers if they want to propose in multiple areas.

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Q5 Do we assume ADNS as the network for this BAA? What Increment of ADNS?

A5 ADNS is a significant part of the available Navy communications environment. The Navy has deployed ADNS 2 and ADNS 2A and is currently deploying ADNS 3. We anticipate a mixed-version ADNS environment going forward. The Navy also has non-ADNS IP communications that may be employed as circumstances require. These may also be addressed in proposals.

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Q6: Are there any currently implemented or preferred middlewares used by either the C4I or Combat System (please specify vendor and/or version):

- a. Data Distribution Service (DDS)
- b. Java Messaging Service (JMS)
- c. Advanced Message Queuing Protocol (AMQP)
- d. Common Object Request Broker Architecture (CORBA)
- e. XMPP
- f. JBoss

A6: Combat Systems currently use DDS for its real-time and QoS capabilities. AMQP and JBoss are being incorporated into C4I services. However, middleware baselines will evolve over time. Offerors should focus on technology solutions to the issues identified in the solicitation.

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Q7: Even though the BAA clearly states that there will be multiple awards, we want clarification of whether there will be a single award per focus area. For example will there be multiple awards on the Edge Services focus area?

A7: The number and type of awards is entirely at the discretion of ONR. There is no procedural impediment to making multiple awards in single focus area.

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Q8: The BAA talks about lower level common services and the Industry Day talked about higher level Planning and Coordination capabilities. Was the Industry Day discussion intended to extend the scope of the BAA or just give context to the BAA?

A8: The Industry Day was intended to provide context to the BAA and not extend the scope.

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Q9: How can I get a copy of the document referenced in the BAA "Surface Navy Combat Systems Software Product Line Architecture, Architecture Description Document, Version 1.0, PEO IWS, 31 July 2009"?

A9: That information was provided under Amendment Number 0002.

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Q10: Reference page 33, Section V, Evaluation Information, item number 4, states, "The management approach is not required in the white paper or for the oral presentations. However, the management approach is required for the full proposal..." Reference, page 24, Section 2, item b requires a management approach in conjunction with the white paper submission. Please clarify whether a management approach is required for the white paper submission.

A10: A description of management approach, not to exceed one page, is desired in the white paper. Therefore, page 33, Section V. Evaluation Information, item number 4 is corrected to read as follows:

"The Management Approach is required in the White Paper and Full Proposal Submission. The Management Approach will be evaluated in accordance with the following criteria:"

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Q11: Are the following technologies within the scope of the BAA: (1) T&E tools that assess the effects of new technologies (e.g., those funded by this BAA) on the productivity, staff workload, and battle rhythm of the MOC; (2) Decision aids that enable MOC leadership to configure staff, schedules, and processes to achieve the maximum effects from new technologies.

Q11: The described capabilities are not within the scope of this BAA.

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Q12: Scientific and technical data are best presented in the form of figures. Using 12 point Times New Roman in figures detracts from the readability of the figures and inhibits explanatory annotations of the figures due to both its size and serif. We therefore request permission to change the font size and type applied to figures and other graphics in the white paper to Arial, 8 point.

A12: Type fonts in figures should be readable but need not conform to the Font requirement (Times New Roman - 12 Point) for text, as specified in the BAA for either the white paper or the full proposal.

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Except as provided herein, all other information remain unchanged.