

Joint Test and Evaluation (JT&E)

The primary objective of the Joint Test and Evaluation (JT&E) Program is to provide rapid solutions to operational deficiencies identified by the joint military community. The program achieves this objective by developing new tactics, techniques, and procedures (TTPs) and rigorously measuring the extent to which their use improves operational outcomes. JT&E projects may develop products that have implications beyond TTPs. Sponsoring organizations submit these products to the appropriate Service or Combatant Command as doctrine change requests. Products from JT&E projects have been incorporated into joint and multi-Service documents through the Joint Requirements Oversight Council process and through coordination with the Air, Land, Sea Application Center. The JT&E Program also develops operational testing methods that have joint application. The program is complementary to, but not part of, the acquisition process.

The JT&E Program has re-engineered its business model in response to a budget reduction starting in FY13. The major change is that project life cycle is reduced to two years from the current three years. To accommodate this shorter timeline, nominating organizations must submit a robust initial nomination package that provides substantial detail on how they will achieve test objectives. The new business model of conducting shorter test projects necessitates establishing permanent test units, managed by operational test agencies, supporting test projects led by the operational sponsor. This new business model reduces the number of staff members needed to support a joint test and improves the stability of personnel assignments.

The program managed six joint tests in FY12 that focused on the needs of operational forces. Projects annotated with an asterisk (*) closed in FY12:

- Joint Advanced Capability Employment (J-ACE)
- Joint Cyber Operations (JCO)
- Joint Deployable Integrated Air and Missile Defense (JDIAMD)
- Joint Integration of Maritime Domain Awareness for Homeland Defense (JIMDA)*

- Joint Jamming Assessment and Mitigation (JJAM)*
- Joint Unmanned Aircraft Systems (UAS) Digital Information Exchange (JUDIE)

The JT&E Program instituted a quick reaction test (QRT) capability in 2003 to respond to the pressing needs of today's deployed forces. QRTs are less than a year in duration and solve urgent issues. The program managed 16 QRTs in FY12:

- Afghanistan Mission Network Coalition Battlespace Management (AMN-CBM)*
- Airborne Maritime Moving Target Indicator (AMMTI)*
- Battlefield Airborne Communications Node (BACN) Intra-Flight Data Link Subsystem and Multi-Domain Integration (BIS-MDI)
- Civil Intelligence Fusion Concept of Operations (CIFC)
- Computer Network Defense Service Provider (CNDSP)
- Joint All-Domain Situational Awareness (J-ADSA)
- Joint Analytical Network Assessment (JANA)*
- Joint Battlespace Awareness via Data Link (J-BADL)
- Joint Beyond Line-of-Sight Command and Control (JBC2)
- Joint Exploitation of Modern Surface-to-Air Missile Systems (JEMS)*
- Joint Military Working Dog (JMWD)*
- Joint Passive Electronic Radio Frequency Emission Classification and Tracking II (J-PERFECT II)*
- Joint Threat Assessment and Negotiation for Installation Infrastructure Control Systems (JTANIICS)
- Joint Vehicle Protection and Survivability System (JVPSS)*
- Rapid Development and Sustainment of Enterprise Mission Services (RDEMS)*
- Unmanned Aircraft Systems – Airspace Integration (UAS-AI)

The program executes special projects, as directed by DOT&E, which address problems DoD-wide. The program managed one special project in FY12, the Rapid Acquisition by Sniper1K Track and Attack (RASTA).

JOINT TESTS

JOINT ADVANCED CAPABILITY EMPLOYMENT (J-ACE)

Sponsor/Start Date: U.S. Strategic Command/August 2011

Purpose: To develop, test, and evaluate a standardized process to support the Joint Force Commander's ability to employ enhanced, advanced capabilities to overcome complex targeting challenges.

