



**Argon Engineering Associates, Inc.**

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Argon Engineering is a rapidly growing systems engineering and development company providing full service information solutions to a wide range of customers. The business vision is to grow by providing unique state-of-the-art technology solutions to difficult system problems. Argon currently provides sensor development, data collection and decision support, analysis and design of information retrieval, and visualization techniques.

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**SBIR Investment: \$850K**

**Non-SBIR Investment: \$100K**

# Sensor Tasking Segment (STS)



## About the Technology

Argon Engineering developed an innovative network-centric sensor tasking segment (STS) architecture using thin-tasking clients, server application, and sensor agents for information warfare sensor tasking and management. Argon analyzed the functions of the Cryptologic Resource Coordinator to develop tools for mission planning and resource optimization. An outcome was the universal tasking format using hypertext markup language (XML) to task a host of different cryptologic sensors. A shipboard demonstration of STS using automated mission tasking with network centric publish and subscribe actions was successfully conducted, allowing a remote land-based tasking authority to initiate operation of an at-sea sensor. The tasking process objective is to use spatial and contextual triggers as well as reporting feedback mechanisms to improve mission management of cryptologic resources.

## Benefits to PEO C4I&Space and Other DOD Programs

The STS addresses the issue of remotely tasking sophisticated shipboard cryptologic systems. These systems perform indications and warnings, specific signal collection and exploitation, and signal development within the full scope of information warfare. This allows tasking refinements from one cryptologic system to another and facilitates network centric command and control. The STS encompasses capability to task all major current and upcoming cryptologic systems for surface, subsurface, airborne, transportable, and fixed-site installations. The STS will be the basis for the core of the next generation cryptologic system tasking and allows the scalability to address the ever-growing sophistication of communication signals and networks.

## Why STS Improves the Technology

- Develops a universal signal description file that leverages the best of current and upcoming cryptologic systems.
- Provides a foundation for signal tasking refinement, reuse, and distribution.
- Provides a significant advance in the quality and timeliness of cryptologic intelligence through improvements in the management and adaptability of sensor tasking.

## Military and Commercial Significance

- A Phase III contract of \$100K has been awarded to use STS as the cryptologic unified build/global command and control system-maritime segment for use in U.S. and second party systems.
- Applicable to other DoD activities that have the issue of tasking ever more sophisticated sensors.
- Since commercial software such as JAVA and XML is used, the STS can be packaged into utilities that can be used outside the electronic intelligence area such as tasking distribution, resource optimization, exploitation optimization, and feedback dissemination.

