

Joint Test and Evaluation (JT&E)

The primary objective of the Joint Test and Evaluation (JT&E) Program is to rapidly provide non-materiel 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 (CCMD) 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, Joint Staff doctrine updates, Service training centers, and 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 uses two test methods – the Joint Test and the Quick Reaction Test (QRT) – and, on occasion, a Special Project focused on the needs of operational forces. These are explained below. Projects annotated with an asterisk (*) were completed in FY17.

The Joint Test is, on average, a 2-year project preceded by a 6-month Joint Feasibility Study. A Joint Test involves an in-depth, methodical test and evaluation of issues and seeks to identify their solutions. DOT&E funds the sponsor-led test team, which provides the customer with periodic feedback and usable, interim test products. The JT&E Program charts two new Joint Tests annually. The JT&E Program managed seven Joint Tests in FY17:

- Digitally Aided Close Air Support (DACAS)
- Joint Advanced Zensor to Zhooter (JAZZ)*
- Joint Counterair Integration (JCI)
- Joint Cyber Insider Threat (J-CIT)
- Joint Interoperability for Medical Transport Missions (JI-MTM)
- Joint Laser Systems Effectiveness (JLaSE)
- Joint Pre/Post-Attack Operations Supporting Survivability and Endurability (J-POSSE)*

QRTs are intended to solve urgent issues in less than a year. The JT&E program managed 22 QRTs in FY17:

- Aviation Radio Frequency Survivability Validation (AVRFSV)
- Critical Strategic Power Projection Infrastructure (CRSPPI)
- Cyber Degraded Training (CDT)*
- Homeland Underwater Port Assessment Plan (HUPAP)*
- Intelligence Prioritization for Cyberspace Operations (IPCO)
- Joint Accelerated Collaborative Targeting (J-ACT)*
- Joint Air Operations Center (AOC) Command and Control (C2) in a Contested Degraded Environment (JADC)*
- Joint Ballistic Missile Defense (BMD) Overhead Persistent Infrared (OPIR) Operational Space Track (J-BOOST)
- Joint Biological/Radiological Mortuary Affairs Contaminated Remains Mitigation Site (JBRM)*
- Joint Contaminated Human Remains (CHR) Recovery in a Chemical Environment (JCRCE)
- Joint Cyber Integration of DOD Information Network Operations (J-CID)*
- Joint Intelligence Production in a Cloud Environment (JIPCE)
- Joint Interagency - Cyber Enhanced Detection and Monitoring (JI-CEDM)*
- Joint Intercontinental Ballistic Missile (ICBM) Weapon Convoy (JIWC)*
- Joint Missile Seeker Defeat (JMSD)
- Joint Multi-Intelligence Correlation and Dissemination (JMCD)*
- Joint Personnel Recovery Information Digital Exchange (J-PRIDE)*
- Joint Radio Frequency-Enabled Cyberspace Operations (JRF-ECO)
- Joint Sensor to Tactically Responsive Integrated Kinetic Effects (J-STRIKE)
- Joint Talon Thresher Theater Integration (JT3I)*
- Non-classified Internet Protocol Router (NIPR) Enhanced Common Operational Picture (Ne-COP)*
- Optimization of Social Media and Open Source Information Support (OSMOSIS)*

As directed by DOT&E, the program executes Special Projects that address DOD-wide problems. Special Projects generally address emergent issues that are not addressed by any other DOD agency but that need a thoroughly tested solution. The program managed one Special Project in FY17:

- Joint National Capital Region Enhanced Surveillance Tactics, Techniques, and Procedures (J-NEST)*

JOINT TESTS

DIGITALLY AIDED CLOSE AIR SUPPORT (DACAS)

Sponsor/Start Date: Joint Staff J6/February 2016

Purpose: To develop, test, and evaluate standardized TTPs in order for Joint Terminal Attack Controllers (JTAC), Joint Fires Observers, and Close Air Support (CAS) aircrew to realize the advantage of DACAS capabilities, including shared situational awareness, increased confidence prior to weapons release, and improved kill chain timeliness.

Products/Benefits:

- TTPs that outline network management considerations and provide mission planning and execution procedures to ensure all users have standardized information to operate on the network and to deliver proper system configuration for first-try connectivity
- Decreased human input error through machine-to-machine data exchange leading to increased speed of CAS execution
- Enable JTAC and aircrew to access existing networks and exploit DACAS benefits
- Enhance operational effectiveness and increase confidence prior to weapons release by providing a common and accurate shared situational awareness

JOINT ADVANCED ZENSOR TO ZHOOTER (JAZZ) (CLOSED AUGUST 2017)

Sponsor/Start Date: U.S. Pacific Command (USPACOM)/ August 2015

Purpose: To develop, evaluate, and validate TTPs to more efficiently and effectively gain and maintain battlespace awareness through the integration of rapidly developed capabilities supporting combat operations in anti-access/area denial environments.