Products/Benefits: The J-ACE-developed products are:

- A repeatable operational employment process that will enhance planning by developing, evaluating, and coordinating concepts of employment (CONEMPs) that can be used by the Joint

Staff, Combatant Commands, Services, and National Security Agency to solve complex targeting challenges

- Multiple approved, enhanced, and advanced capability CONEMPs to overcome complex targeting challenges
- Relevant training scenarios and vignettes
- Documented effects associated with techniques against representative targets
- Recommendations to operational concept of operations (CONOPS) and approval process packages

JOINT CYBER OPERATIONS (JCO)

Sponsor/Start Date: U.S. Pacific Command (USPACOM)/August 2010

Purpose: To develop, assess, and evaluate joint TTPs to employ an adaptive cyber defense Virtual Secure Enclave (VSE) to ensure the protection and availability of critical command and control services.

Products/Benefits:

- Addresses network vulnerabilities of critical command and control services by enabling Joint Task Force Commanders to employ an adaptive cyber defense VSE to protect against, detect, and respond to cyber threats against specific command and control applications at the operational level
- Provides the Commander with situational awareness and cyber defense options to maintain a proactive defensive posture
- Facilitates a systematic approach to warfighting in the cyber domain
- Tests and validates operational effectiveness of Joint Task Force implementation

JOINT DEPLOYABLE INTEGRATED AIR AND MISSILE DEFENSE (JDIAMD)

Sponsor/Start Date: North American Aerospace Defense (NORAD), U.S. Northern Command (USNORTHCOM), Army Space and Missile Defense Command/August 2011

Purpose: To develop joint planning and execution processes and procedures for deployable, integrated air and missile defense (IAMD) for the homeland.

Products/Benefits:

- IAMD process modeling that provides a comprehensive view of the integrated planning and execution process
- NORAD and USNORTHCOM current operations planning processes, checklists, and procedures for IAMD
- Continental NORAD Region and Air Forces North planning and execution TTPs for IAMD
- U.S. Fleet Forces and Third Fleet planning and execution TTPs for naval support of IAMD
- Army North planning and execution TTPs for operational control of ground-based IAMD forces
- 263rd Army Air and Missile Defense Command planning and execution TTPs for IAMD

JOINT INTEGRATION OF MARITIME DOMAIN AWARENESS FOR HOMELAND DEFENSE (JIMDA)*

(Closed October 2012)

Sponsor/Start Date: NORAD and USNORTHCOM/August 2009

Purpose: To develop TTPs for consistent and comprehensive coordination across the distributed maritime community in order to synchronize maritime domain information for key decision makers across the operations centers responsible for homeland defense.

Products/Benefits:

- Integrated maritime domain awareness processes, procedures, and checklists for all participating operations centers

- An online handbook detailing the information and resources available for developing and sharing maritime domain information across the NORAD and USNORTHCOM command and control network and among participating interagency partners
- An online portal, hosted by NORAD and USNORTHCOM, that enables the distributed execution of the maritime domain awareness processes, procedures, and checklists during daily operations at participating operations centers throughout the maritime community

JOINT JAMMING ASSESSMENT AND MITIGATION (JJAM)*

(Closed September 2012)

Sponsor/Start Date: Air Force/August 2009

Purpose: To develop TTPs that mitigate the effects of adversary purposeful interference (PI) on satellite communications (SATCOM) and allow friendly operational forces to effectively sustain operations when SATCOM is degraded or denied.

Products/Benefits:

- Created SATCOM PI mitigation training employing live jamming signals that allowed the SATCOM community of interest to rehearse technical and procedural PI resolution processes
- Established SATCOM PI mitigation TTPs and CONOPS being used by U.S. Strategic Command, USPACOM, and U.S. Central Command (USCENTCOM)
- Improved information exchange, situational awareness, and command and control decision processes which reduced the timeline for detection, attribution, and target nomination from days to hours
- Integrated Joint Space Operations Center space target coordination and nomination processes into theater operations
- Produced a first-generation PI visualization tool to provide key decision makers real-time awareness of events affecting operationally critical SATCOM networks
- Published SATCOM PI Training and Exercise Handbook for Combatant Command planners
- Integrated SATCOM PI Mitigation TTPs into 19 joint and Service publications

JOINT UNMANNED AIRCRAFT SYSTEMS DIGITAL INFORMATION EXCHANGE (JUDIE)

Sponsor/Start Date: Air Force/August 2010

Purpose: To develop, test, and evaluate cross-component UAS information exchange TTPs used to improve joint battlespace situational awareness and target prosecution capabilities for the Commanders at the tactical level of brigade and below.

