



DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND
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IN REPLY TO

3960
Ser 06/052
30 May 03

MEMORANDUM FOR DIRECTOR, DEFENSE SYSTEMS OFFICE, OFFICE OF THE
UNDER SECRETARY OF DEFENSE (ACQUISITION,
TECHNOLOGY AND LOGISTICS)

Subj: TRANSFORMING TEST AND EVALUATION

1. The evolution of the acquisition of systems to a spiral development model promises to offer great challenges to the test and evaluation of systems. The recent trend of highly integrated systems into Family of Systems has similarly challenged the testing norms. These trends and the requirement to ensure Joint interoperability highlight the need to evolve the way systems are developed and tested. These complexities, combined with a smaller force structure available to support testing, require testing to occur in a virtual environment. The Navy must continue to pursue augmenting live testing with a virtual environment.

2. A virtual testing environment exists for Naval systems today. The Navy has invested over \$100M to develop the Distributed Engineering Plant (DEP) which integrates its land based test centers. The testing and analysis conducted by the DEP is used as the primary method for achieving Battle Group and Battle Force interoperability assurance. The results of testing conducted in the DEP are widely accepted by fleet operators. Since its inception, over 20 Carrier Battle Group Configurations have been tested for interoperability. The products produced through the work and testing in the DEP are recognized as the sole source for determining Battle Group coordinated link and combat system operations. The Navy is also examining the potential use of the DEP to assist in training Battle Group operators as it provides an advanced training environment for most combat systems. As the Department of Defense attempts to identify an environment for testing capability-based systems in a spiral development model; the DEP offers a great example to investigate.

3. The Navy intends to expand its use of the DEP in support of acquisition programs to help reduce the burden on our operating forces. The development community is soliciting support to

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further expand the use of the DEP for Developmental and Operational Test and Evaluation. A collaborative effort by the service and oversight communities is needed to develop acceptable validation criteria and procedures to support a number of future OT&E events. We recommend an Executive Steering Committee be established to achieve a common vision of testing for the future.

4. Cooperative Engagement Capability (CEC) Operational Testing in support of Block 2 development intends to utilize the DEP and Joint Distributed Engineering Plant (JDEP) to the maximum extent possible. This will require a significant shift in the mindset of how systems are tested and evaluated. The old rule of "full use of actual assets" should be revisited as we develop force-level netted capabilities integrated across a spectrum of platforms. We request your support as we pursue this new course.

5. Points of contact for this are CDR Brian Daugherty, SEA 61B (202) 781-2387 (daughertybw@navsea.navy.mil) and Mr. George Axiotis, SEA 62T, (202) 781-0424, (axiotisgm@navsea.navy.mil).



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