Products/Benefits:

- Sensor to shooter TTPs that enable sharing of advanced sensor and National-Tactical Integration (NTI) data between 5th and 4th generation fighters leading to increased situational awareness, improved engagement opportunities, and better utilization of weapon systems
- Documented roles and responsibilities for the Operational Air Component Commander and tactical datalink network designers to plan and execute integration of advanced sensors and NTI into any theater of operations
- An innovative tactical datalink design compatible for coalition operations and integration of advanced sensors and NTI
- DOT&E notification to CCMDs about the discovery of previously unidentified discrepancies for NTI reporting on tactical datalinks

JOINT COUNTERAIR INTEGRATION (JCI)

Sponsor/Start Date: USPACOM/February 2017

Purpose: To develop, test, and evaluate TTPs to provide counterair shooters and command and control (C2) operators

with the ability to integrate joint defensive counterair (DCA) resources in a contested, degraded, and operationally limited (CDO) environment to protect defended assets from expected threats.

Products/Benefits:

- TTPs that enable operators to integrate DCA forces in a CDO environment to improve tactical-level operations, enhance coordination between assets, and minimize exploitation of gaps in area coverage
- Integration of Army, Air Force, Navy, and Marine Corps DCA assets to counter a peer threat in a CDO environment

JOINT CYBER INSIDER THREAT (J-CIT)

Sponsor/Start Date: U.S. Army Research Laboratory/ August 2016

Purpose: To develop, test, and evaluate TTPs to detect and report cyber insider threats in order to prevent harm to national security interests.

Products/Benefits:

- Cyber Insider Threat Detection and Reporting (CIDaR) TTPs that provide Cybersecurity Service Provider tier II operators with specific technical and configuration requirements to establish a cyber Insider Threat Advanced Detection (ITAD) capability to create unique analysis and reporting procedures for insider threats
- CIDaR TTPs that identify operational characteristics, such as staffing requirements, needed to monitor cyber insider threat activities
- CIDaR TTPs and ITAD capabilities that are software/hardware agnostic

JOINT INTEROPERABILITY FOR MEDICAL TRANSPORT MISSIONS (JI-MTM)

Sponsor/Start Date: DOD Chief Information Officer/ August 2017

Purpose: To develop, test, and evaluate standardized TTPs to access and utilize existing patient information from various health information systems across the DOD during the patient movement coordination and validation process.

Products/Benefits:

- Faster access to required information resulting in quicker validation of patient movement requests and movement to the appropriate care level
- Richer picture of patient history for better informed medical decisions
- Improved capability to plan and deliver appropriate transport and onboard medical staff in order to provide the best en route care for patients
- Reduced workload and potential for errors during manual information reentry into the patient movement planning system

JOINT LASER SYSTEMS EFFECTIVENESS (JLASE)

Sponsor/Start Date: Naval Surface Warfare Center, Dahlgren Division/April 2017

Purpose: To develop and test procedures that integrate emerging directed energy laser (DEL) weapon systems with weaponizing and Collateral Damage Estimation (CDE) methodology within the Joint Targeting Cycle.

Products/Benefits:

- Joint Targeting Cycle procedures for Laser Weaponizing and CDE in addition to Joint Munition Effectiveness Manual (JMEM) lethality data
- Integration of DEL systems into the Joint Targeting Cycle focusing on capabilities analysis, weaponizing, and damage estimation
- Development of JMEM data for use by weaponizers with joint targeting systems as part of the JMEM Weaponizing System
- Increased confidence of warfare commanders in the ability of laser weapons to provide scalable lethality ranging from degrading sensors to catastrophic destruction
- Recommendations to assist the Services in DEL system development and acquisition as well as with integrating DELs into the operational environment

- TTPs for the integration of high energy laser weapon systems into joint and Service operations in order to engage enemy targets according to the commander's intent

JOINT PRE/POST-ATTACK OPERATIONS SUPPORTING SURVIVABILITY AND ENDURABILITY (J-POSSE) (CLOSED FEBRUARY 2017)

Sponsor/Start Date: U.S. Strategic Command (USSTRATCOM)/February 2015

Purpose: To develop, test, and evaluate TTPs to provide joint operators the ability to survive an electromagnetic pulse (EMP) event in order to ensure continuous mission functionality.