Products/Benefits:

- Standardize UAS information exchange TTPs and checklists
- Standardize terminology for UAS information exchange

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- Integrate information portal and situational awareness display technology currently in use by the components to improve the UAS information exchange efficiency
- Introduce the information exchange TTPs to combat training centers and formal training units

QUICK REACTION TESTS

AFGHANISTAN MISSION NETWORK COALITION BATTLESPACE MANAGEMENT (AMN-CBM)*

(Closed January 2012)

Sponsor/Start Date: USCENTCOM and Defense Information Systems Agency (DISA)/January 2011

Purpose: To measure and evaluate the utility of battlespace management TTPs for both joint and coalition forces.

Products/Benefits: Developed a methodology for use by the Afghanistan Mission Network testing organizations enabling them to test and evaluate the utility of TTPs for executing coalition mission threads, and to execute repeatable test events providing reliable quantitative data.

AIRBORNE MARITIME MOVING TARGET INDICATOR (AMMTI)*

(Closed September 2012)

Sponsor/Start Date: U.S. Southern Command/July 2011

Purpose: To develop TTPs for the employment of the Joint Surveillance Target Attack Radar System (JSTARS) Enhanced Land Maritime Mode (ELMM) in support of the counter-narcotics trafficking mission in U.S. Southern Command's area of responsibility. AMMTI will formulate the first TTPs for employment of the JSTARS radar system for open water surveillance.

Products/Benefits:

- Optimized system parameters for JSTARS maritime employment
- Detailed information on the probability of detection and target location error for the specified AMMTI targets
- Mission planning improvements for JSTARS maritime employment
- TTPs for employment of the JSTARS ELMM capability in multiple Combatant Commands
- Flash Bulletin on JSTARS maritime employment considerations

BATTLEFIELD AIRBORNE COMMUNICATIONS NODE (BACN) INTRA-FLIGHT DATALINK SUBSYSTEM AND MULTI-DOMAIN INTEGRATION (BIS-MDI)

Sponsor/Start Date: USPACOM/November 2011

Purpose: To develop and evaluate TTPs for the BIS-MDI, an upgrade to the basic BACN capability that provides interoperability across multi-band voice and datalink communications and bridges widely separated Link 16 networks. This will greatly enhance situational awareness and operational

effectiveness, especially between fourth and fifth generation fighter aircraft and surface shooters.

Products/Benefits:

- BIS-MDI fuses sensor information from multiple sources, including fourth and fifth generation platforms, into the Service member's overall common operational picture
- Joint and coalition Service member CONOPS and TTPs for BIS-MDI employment in support of potential USPACOM operations conducted in anti-access and area-denial environments

CIVIL INTELLIGENCE FUSION CONCEPT OF OPERATIONS (CIFC)

Sponsor/Start Date: Joint Staff/January 2012

Purpose: To test and validate the Civil Intelligence Fusion CONOPS. Many intelligence organizations do not dedicate adequate support to collecting and integrating civil information, preventing the Joint Force Commander from obtaining a holistic view of the operational environment.

Products/Benefits:

- Validated and improved CONOPS for fusion of civil intelligence
- New doctrine change requests for consideration
- Connects sources of civil information with planners, operators, and intelligence professionals creating a community of interest
- Provides processes and architecture for improved information sharing resulting in better knowledge of the operational environment

COMPUTER NETWORK DEFENSE SERVICE PROVIDER (CNDSP)

Sponsor/Start Date: DoD Chief Information Office (CIO)/July 2012

Purpose: To develop, document, and formalize Department-level TTPs to ensure the capability exists within DoD CNDSPs to guide day-to-day operations and ensure an acceptable level of performance of DoD CNDSP defenders when facing a capable cyber adversary.

Products/Benefits: The CNDSP QRT will develop a methodical, repeatable, and verifiable framework for measuring the effectiveness of DoD CNDSPs on the Non-secure Internet Protocol Router Network and Secret Internet Protocol Router Network.

