Questions and Answers from Distributed Systems Processing Industry Day
April 2, 2007

(Updated April 5, 2007)

1. What types of data will be available from the Government to contractors?

The data will primarily be beamformed passive or active sonar data, and the Government will supply the outputs of existing sensor detection algorithms upon request. Contractors are allowed to propose Government furnished information as part of their proposal.

2. Will the organizations performing independent validation and verification be the same as the algorithm developers?

The team of algorithm developers funded by the program will perform the independent validation and verification. The contractor who develops the algorithm will not perform the independent validation and verification; one of the other contractors on the team will conduct it. Potential performers who are unwilling to meet this expectation will not be funded.

3. How do we bring the final algorithm to proof?

Algorithms will be tested against metrics agreed upon between ONR and the transition agents. Multiple development and testing strokes may be required to improve the performance of the algorithms to the point that they pass all tests and are ready for delivery to our customers.

4. For the algorithms solutions are you interested in a generic philosophy to mitigate false alarm or specific solutions?

We seek techniques that apply to general types of passive and active acoustic distributed systems. However, they must be robust enough so that they add value to the performance of our transition customers. ONR will not fund projects with limited transition potential.

5. Do you always know what the threats look like?

The general characteristics of the threats are known.

6. Will specific metrics be available prior to white paper and proposal submission?

No, the metrics will not be available prior to white paper and proposal submissions. Your white papers and proposals should focus on *algorithms* and why you believe that have the potential to contribute to meeting the goals of the project. You need to make a compelling case in your white papers that you have technologies that will contribute to meeting the goals of this project.

7. Are we able to propose features that are active or passive?

You can propose either one or a combination of both.

8. Will government labs and Federally Funded Research and Development Centers be used at all?

Federally Funded Research and Development Centers and government laboratories are ineligible to be prime contractor, but they may be used as subcontractors.

9. Will passive sensors be fixed mobile or both?

The passive sensors of primary interest will be fixed. The active sensors may drift.

10. What is the classification level of the project?

Classification will be up to the GENSER Secret level. See the BAA for additional information.

11. How will ONR decide to exercise proposal options? Does it depend on meeting algorithm metrics?

Options will be exercised based on outcomes of biannual execution reviews conducted by ONR program managers.

12. Will the base or any of the options involve a demonstration?

Yes, at some point ONR will expect demonstrations of signal and information processing technologies.

13. Are contractors able to submit more than one white paper?

Yes, contractors may submit more than one white paper and may submit white papers on different topics.

14. Why does field-level processing have the potential to improve performance compared to individual node processing?

The technical hypothesis is that field-level processing will reduce system false alarm rate and increase target detection probability by combining information collected by distributed sensors.

15. Please verify that contractors cannot propose or develop anything related to a specific system.

This is not true. We seek techniques that apply to general types of passive and active acoustic distributed systems; however, they must be robust enough to meet the specific goals of this project. ONR will not fund projects unless they have the ability to meet the needs of the customers.

16. Are computer resource requirements a bounding variable?

Algorithms must run within timelines corresponding to the targeted system – hours for passive surveillance systems and minutes for active sonar tactical systems.

17. What is the technology readiness level?

The technology readiness level of your products must be high enough such that they have an excellent likelihood of transitioning to advanced development programs. Basic research with very high technical risk will not be funded by the Distributed Systems Processing project.

18. Will humans be eliminated from the loop?

No, there will be trained operators "in the loop" that manage the distributed sensor field and interpret the information it is providing to them. The objective of the project is to provide tools that reduce operator work load and help operators manage their work loads more effectively -- not to eliminate operators altogether.

19. Can you recommend resources to find more information about the sensors and submarines?

Jane's Fighting Ships gives an excellent overview of the world's navies. There are resources on the Web such as the Federation of American Scientists that have information about various Navy sensor systems.

20. It is not clear to me if the sensor nodes and forms of communications you are seeking pertain to surfaced devices with radio frequency communications as opposed to undersea autonomous nodes with acoustic communications. If the latter, do you accept a tradeoff between cost, size, and deployability versus single-node capabilities?

The Fixed Surveillance System telemeters all acoustic data collected by each node to central processing facilities. The air-deployed active sonar systems telemeter data using radio frequency links to Tactical Support Centers. Solutions including acoustic communications will not be funded by this project.