

JOINT TEST AND EVALUATION (JT&E)

INTRODUCTION

The Joint Test and Evaluation (JT&E) Program has been in existence for 29 years and is designed to provide quantitative information for analysis of joint military capabilities and potential options for increasing military effectiveness. The program is complimentary to, but not a part of, the weapons acquisition process. A JT&E project brings together two or more Military Departments or other components to:

- Assess the interoperability of Service systems in joint operations.
- Evaluate improvements in joint technical and operational concepts.
- Evaluate and validate multi-Service testing methodologies.
- Assess performance of interacting systems under realistic joint operational conditions.
- Provide data from joint field tests and exercises to validate models, simulations and test beds.

The JT&E Program is managed by the Director, Strategic and Tactical Systems (D,S&TS) and is presided over by a Senior Advisory Council (SAC). The SAC is co-chaired by the D,S&TS and D,OT&E and includes representatives from the Joint Chiefs of Staff, the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence and the Military Departments. Both D,S&TS and D,OT&E approve JT&E charters as well as test plans. The Senior Advisory Council prioritizes specific JT&E projects after a Defense-wide nomination process and subsequent feasibility studies.

The JT&E program provides validated answers to warfighter issues by “doing better with what we have.” Its focus remains on identifying realistic, cost-effective, solutions implementable by the Services for the programs facing today’s warfighter. Currently, there are nine joint tests. They are:

- Joint Battlefield Damage Assessment (JBDA)
- Joint Close Air Support (JCAS)
- Joint Command and Control, Intelligence, Surveillance, and Reconnaissance (JC2ISR)
- Joint Cruise Missile Defense (JCMD)
- Joint Global Positioning System Combat Effectiveness (JGPSCE)
- Joint Methodology to Assess C4ISR Architecture (JMACA)
- Joint Shipboard Helicopter Integration Process (JSHIP)
- Joint Theater Distribution (JTD)
- Joint Unmanned Aerial Vehicles (JUAV)

There were four Joint Feasibility Studies considered for continuation as Joint Tests during the past year. Because of funding limitations and critical government personnel requirements, only the two highest priority programs of the SAC, Joint Methodology to Assess C4ISR Architecture (JMACA) and Joint Unmanned Aerial Vehicles (JUAV), were selected as new start JT&E efforts.

The JMACA Joint Test will assess and validate the integrated architecture assessment methodology found in Command, Control, Communication, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) that meets the following requirements:

- Timely assessment: reduce set up time for a Joint Task Force (JTF), identifying architecture improvements, and solving interoperability issues.
- Supportable process: use a small cadre of support personnel.
- Adaptable methodology: evolve as new warfighting concepts and technologies are fielded.
- Integration with the Joint Task Force: be part of the JTF Planning process.

The JMACA JT&E concept is to use *methodology* as the test article and *integrated architectures* as test resources. The test approach will be to validate methodology using a mini-test, two test events, and an operational event, and then assess the impact of improvements. The methodology will involve the use of coarse analytical tools as “preprocessors” to identify high-risk areas across the breadth of the architecture, then to use higher resolution tools and procedures to selectively analyze in depth the high-risk areas identified by the analytical tools, and finally to identify and recommend solutions that enhance capabilities or mitigate limitations of the architecture.

The Navy is the lead Service for the test with the Army, Marines, and Air Force participating. When fully staffed, JMACA will have ten uniformed military personnel and one government civilian, plus support contractors. The JMACA JT occupies a leased building in Suffolk, Virginia, in the vicinity of the USJFCOM J7 and J9 facilities.

The JUAV JT&E will specifically address and evaluate three alternative processes and procedures for the integration of the UAV into the Joint Tactics Techniques and Procedures (JTTPs) that govern time sensitive operations. Test methodology is designed to evaluate the effectiveness using these alternative procedures. The JT&E will execute a three-phase test program to refine, evaluate, and validate proposed alternative processes and procedures: Phase 1, Simulation to refine alternatives; Phase 2, Field Tests to evaluate the alternatives; and Phase 3 Joint Exercises to validate the alternatives. The JT&E will develop, document and disseminate conclusions and recommendations regarding the JTTP alternatives following each test activity. This procedure will enable new and proven processes and procedures to be rapidly disseminated to the joint warfighter throughout the duration of the JT&E.

The Navy is the lead Service with the Army, Marines, and Air Force participating. When fully staffed, JUAV will have fourteen uniformed military personnel and three government civilians, plus support contractors. The JUAV JT occupies government facilities at Fallon NAS, NV.

The other two studies, Joint Anti-Terrorism/Force Protection (JAT/FP) and Joint Aircraft Survivability to Man-Portable Air Defense Systems (JASMAN) are to complete JT&E reporting with remaining funding. As a result of the terrorism events of September 11, 2001, JAT/FP received required funding to begin testing outside the JT&E program.

In addition to the ongoing joint tests, this year there are two new feasibility studies. Upon completion of a one-year study period, the SAC will review these studies as potential projects; and either one or both will be selected as full joint test projects. These new feasibility studies are listed below:

Joint Battlespace Integration Test (JBIT) - The study is intended to identify test methodologies for evaluating current and next generation family of systems testing with an integrated

battlespace. Such a concept would allow both the warfighter and the developer to conduct evaluations of the interoperability of the families of systems. This would solve the problem of the current platform centric, service centric, test and evaluation of families of systems without assuring interoperability.

Joint Logistics/Planning Enhancement (JLOG/PE) - The study is intended to investigate the C2 information architecture and component interfaces for near real time information on systems and classes of supply status and identify enhancements in joint logistic and operational planning and execution processes. Each of the Services have unique support systems with on-demand information but the joint commander does not get timely inputs.

Two programs were finalized this past year: Joint Warfighters (JWF) and Joint Suppression of Enemy Air Defenses (JSEAD). At the request of the Joint Requirements Oversight Committee (JROC), JSEAD is being considered for establishment as a permanent mission area organization.

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