

Functional Area 5 - System Design Documentation and Technical Data

AAC Contract N66604-01-C-4218: AAC is performing a \$29M Phase III SBIR task for the Submarine Acoustic Intercept Improvement Program using Sparsely Populated Volumetric Arrays (SPVAs). This program is a "light-bulb replacement" approach for the aging AN/WLR-9 outboard sensor domes. NAVSEA PMS-415 is the sponsor and NUWC Newport is the technical agent. As part of this task, AAC captured all relevant technical and design data necessary for development and maintenance in a series of design documents.

PSI Contract N00167-02-D-0038 DO 1: As part of its support to the Signature and Silencing Systems equity of the Ships and Ship Systems Product Area, Naval Surface Warfare Center Carderock Division (NSWCCD) is developing the Acoustic Trials On-board Measurement System (ATOMS) for VIRGINIA class submarines. ATOMS collects and processes submarine on-board accelerometer data, Sonar self noise data, and TSMS data during acoustic trials. As part of our support to the ATOMS program, PSI prepared and updated technical documentation reflecting the design of the ATOMS system. PSI worked with NSWCCD personnel to identify system requirements and system design parameters and documented this information in a series of design documents. The documents produced and maintained by PSI were the System/Subsystem Design Description (SSDD); the Software Design Description (SDD) and the Interface Design Description (IDD) all for the VIRGINIA Class Acoustic Trials Onboard Measurement System. In addition to generating the technical inputs for these documents, PSI also performed revision control on them and performed technical editing and document production.

PSI Contract DATM07-02-C-0036: PSI developed the Precision Airdrop System (PADS), a data acquisition and reporting system that supports parachute delivery of materials from high-altitude aircraft. The concept of operations for PADS includes deliveries from altitudes up to 25,000 feet to a target landing area of 400 meters. PADS acquires and processes wind data from many sources, including in situ data from aircraft-launched drop sondes. PSI designed the drop sonde to collect, process, and communicate GPS position, status, and time, and barometric pressure, temperature, and humidity. Using a UHF or VHF telemetry link, sonde data is recorded aboard the aircraft and data is quality assured for the specific delivery mission and parameters. PSI engineers developed detailed technical documentation for PADS, including documentation for design, configuration, and integration of the system.

AAC Contract N00178-98-C-2011: The Surface Network Embedded Analysis Tactical Trainer (SNEATT) is a multi-sensor trainer for the aircraft carrier CV-TSC module. SNEATT is a complex system with significant interfaces and Sim/Stim requirements. As such, considerable system documentation was required to fully define the SNEATT system. AAC developed a full set of documentation covering not only the latest system

design, but also installation, training, and maintenance. The SNEATT documentation was developed in accordance with the CMMI Level 3 approach used to develop this system.

Additional Contracts:

NTI Contract N00167-01-D-0016, Contact J. Cummings, 301-227-1608

AHA Contract N00039-97-C-0031, Contact Loretta Bourne - 619-524-7154

AHA Contract N00024-96-C-6231, Contact Richelle Sweeney-703-885-7765

AHA Contract N00024-99-C-6304, Contact John Dennard-703-604-6013