

DARPA-BAA-13-01

Frequently Asked Questions

Last Updated: 11/6/12

GENERAL INFORMATION

Q: What DARPA seedlings predate this program? Are reports available?

A: There were no preceding efforts.

Q: If my research is relevant in this field, but is not geared specifically to meet these goals, is there a solicitation that I can respond to?

A: Yes. DARPA/DSO has an Open solicitation (DARPA-BAA-11-65) for which responses are being collected through 7 Feb 2013.

Q: Is the Program Manager available for a meeting to discuss the BAA?

A: Please be advised that in accordance with DARPA policy in ensuring fairness to all proposers, the program manager is advised not to speak directly to potential proposers once the BAA has been published. The BAA describes the program including metrics in detail. If you have specific questions or require clarification, please submit them by email to DARPA-BAA-13-01@darpa.mil.

PROPOSALS

Q: Can a prime or collaborator be an international company?

A: Yes, international companies and universities are acceptable.

Q: Is subcontracting to a National Lab or Federally Funded Research and Development Center (FFRDC) permitted?

A: Yes. Proposer should comply with the section on FFRDCs as stated within the BAA.

Q: Will any response be provided to abstracts?

A: It is anticipated that replies will be made on whether proposals are encouraged or discouraged as well as limited feedback on the encourage/discourage decision.

Q: Does DARPA intend to try to provide more rapid feedback on the abstracts for this solicitation?

A: Although the BAA mentions that DARPA will respond to the proposal abstracts within one month, we will attempt to respond much sooner.

Q: Will the due date for a full proposal be extended past Dec. 18 for a favorably reviewed abstract?

A: No. As stated in the BAA, "Early submissions of abstracts and full proposals are strongly encouraged because selections may be made at any time during the period of solicitation."

COST

Q: What is the overall DARPA budget for MEDS? Are there funding limits for individual proposals?

A: As stated in the BAA, "The amount of resources made available under this BAA will depend on the quality of the proposals received and the availability of funds." At this time, no single-project funding limits have been set.

PROGRAM STRUCTURE

Q: How many awards are anticipated?

A: The number of awards will depend on the merits of the proposals received and funds available.

Q: What is the anticipated period of performance? For multiyear awards, do you anticipate making a single base award covering multiple years, or a base plus options?

A: As stated in the BAA - "The duration of the program will not exceed 18 months. Proposals should consist of a base period (not to exceed 12 months) for development and to demonstrate capability in the proposer's laboratory, and one option period (not to exceed 6 months) to reproduce the capability at a government laboratory for validation and more comprehensive testing."

Q: Does DARPA have similar health concerns regarding the use of high power electromagnetic radiation as it does for ionizing radiation?

A: DARPA has similar health concerns regarding the use of high power electromagnetic radiation. Compliance with ANSI/OSHA/IEEE safety standards would be expected to ensure operator/bystander safety in case of unintended specular reflection.

TECHNICAL

General Statement

Should you decide to submit an abstract, please do provide quantitative technical support for your innovation claims in accordance with the guidance provided in both the abstract and full proposal preparation sections.

Q: Is my research approach consistent with the objectives of the BAA?

A: DARPA is not able to suggest specific research approaches. If you feel that your chosen effort is consistent with the objectives of the BAA and capable of meeting the goals stated within the BAA, then you should feel free to propose them. It is strongly

encouraged that you read the BAA carefully. It is your burden to make clear within your proposal that your approach is supportive of your innovative claims, and includes a detailed analysis of the technical motivation.

Q: Regarding the non-contact mode requirement stated in the BAA, the stand-off distance > 1 cm requires air gap between the detectors and the object to test, or would other medium such as water be acceptable?

A: The specific objectives of the program, as described in the BAA, require that the methods be non-contact methods. For this program, non-contact does mean an air gap between the detector system and the object being examined.

Q: Although not indicated in the body of this BAA, will DARPA consider detection of other components of the IED "system" in tandem with (or instead of) the explosive ones?

