COMMUNICATIONS AND NETWORKING TECHNOLOGY
BAA 07-012
Amendment #3

Questions and Answers (Set #3)

07 March 2007

QUESTION #1 - Are you more interested in basic research into enabling technology or are you more interested in having a working prototype? If I were able to demonstrate a new antenna in a laboratory environment, would that meet your expectations?

ANSWER #1 – ONR is interested in applied research leading to working a prototype for Technology Readiness Level of 3. Yes, a new ELF/VLF antenna in a laboratory environment would fit that requirement.

QUESTION #2 - What is the intended platform for the antenna? Are you interested in a thin antenna that can be mounted on a UAV? How much of the 100 Hz to 10 KHz bandwidth should the antenna cover? Approximately what size antenna would fit your goals? Is antenna efficiency your main goal?

ANSWER #2 – The intended platform: submarine UUV and UAV; although, thin antenna on UAV is desirable. However, the antenna can cover any bandwidth within that spectrum where there is less interference from atmospheric noise that gives the desired bit rate of 20 kbps to 100 kbps and communication range. Antenna size constrained by small tactical UAVs of 10' span length or UUVs which are also similar in size will be acceptable. Antenna efficiency is one of the major goals since the platforms are power-constrained.

QUESTION #3 - Does ONR have a specific type of UAV in mind. If so, could you please email me a more detailed description of the specifications of such as UAV. Otherwise our plan was to work with a commercial UAV from Procerus.

ANSWER #3 – Yes, we are interested in small tactical UAVs, about 10' wing span, 5-15 lb overall payload.

QUESTION #4 - A typical Procerus UAV conducts all its RF transmissions at the 900 MHz range (which is an unlicensed ISM band). Is there a specified transmission frequency that ONR prefers?

ANSWER – Yes, 900 MHz is acceptable for a low-data rate mode. "High data rate ISR" could be in the Ku range of 14-15 GHz or the Ka range of 37-40 GHz.

QUESTION #5 - What sort of data rate is implied by "high data rate ISR" in the General Information of the ONR Research Opportunity Description?

ANSWER #5 – A data rate of 10-300 Mbps traded off for distance is acceptable.

QUESTION #6 - Cover page: How to put "the technology area addressed"? Is there a standard area list to select from? Or I should select from the ones listed under the areas of ONR department?

ANSWER #6 - In order for you to decide the "technology area addressed", you should go to ONR's website, http://www.onr.navy.mil/, and on the far right side of the page you will see "Code 31, 311, 312, and 313" the department for which the BAA is being solicited. Please review these different topics and select the area(s) which best describes the technology that you are submitting your White Papers for. You can select more than one area of technology; however, you must submit separate White Papers for each area.