

BAA for Widely Tunable IR Source
(WTIRS)
BAA 12-06
Questions & Answers
April 18, 2012

Question

1.

The solicitation states that “WTIRS is a component of the Standoff Trace Explosives Detector (STED) Program.” Is there any information on this program or the sensor in which the WTIRS component is required to integrate?

Answer

The Standoff Trace Detector Program is in the planning stages and currently conducting an analysis of alternatives. No further details for the program or potential sensor that the WTIRS component will integrate into are available at this time. Any sensor developed will use the standard data transfer interfaces defined in the BAA which will mitigate the risk of offset development cycles. The WTIRS is seen as an enabling component for infrared sensing in the 6-10 μ m region for multiple applications, including explosives detection. Therefore it is by design that the integration is not specifically defined. All hardware, including optical interfaces, will be the responsibility of the trace sensor developer.

Question

2.

In the announcement it states “any proposal that requires thermal and/or mechanical tuning elements will be considered non-responsive.” In the specification, it does allow a thermo-electric cooler for the source cooling (Threshold requirements). If the thermo electric cooler for the source cooling is used to vary the temperature (and hence wavelength) of the source, will this be considered ‘thermal tuning’ and be non-responsive?

Answer

The allowance of thermal-electric cooling is to accommodate the full range of operating temperatures. These restraints are due to the deployment of the WTIRS within a sensor in outdoor environments and extreme temperatures. An amendment to the BAA will clarify the Government’s required tuning speed for the WTIRS. The operational environment described in Section 1.8.1 prescribes the need for extremely rapid tunability. The Government believes that thermal tuning will not meet the specifications in the BAA for tuning range, tuning speed, reliability, and availability. However, if a proposed approach will meet the requirements with supporting data, it will be considered.

Question

3.

Please explain the objective related to restricting the use of mechanical and thermal tuning? Will a design that addresses the objective and meets the specification be considered responsive?

Answer

An amendment to the BAA will clarify the Government's required tuning speed for the WTIRS. The operational environment described in Section 1.8.1 prescribes the need for extremely rapid tunability. The Government believes that mechanical and thermal tuning will not meet the specifications in the BAA for tuning range, tuning speed, reliability, and availability. However, if a proposed approach will meet the requirements with supporting data, it will be considered.

The required maintenance and attention of the sensor that WTIRS will be integrated into should be as little as possible. It is best to think of it as an appliance that will be installed, plugged in, and then left to operate for as long as possible before required maintenance. Outdoor deployments are likely under relatively extreme conditions. It is anticipated that any component requiring precise mechanical movement or thermal control for operation will have difficulties in this type of deployment.

Question

4.

We are considering a proposal on BAA 12-06 which utilizes MEMS technology to achieve higher performance than the WTIRS specifications require. Is using MEMS technology considered to be responsive to this BAA?

Answer

If the proposed approach, using MEMS technology, meets the specifications in the amended BAA with sufficient supporting data, it will be considered responsive.