A: The background section of the BAA does reference the fact that there are other aspects of the IED system that are detectable apart from the explosives. Please be advised that this program is not an applied IED detection program which would need to be conducted at the classified level. This program calls for development of proof-of-concept with emphasis on demonstration of feasibility that can be more extensively investigated in an appropriate environment by Government laboratories.

Q: Is DARPA interested in active pulsed neutron interrogation in this solicitation?

A: As stated in the BAA, this program is not predisposed to any specific method. The converse is also true; no technique is precluded if it can address the requirements specified in the BAA. As stated in the BAA, development and demonstration of techniques that employ no ionizing radiation are preferred. However, methods where dosage < 0.1 μSv per scan will be considered.

Q: Will detection techniques including NQR, be considered as they are applicable to many, but not all, explosive materials?

A: The BAA does require proposed solutions to be agnostic to specific explosive composition. However, proposals are solicited for any detection mechanism or mixed modality of mechanisms that meet the objectives/metrics of the program.

Q: Would you consider a proposal that employs THz-frequencies inside well-known deep narrow--windows in the absorption-spectrum between 0.1 and 11 THz? Or are there additional conditions you know of that preclude any/all THz considerations?

A: As stated in the BAA, this program is not predisposed to any specific method. The converse is also true; no technique is precluded if it can address the requirements specified in the BAA. In the RF regime, radiation intensity may be an issue, and compliance with ANSI/OSHA/IEEE safety standards would be expected to ensure operator/bystander safety in case of unintended specular reflection.

Q: Can we assume that the IEDs have some range of characteristic shapes and range of sizes? If so, what are these ranges?

A: The BAA does require proposed solutions to be agnostic to specific explosive including shape. For the purposes of this program, a fairly compact, but variable, shape can be assumed.

Q: Can we indirectly detect the IED by necessary elements within it, e.g., detonators, electronics, etc.? If so, can we assume anything about the range of characteristic shapes and range of sizes of these elements?

A: As stated in the BAA, indirect methods that for example detect packaging, wiring, or fusing are outside the scope of the MEDS program. DARPA is seeking the development and demonstration of technologies that will be able to identify the presence of explosive materials.

Q: Does the sensor need to be 1 cm away from the water solution embodying the explosive or can the sensor be in the water media and have to be 1 cm away from the explosive? Does the volume requirement of 100 cc refer to the volume of the water media or the explosive size?

A: The objectives specified in the BAA include demonstration of the detection capability at a standoff of >1 cm from the package, not the explosive; with the explosive having a volume of >100 cc, and which is embedded in the high water content medium to a depth of > 5 cm.

Q: Are the specified desired false positive/negative rates to be achieved in the context of anomaly detection (i.e., locating an unexpected object irrespective of it being a bulk explosive) or target discrimination (i.e., determine whether or not a detected anomaly is an explosive as opposed to a benign object)?

A: Since the property to be interrogated is dependent on the detection method selected, as part of the program, proposers will need to establish lack of interference, and signal to noise and resolution consistent with the attainment of the specified false positive/false negative rates in the presence of material classes characteristic of typical clutter. Since this is a technology development program, proposers are not expected to perform an exhaustive study of all potential clutter materials or material types in order to establish the false positive/false negative rates. The solicitation provides for a proposed option to reproduce, at a government laboratory, the capability developed by successful performers. The government laboratory will perform validation and more comprehensive testing of the developed technology.

Q: Is discrimination and identification of different explosive materials required?

A: As stated in the BAA, this program is not predisposed to any specific method, whether imaging or non-imaging, but DARPA is interested in all technologies that are able to discriminate explosive materials from other anomalies. Determination of the type of explosive material involved is not required.

Q: Can you provide any more detail about the media? Specifically, what range of levels of salinity, mineral content, and other impurities can we expect?

A: For the purposes of this program, water content range is 70-90% and salinity ~1%. Other minerals/impurities are only expected at trace levels.