Products/Benefits:

- Standardized procedures that provide overarching guidance for required actions before and after an EMP event for survival
- Results to inform future resourcing decisions regarding physical enhancements
- TTPs that can be extended to other mission systems that are potentially vulnerable to EMP effects

QUICK REACTION TESTS

AVIATION RADIO FREQUENCY SURVIVABILITY VALIDATION (AVRFSV)

Sponsor/Start Date: U.S. Army Aviation Center of Excellence/October 2016

Purpose: To increase rotary-wing asset survivability effectiveness against the most widely proliferated radio frequency (RF) threats through the employment of a combination of aircraft survivability equipment, countermeasures, and maneuvers.

Products/Benefits:

TTPs for rotary-wing aircraft to maintain freedom of maneuver against and defeat RF threats.

CRITICAL STRATEGIC POWER PROJECTION INFRASTRUCTURE (CRSPPI)

Sponsor/Start Date: North American Aerospace Defense Command (NORAD)-U.S. Northern Command (USNORTHCOM)/June 2017

Purpose: To develop Interagency Infrastructure Assessment (IIA) TTPs to enable the assessment of select critical interagency infrastructures. Sponsor lacks specific agreements, procedures, and access to conduct assessments in areas that the DOD does not own or control. A lack of information and assessment of certain critical infrastructures, facilities, and transportation nodes significantly degrades the sponsor's ability to prepare for and rapidly respond to high consequence, multi-domain threats to U.S. critical strategic infrastructures.

Products/Benefits:

IIA TTPs, with an accompanying implementation plan, to prescribe all aspects of manning, agreements, funding support, and coordination to initiate an IIA program of record.

CYBER DEGRADED TRAINING (CDT) (CLOSED JANUARY 2017)

Sponsor/Start Date: USPACOM/October 2015

Purpose: To develop, test, and evaluate concept of operations (CONOPS) and TTPs that address the characteristics of cyber-degraded training environments as well as how to select, employ, and overcome these capabilities relative to factors such as military training objectives, commander's risk tolerance, threat representation, and exercise complexity.

Products/Benefits:

- TTPs that provide USPACOM with standardized, comprehensive tools to support commanders at all levels with the ability to function in a cyber-degraded environment
- CONOPS that identify the different types of cyber-degraded environments that can be created and ways that trainers, planners, and subject matter experts can use them in training and exercise activities

HOMELAND UNDERWATER PORT ASSESSMENT PLAN (HUPAP) (CLOSED OCTOBER 2016)

Sponsor/Start Date: NORAD-USNORTHCOM/June 2015

Purpose: To develop and evaluate TTPs for underwater port assessments to include specific details about the roles and responsibilities of the stakeholders; identify available local, state, and federal force multipliers; provide data collection, compilation, and sharing guidance; and identify gaps in response considerations.

Products/Benefits:

- Comprehensive TTPs that prescribe the standards and activities needed to gather interagency underwater port information for homeland ports and internal waterways in preparation for a catastrophic event
- Reference for port authorities when developing an Interagency Underwater Port Assessment to provide DOD and interagency partners with the preparation, response, and recovery information necessary to reopen ports and waterways

INTELLIGENCE PRIORITIZATION FOR CYBERSPACE OPERATIONS (IPCO)

Sponsor/Start Date: U.S. Special Operations Command/February 2017

Purpose: To develop and assess TTPs for integration of cyber intelligence planning into mission execution. Joint Task Forces lack early allocation of intelligence resources to enable cyberspace operations. Significant lead time is needed for proper cyberspace operations planning.

Products/Benefits:

- TTPs to improve the timing and production of required basic level intelligence preparation of the operational environment products used by the joint force
- TTPs that facilitate the integration of cyberspace operations into the planning and execution of joint operations

JOINT ACCELERATED COLLABORATIVE TARGETING (J-ACT) (CLOSED MAY 2017)

Sponsor/Start Date: USSTRATCOM/February 2016

Purpose: To develop and assess CONOPS that use an accelerated intelligence processing, exploitation, and dissemination (PED) process that streamlines intelligence analysis and coordination with targeteers to increase the speed of potential target object classification and verification.

Products/Benefits:

PED CONOPS that accelerate imagery analysis, target object classification, and target verification.

