

THE DEPARTMENT OF HOMELAND SECURITY
SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM
PROGRAM SOLICITATION FY07.2

Full Solicitation Issued on 06/27/2007
Q&A #3 Posted on: 08/09/2007

The purpose of this release is to provide the below Questions and Answers.

THIS IS THE FINAL POSTING OF Q&A FOR THIS SOLICITATION

The following four (4) questions pertain to SBIR Topic H-SB07.2-005:

Question: Does the scope of this topic include enhancing security, and more specifically providing location based security by virtue of additional network infrastructure?

Response: While SBIR Topic H-SB07.2-005 is intended to improve the security and reliability of wireless systems, the topic is not intended to provide location specific or location based security solutions.

Question: Would a hybrid optical/RF network be responsive to this solicitation and be of interest?

Response: The topic is intended to address security of emerging wireless technologies (either add-ons or upgrades), such as IEEE 802.11 or IP WLANs, and not technologies such as a hybrid optical/RF network.

Question: Wireless security and wireless interference avoidance/mitigation can be two quite different things, e.g., a non-secure wireless link can have very little interference but may be eavesdropped or hijacked, and an interference prone link may still be made very secure. The approaches to these two different areas are normally quite different. Does this topic emphasize wireless security or wireless interference avoidance/mitigation?

Response: The topic is primarily concerned with wireless security and secondarily with wireless interference.

Question: Are the four suggested emerging wireless technology areas, Hybrid wire and wireless systems, Field sensors consisting of micro-electronic-mechanical systems, Self-assembling network arrays, and Cognitive radios, exclusive or exhaustive? Are you open to other possible emerging wireless technology areas to achieve the goal of this topic?

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Response: The proposed list is neither exclusive nor exhaustive. It was purely an example list. We are open to other emerging wireless technology areas.

The following eight (8) questions pertain to SBIR Topic H-SB07.2-007:

Question: Would 2.5 MeV neutron be adequate (D-D reaction) or would the T-T reaction (2- 9 MeV) be preferred or required?

Response: A 2.5 MeV neutron (D-D reaction) would be adequate. A T-T reaction (2-9 MeV) is neither preferred or required.

Question: Is a minimum pulse length of 100 microseconds OK or do you want shorter?

Response: In general, for a given neutron yield, the shorter the pulse length the better. A minimum pulse length of 100 microseconds is acceptable.

Question: What neutron energy range is desired? Only "high" and < 8.5 MeV were specified (is the "<" a typo?). Is there a lower bound for useful neutrons and what kind of spectrum is desired? Also, can we produce, say, 14 MeV neutrons and moderate them down below the 8.5 MeV listed or do you want monoenergetic neutrons?

Response: For this solicitation, the upper end of the neutron energy range is 8.5 MeV (this was not a typo). The lower end of the neutron energy range is 50 keV. Monoenergetic neutrons are not required.

Question: Regarding not using "radioactive material", does that mean no radioactivity-based neutron sources (Cf or Pu) or no radioactive materials at all such as tritium?

Response: Radioactive material includes radioactivity-based neutrons sources and tritium.

Question: Is there a lifetime goal in mind (# of hours of operation)?

Response: It depends on the cost of the final system. In general, the life time should be greater than 2000 hours. The goal is 10,000 hours.

Question: Are there any particular size or power constraints other than portable & comparable to existing sources?

Response: No

Question: What kind of neutron yield/pulse is needed for your applications?

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Response: The minimum requirement is 1e8 neutrons per second (nps). The goal is 1e10 nps.

Question: How short of a pulse width are you interested in? Shorter is better for TOF applications, but how short do you have in mind?

Response: For a given neutron yield, a shorter the pulse length is generally considered better. A minimum pulse length of 100 microseconds is acceptable. It is critical that there are no "leakage" neutrons between pulses.

The following five (5) questions pertain to SBIR Topic H-SB07.2-006:

Question: The description for Topic H-SB07.2-006 (Robust Algorithm Development for Multidimensional Chemical Analysis) stipulates that the proposed software should be "congruent with the multi-dimensional chemical detection technologies currently being developed for the DHS S&T Directorate". However, these technologies are not described at all in the call for proposals. Are there any specific chemical detection technologies that we should have in mind as we submit our proposal?

Response: The application does not have to coincide with any particular chemical detection approach but the algorithm must be able to analyze data from more than one chemical detector input. However, if one wishes to develop an algorithm for the technologies being evaluated via DHS S&T, they are GC/IMS, DMS/IMS, Chemiresist/IMS, MS/MS.

Question: What are the "multi-dimensional chemical detection technologies currently being developed for the DHS S&T Directorate"?

Response: GC/IMS, DMS/IMS, Chemiresist/IMS, MS/MS

Question: Can you provide a list?

Response: GC/IMS, DMS/IMS, Chemiresist/IMS, MS/MS

Question: Can you provide performance specifications for these "multi-dimensional chemical detection technologies currently being developed for the DHS S&T Directorate"?

Response: See www.hsarpabaa.com, past solicitations, RA03-01, TTA 3 and 4.

Question: Can you direct us to where we can find this information?

Response: See www.hsarpabaa.com, past solicitations, RA03-01, TTA 3 and 4.

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The following four (4) questions pertain to SBIR Topic H-SB07.2-002:

Question: The solicitation refers to an airborne-based system (radar, EO/IR). Would an acceptable system include a ground-based or ship-based radar?

Response: The requirement is solely for airborne surveillance. Ground based or ship based are not options.

Question: Can you share the specs on the surface search radar and EO/IR sensors being placed in the C-130J Deepwater Missionization Upgrade?

Response: We do not know what Deepwater is utilizing. However, that is irrelevant to the SBIR solicitation. You may propose any airborne EO/IR or radar needed to support your technology. Or you may specify the EO/IR resolution and scan rate needed and/or the radar detection performance.

Question: Are you interested in a large-area coverage turreted EO sensor integrated with a tracking capability and a footprint of 5km x 5km?

Response: Yes, if it can detect a human in the water.

Question: Would you also consider an EO sensor system mounted on a positioner from a tower or the mast of a tall ship in port, as an option?

Response: No, the requirement is for an air platform.

The following three (3) questions pertain to SBIR Topic H-SB07.2-001:

Question: Is "spectroscopic methods" limited to optical spectroscopy, or are you including other forms of spectroscopy such as mass spectroscopy?

Response: Any spectroscopic technique that can adequately collect or analyze an explosive sample, at a standoff distance as defined in the solicitation will be considered.

Question: Must the proposed technology be able to address all eight items in the bulleted list (Flexible Concept of Operations, Near trace level sensitivity to multiple explosives, etc.), or are you willing to accept a narrower set of capabilities?

Response: The bulleted list was provided as guidance (or desirable capabilities) rather than forced requirements. Addressing a narrower set of capabilities will be considered and appropriately scored.

Question: What are the two or three highest priority items in the bulleted list?

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Response: Standoff detection is the driving force behind this solicitation.

Question: With the requirement that a minimum of 2/3 of the research must be performed by the proposing firm, does G&A dollars derived from the subcontract costs count towards the proposing firm's % or the subcontractor's %?

Response: DHS SBIR awards are negotiated between the Contracting Officer and the Small business Concern (SBC); while a subcontractor may derive G&A cost, the subcontracting agreement is with the SBC and is subject to negotiation between these two entities.

**THE TERMS AND CONDITIONS OF PROGRAM SOLICITATION FY07.2
REMAIN UNCHANGED.**

Closed

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