* Project closed in FY12

JOINT ALL DOMAIN SITUATIONAL AWARENESS (J-ADSA)

Sponsor/Start Date: NORAD and USNORTHCOM/June 2012

Purpose: To develop and test necessary TTPs to improve the ability of NORAD and USNORTHCOM senior leaders to gain and maintain comprehensive, integrated all-domain situational awareness and decision superiority.

Products/Benefits: The J-ADSA QRT will develop and evaluate the effectiveness of TTPs to access and analyze the effectiveness of seemingly unrelated cross-domain activities and events to enable the NORAD-USNORTHCOM leadership to make timely decisions.

JOINT ANALYTICAL NETWORK ASSESSMENT (JANA)*

(Closed January 2012)

Sponsor/Start Date: USNORTHCOM/January 2011

Purpose: To develop, test, and validate a mission essential circuit list (MECL) for all inter-landmass command circuit service designators in the Pacific theater, supporting operations plans and critical mission operations, both inside and outside the USPACOM area of responsibility.

Products/Benefits:

- Created a methodology utilizing an analytical hierarchy process to develop standardized inter-landmass MECLs and TTPs for use of MECLs during strategic communication restoration
- Command leadership can now properly sequence restoration efforts based on inter-landmass MECLs to ensure the most important capabilities are restored first

JOINT BATTLESPACE AWARENESS VIA DATALINK (J-BADL)

Sponsor/Start Date: NORAD and USNORTHCOM/August 2012

Purpose: To research and develop TTPs that will focus NORAD, USNORTHCOM, and supporting commands' use of joint global sensor information to provide cuing to address priorities, adjust surveillance assets, or position existing forces in executing the Joint Engagement Sequence against advanced air threats.

Products/Benefits: The expected test product includes TTPs that lay out the processes and procedures for the execution of Joint Engagement Sequence capabilities that can be used operationally by NORAD and USNORTHCOM, as well as by other Combatant Commands and government agencies, against advanced air threats.

JOINT BEYOND LINE-OF-SIGHT COMMAND AND CONTROL (JBC2)

Sponsor/Start Date: Air Force/July 2012

Purpose: To develop and evaluate TTPs so operations centers can better plan and execute integrated employment of Beyond Line-of-Sight Command and Control system of systems

to support real-time, bi-directional, full motion video, and collaborative command and control capabilities.

Products/Benefits: The QRT will focus the TTP development on operations at both the Maritime Operations Center and the Air and Space Operations Center in the USCENTCOM area of operations in support of responsive fleet defense and strike operations.

JOINT EXPLOITATION OF MODERN SURFACE-TO-AIR MISSILE SYSTEMS (JEMS)*

(Closed January 2012)

Sponsor/Start Date: Naval Air Weapons Center/January 2011

Purpose: To develop and test TTPs for effectively employing countermeasures to modern surface-to-air missile systems for improving aircrew survivability.

Products/Benefits: The JEMS project provided updates to the Joint Research Assessment and Analysis Center for inclusion in applicable threat simulations. It also produced TTPs and training outlines for incorporation by the Services into applicable aircraft tactics and threat training products.

JOINT MILITARY WORKING DOG (JMWD)*

(Closed April 2012)

Sponsor/Start Date: USCENTCOM/April 2011

Purpose: To develop, test, and validate TTPs to support the ground tactical Commander's use and support of military working dogs while performing counter-IED and counterinsurgency missions.

Products/Benefits: The JMWD QRT developed a single-source document for ground maneuver leaders to plan and execute counter-IED and counterinsurgency missions employing military working dogs. The primary test products included the Integrating Military Working Dogs into Counter-IED and Counterinsurgency Operations Handbook and a quick reference card. JT&E transitioned both of these to the U.S. Army Military Police School with 10,000 copies printed for both training and operational use.

