Broad Agency Announcement 12-008
"Electronics Warfare Technology"
Amendment 0007
"Questions and Answers"

The purpose of Amendment 0007 is to answer questions received in response to BAA 12-008 entitled, "Electronics Warfare Technology".

Q#1: Technology area B, "Continuously tunable multispectral fiber/waveguide lasers" says, "…system architecture consisting of NO free-space optical components in order…." Are components such as packaged isolators which have fiber pigtails coming out of each end of the device considered free-space optical components or would such packaged devices be ok in our design? In the package, many of these types of components have free-space optical elements, but as a device, they may not be sensitive to temperature or vibration.

A#1: Packaged devices with fiber pigtails that can be fused with a fiber beam transport should satisfy the " … NO free-space optical components…" requirement, even if internally they have some free-space optical elements, as long as they have demonstrated a tolerance to the type of temperature and vibration environment they may encounter on, for instance, a rotor-wing aircraft. A statement of the manufacturer's specifications for temperature and vibration tolerance might be appropriate in such a case.

Q#2: Recently, I saw this BAA Number 12-008 posted on FBO. I am wondering is this BAA open to Navy Labs to respond to or is it only for Industry and Educational folks?

A#2: Please refer to BAA 12-008 entitled, "Electronic Warfare Technology" Section III entitled, "Eligibility Information" 3rd paragraph which states, "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. If any such organization is interested in one or more of the programs described herein, the organization should contact an appropriate ONR POC to discuss its area of interest. The various scientific divisions of ONR are identified at http://www.onr.navy.mil/. 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." BAA 12-008 also states in Section II "Award Information" Sub-section 1 "Amount and Period of Performance" at the end of the 2nd paragraph "Some portion of this budget may fund research requests in this program area received from Government entities outside of this BAA." To receive details on how to submit such research requests in this program area you should contact the primary point of contact for BAA 12-008, Dr. Peter Craig, at the email address peter.craig@navy.mil

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Q#3: We have a concept as it applies to BAA 12-008. Do you have some time for a telecon to discuss our ideas?

A#3: The Government prefers not to field questions on particular approaches, concepts, or systems response to this BAA to avoid the perception of favoritism toward any one company or "cherry-picking" of ideas. If you feel you have a valid concept you are encouraged to take the time to write a four-page white paper and submit it in accordance with the BAA instructions.

Q#4: The ONR BAA12-008 focuses primarily on the Electro-optic and Infrared (EO/IR) band of the EM spectrum (areas A entitled, “Multispectral Semiconductor Lasers”, area B entitled, “Continuously Tunable Multispectral Fiber/Waveguide Lasers” and area C entitled, “Non-Mechanical Beam Steering”). However, for area D entitled, “Innovative EW Concepts”, are you considering radio frequency band EW ideas, specifically RF radar non-conventional ES, or would that be outside of the scope of this BAA? Thank you.

A#4: There is no limit on the wavelength/frequency band for area D entitled, “Innovative EW Concepts” and concepts for the radio frequency band are acceptable. The emphasis for area D is on innovative concepts, as long as they are clearly EW. For example, innovative radar concepts are not acceptable because radar is not considered EW.

Q#5: The BAA indicated "spanning multiple bands of the ultraviolet (UV), visible (VIS), near infrared (NIR), short-wave infrared (SWIR), mid-wave infrared (MWIR), and long-wave infrared (LWIR) spectrum." Would coverage over SWIR and MWIR be sufficient?

A#5: The BAA Research Opportunity 6B states that proposed concepts should operate across "as much of the full spectral tuning range as possible (preferably ALL), with particular emphasis on inclusion of the MWIR band." Responses will be evaluated against this requirement and those that more fully meet this description will be viewed more positively than those that operate over a narrower spectral range. However, responses that cover a narrower range, such as the SWIR and MWIR as you suggest, should discuss whether their concept could be expanded to encompass a greater spectral range in a later effort and identify any technical roadblocks that might prevent this.

Q#6: The BAA indicated "continuously tunable output emissions." Would it be acceptable to have a broadband source with sufficient spectral density, instead of wavelength tunability?

A#6: As you indicate, the BAA Research Opportunity B entitled, “Continuously Tunable Multispectral Fiber/Waveguide Lasers” states a preference for "continuously tunable output emissions." Responses will be evaluated against this requirement and those that more fully meet this description will be viewed more positively than those that do not. However, responses that propose a broadband source should discuss any advantages and disadvantages such a concept would have with respect to a continuously tunable source. For example, a broadband source would be expected to emit a certain percentage of its power in spectral bands that do not transmit through the atmosphere - how will this impact the overall efficiency of operation of an EW system using such a source?

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Q#7: Regarding BAA 12-008, we are considering teaming with a university professor who has received invitations from another team. Please indicate any limitations or issues with regards to a university researcher supporting multiple teams.

A#7: The Government has no objection to a university researcher supporting multiple teams. However, if multiple awards are made to the same university researcher, either directly or under a sub-contract or teaming agreement, ONR will contact the researcher to ensure s/he will be able to fully support all of the proposed activities before finalizing the awards. It will be up to the other teaming partners to ensure the researcher does not inappropriately share information or knowledge with other teams.

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Q#8: Can the proposing team consist of teams from an Air Force lab, from a University, and from the industry?

A#8: Yes, teams of government, academia, and industry are allowed in any combination. However the specific roles for each team member should be clearly explained and separate funding shown for each team member.

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Q#9: Do you intend for the final system to be a distributed aperture system?

A#9: A distributed aperture countermeasure system is one possible application of the non-mechanical beam steering technology requested in Area C of the BAA but is not the only one. An integrated laser and beam director may be one approach; another would be a fiber connection between the laser and the beam director.

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Q#10: What is the order of the number of antenna elements expected to be deployed?

A#10: The 120-degree field-of-regard (FOR) threshold in Area C entitled, “Non-Mechanical Beam Steering” of the BAA would provide 360-degree coverage from four apertures with 15-degree overlap between apertures, although the hemispherical FOR goal in the BAA would permit full spherical coverage with as few as two apertures.

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Q#11: IV(1) states that White Papers are to be submitted via electronic mail (email) only to 312_EC@onr.navy.mil, however section IV (6) states that White Paper hard copies should be submitted to Dr. Peter Craig at ONR. Can you please confirm that the White Papers are only to be delivered via email and that a hard copy is not the required.

A#11: Please submit white paper responses in accordance with Section IV entitled, "Application and Submission Information" paragraph entitled, "White Papers" which states "White papers are to be submitted as a pdf file via electronic mail (email) only to 312_EC@onr.navy.mil"

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