

Surface Electronic Warfare Improvement Program (SEWIP)

SUMMARY

- The Surface Electronic Warfare Improvement Program (SEWIP) conducted an operational assessment of its first development increment during FY04. The testing indicated that the new digital processing unit performed well, with detection and classification probabilities that were above the requirements.
- Approval occurred in October 2004 of the SEWIP Test and Evaluation Master Plan's (TEMP) adequacy to evaluate Block 1A of this evolutionary development program.
- The program office intends to begin testing Block 1B in FY05, but both the Capability Development Document and the TEMP for Block 1B remain unapproved.



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SYSTEM DESCRIPTION AND MISSION

SEWIP is an Acquisition Category II development established to provide much needed logistic and capability improvements to the Navy's AN/SLQ-32 equipment installed on all surface warships. Small ships have only a basic passive intercept capability, and the installation on larger ships includes a self-protection jamming capability. SLQ-32 achieved initial operational capability in 1972 and received numerous upgrades over the years, but now some replacement parts are unavailable. The Advanced Integrated Electronic Warfare program, intended to replace SLQ-32, terminated in April 2002 in response to cost and schedule deficiencies.

SEWIP is an evolutionary acquisition program to provide electronic warfare improvements in three block upgrades, although Block 1 has three sub-block increments. Block 1A replaces the obsolete digital processing and tracking modules for all ships except aircraft carriers. It also provides substantially improved operator human-machine integration for amphibious ships (LSD and LPD), destroyers (most DDGs), frigates (FFG), and fleet flagships (AGF and LCC). Block 1B adds situational awareness improvements and some classified enhancements, and Block 1C extends the Block 1A improvements to all ships with SLQ-32. Block 2 replaces the receiver and antenna with significantly improved equipment (and is a candidate for installation in DD(X)), and upgrades self-protection jamming for the ships with jamming capability. Block 3 further improves jamming capability. Milestone B dates for Blocks 2 and 3 remain to be determined.

TEST AND EVALUATION ACTIVITY



The first operational assessment of the Block 1A development was conducted at sea in the Navy's Virginia Capes Operating Areas in May 2004. This operational assessment examined the capabilities of the Electronic Surveillance Enhancement that replaces the obsolete digital processing and tracking modules in the SLQ-32. Electronic Surveillance

NAVY PROGRAMS

Enhancement testing occurred in May 2004 with the new modules installed in an Aegis destroyer operating in the Virginia Capes fleet operating areas. The ship tracked simulated attacking missiles and aircraft, as well as various targets of opportunity. A second operational assessment to examine capability of the improved operator interface encountered delays that moved it into FY05.

TEST AND EVALUATION ASSESSMENT

Testing for the operational assessment consisted of scenarios stressing situational awareness, as well as some to evaluate support to missile engagements. These scenarios were not as realistic or as stressing as those to be presented in final testing of Block 1A, but the testing indicated that the new digital processing unit performed well, with detection and classification probabilities that were above the requirements. The time on test was not sufficient to thoroughly verify reliability performance, and maintenance testing was hampered by inadequately identified system components.

Planning for the initial operational test and evaluation, called operational evaluation by the Navy, of SEWIP Block 1A is in progress. Initial indications are that the test will be adequate to determine the operational effectiveness and suitability. Some difficulties may result from schedule perturbations involving the test ship. Completion of arrangements to provide a drone target for realistic simulation of an attacking cruise missile is required.

The TEMP for SEWIP covers only Block 1A. Although the program schedule indicates that Block 1B began development and integration in FY03 and is planning to begin government test and evaluation in FY05, there is no approved TEMP for that testing or for Block 1C.