JOINT PASSIVE ELECTRONIC RADIO FREQUENCY EMISSION CLASSIFICATION AND TRACKING (J-PERFECT) II *

(Closed July 2012)

Sponsor/Start Date: NORAD and USNORTHCOM/May 2011

Purpose: To develop and evaluate CONOPS and TTPs for employing DoD intelligence, surveillance, and reconnaissance capabilities that have the potential to improve near real-time situational awareness for decision makers and that will support successful operations against modern strategic threats to the United States and Canada.

Products/Benefits:

- Detect, track, and identify strategic air threats to North America
- Outline the actions and methods which implement doctrine and describe how forces will be employed in operations
- Make recommendations to Combatant Commands and applicable national agencies other than NORAD and USNORTHCOM

JOINT THREAT ASSESSMENT AND NEGATION FOR INSTALLATION INFRASTRUCTURE CONTROL SYSTEMS (JTANIICS)

Sponsor/Start Date: Air Force/January 2012

Purpose: To develop and validate a risk assessment handbook for use by installation Commanders to strengthen their industrial control system security posture.

Products/Benefits: The JTANIICS handbook:

- Enables the installation Commander to conduct self-assessments of industrial control system vulnerabilities
- Provides guidelines for assigning priority to vulnerabilities based on mission requirements
- Includes a validated methodology that aids in identifying commonly overlooked systems that can potentially allow unauthorized access to mission-critical and safety-critical systems

JOINT VEHICLE PROTECTION AND SURVIVABILITY SYSTEMS (JVPSS)*

(Closed July 2012)

Sponsor/Start Date: USCENTCOM/July 2011

Purpose: To capture lessons learned and best practices to identify, document, and validate the safety and survivability features of the primary ground combat vehicles used in the USCENTCOM area of responsibility.

Products/Benefits: A handbook and training video that contains TTPs, lessons learned, and best practices that maximize Service member survivability when utilizing Mine Resistant Ambush Protected Vehicles, Strykers, and personnel protective

equipment. The handbook targets the individual vehicle operator, crew members, and small unit leader with instructions on how to maximize the effectiveness of the safety and survivability features of their vehicle. These instructions are listed as “do’s” and “don’ts” in a graphically intensive, reader-friendly format.

RAPID DEVELOPMENT AND SUSTAINMENT OF ENTERPRISE MISSION SERVICES (RDEMS)*

(Closed July 2012)

Sponsor/Start Date: DoD CIO/July 2011

Purpose: To identify and document impediments to the implementation of the DoD Information Sharing Strategy. The resulting document reflects the lessons learned and updates the CONOPS and TTPs in an RDEMS User Guide, based upon DoD-prescribed standards, specifications, doctrine, and technical processes to enable effective and efficient enterprise information sharing.

Products/Benefits:

- Documented impediments to information sharing at the joint level across Combatant Commands, Services, and other Department organizations
- DoD CIO has taken the impediments for action and is actively working to resolve them
- Product sponsors captured lessons learned from the project use case and updated CONOPS and TTPs in the RDEMS User Guide for use throughout the Department

UNMANNED AIRCRAFT SYSTEMS – AIRSPACE INTEGRATION (UAS-AI)

Sponsor/Start Date: NORAD and USNORTHCOM/January 2012

Purpose: To evaluate a discrete set of flight access profiles from the DoD Airspace Integration CONOPS developed to facilitate UAS integration into the National Airspace System

Products/Benefits: Recommend potential improvements to the CONOPS and provide all test results to the USD(AT&L) UAS Task Force for the purpose of identifying CONOPS gaps revealed by the QRT.

SPECIAL PROJECTS

RAPID ACQUISITION BY SNIPER 1K TRACK AND ATTACK (RASTA)

Sponsor/Start Date: USPACOM/November 2011

Purpose: To develop and test joint TTPs that improve the timely integration of specific target track generating capabilities for tactical fighter aircraft during combat employment in an environment that includes Advanced Electronic Attack waveforms. Concurrent TTP development lays out the process

for open architecture changes and additions to the operational flight program for fighter aircraft to enable changes to be made rapidly and inexpensively.

Products/Benefits: RASTA will provide Service members the ability to generate target-quality information to enhance kill chain effectiveness while operating in an Advanced Electronic Attack waveform environment.

