

**Amendment No. 0003
Questions and Answers**

Broad Agency Announcement (BAA) Number 09-030

“Multi-Function Airborne Surveillance Technology”

The purpose of Amendment 0003 is to provide answers to questions received in response to the BAA.

Question 1: What is the anticipated configuration (e.g. planar, multi-planar, or conformal) and what are the size minima and maxima of the aperture(s) for a given platform?

Answer 1: Not specified, although one may consider the range of Navy manned and unmanned platforms as guidance.

Question 2: Will each element be assignable and addressable independently, or will groups of elements (e.g. subarrays) be assigned to a beam together?

Answer 2: There are many ways to formulate a phased array. Element level arrays are of the most interest, but also the most technologically demanding. Without understanding your particular technology base, it would be only a distraction to tell you which approach is favored.

Question 3: For the most demanding of the missions, what percentage of the array elements will be needed to achieve the highest power or gain requirements?

Answer 3: Without an offeror's proposed configuration, this question cannot be answered.

Question 4: In how many beams will a particular element be able to participate? For example, the elements for the GDPAA could participate in two receive tasks and one transmit task simultaneously.

Answer 4: This is dependent on the offeror's proposal. However, additional beams are desired.

Question 5: Can contractors contact the BAA Technical POCs directly at any and all points in the BAA process?

Answer 5: As stated in the BAA, any and all questions should be submitted in writing. Questions must be received by 22 July 2009 for white paper submissions and by 02 September

2009 for full proposal submissions. Feedback on white papers will be provided if requested. Contractors should not be contacting

Question 6: For simultaneous full duplex receive and transmit operation, how close in proximity (frequency) are the signals?

Answer 6: This is dependent on the offeror's proposal. However, maximum use of spectrum is desired.

Question 7: Can there be a defined frequency band where this full duplex operation occurs? For example, when operating simultaneously, the Receive frequency range would always operate between 200 MHz and 500 MHz and the Transmit frequency range would always operate between 1000 MHz and 4000 MHz. When operating in single mode, both Receive and Transmit will operate over the full frequency band.

Answer 7: There can be a defined frequency band where this full duplex operation occurs. However, it is not specified given the BAA concept involves flexible multifunction utilization of the spectrum.

Question 8: Is the frequency range of operation of the antenna aperture equal to the instantaneous bandwidth of the array, i.e. can the aperture be dynamically tuned or reconfigured?

Answer 8: Instantaneous is desired, but should consider the requirements that band selection would be required to operate in a complex RF environment. Dynamically tuning, or reconfiguration, are two of the many possible approaches.

Question 9: Is there a threshold or objective size requirement for a "thin" array? Does this apply just to the feed structure and elements or to electronics as well?

Answer 9: "Thin array" is desired, but not required. Many more applications would be enabled should your proposed solution be thin and lightweight, and is therefore desired.

Question 10: The direction is for a white paper to not be more than 4 pages. If we are submitting more than 1 technology, is it expected that there will be no more than 4 pages per technology rolled into 1 white paper?

Answer 10: White papers are limited to 4 pages total (excluding the cover page). Whitepapers exceeding this limit may not be considered. As stated in Amendment 0002, one white paper is preferred.