JOINT AIR OPERATIONS CENTER (AOC) COMMAND AND CONTROL (C2) IN A CONTESTED DEGRADED ENVIRONMENT (JADC) (CLOSED JULY 2017)

Sponsor/Start Date: USPACOM/February 2016

Purpose: To develop TTPs to support joint AOC distributed planning, execution, and assessment in a contested, degraded, and operationally limited environment by distributing authorities and effectively employing airpower and supporting forces.

Products/Benefits:

- TTPs that enable delegation of operational airpower C2 from the joint AOC to subordinate commanders
- Distributed authorities that empower leaders at lower echelons of command to continue execution of the commander's intent with limited loss of operational or tactical initiative

JOINT BALLISTIC MISSILE DEFENSE (BMD) OVERHEAD PERSISTENT INFRARED (OPIR) OPERATIONAL SPACE TRACK (J-BOOST)

Sponsor/Start Date: U.S. Air Forces in Europe-Air Forces Africa/October 2016

Purpose: To develop TTPs to optimize existing space-based technology for active and passive defense. The goal is to better use current and near-term BMD capabilities resulting in earlier missile threat situational awareness, precision cueing, engagement opportunities, and improved architecture resilience.

Products/Benefits:

- TTPs that document configuration of communications networks to allow select C2 nodes, Aegis BMD, and Aegis Ashore systems to receive, interpret, and use Enterprise Sensors Processing Node tracks in testing, training, exercises, and operations
- Earlier and more refined development of defensive response options
- Increased warfighter confidence in the ability to use space-based data in support of the BMD mission set

JOINT BIOLOGICAL/RADIOLOGICAL MORTUARY AFFAIRS CONTAMINATED REMAINS MITIGATION SITE (JBRM) (CLOSED DECEMBER 2016)

Sponsor/Start Date: U.S. Army Quartermaster School/June 2015

Purpose: To develop TTPs for the safe processing, identification, and preparation for the evacuation of biologically or radiologically contaminated human remains. To improve the Mortuary Affairs Contaminated Remains Mitigation Site effectiveness and safety for operational mission requirements,

including mitigating hazards, preserving forensic evidence, establishing chain of custody, supporting positive identification processes, and preparing remains for evacuation.

Products/Benefits:

- Updates to U.S. Army and joint doctrine with the primary focus on Army Techniques Publication 4-46.2, “Mortuary Affairs Contaminated Remains Mitigation Site Operations,” as related to biological or radiological contaminated human remains
- Verified data and tools for the mortuary affairs community to use in both USNORTHCOM homeland defense missions and DOD’s worldwide contingency operations
- A Mortuary Affairs Contaminated Remains Mitigation Site Tactical Handbook

JOINT CONTAMINATED HUMAN REMAINS (CHR) RECOVERY IN A CHEMICAL ENVIRONMENT (JCRCE)

Sponsor/Start Date: U.S. Army Quartermaster School/ June 2017

Purpose: To identify gaps in current TTPs and provide TTPs improvement recommendations for the safe recovery of chemically contaminated human remains (C-CHR). To validate procedure effectiveness and safety for mitigating hazards, preserving forensic evidence, and accomplishing preliminary decedent identification tasks.

Products/Benefits:

- Joint TTPs for safe recovery of C-CHR
- Evaluations on the utility and suitability of new human remains pouch capabilities

JOINT CYBER INTEGRATION OF DOD INFORMATION NETWORK OPERATIONS (J-CID) (CLOSED NOVEMBER 2016)

Sponsor/Start Date: USPACOM/June 2015

Purpose: To develop CONOPS and TTPs for the CCMD’s Joint Cyber Center (JCC) that fully integrates the organization, authorities, and capabilities of DOD Information Network commands in support of joint theater cyber operations.

Products/Benefits:

CONOPS and TTPs that provide best practices for the support of regional operations, situational understanding, and decision-making for cyberspace operations between regional DOD Information Network commands and JCCs.

JOINT INTELLIGENCE PRODUCTION IN A CLOUD ENVIRONMENT (JIPCE)

Sponsor/Start Date: Air Combat Command/October 2016

Purpose: To develop TTPs to utilize Intelligence Community Information Technology Enterprise (IC ITE)-enabled tools and tradecraft to supplement Joint Intelligence Preparation of the Environment (JIPOE) processes.

Products/Benefits:

TTPs and quick reference guides that enable Joint Intelligence Operations Center intelligence analysts to optimize IC ITE cloud-based intelligence information and tools, particularly BRIMSTONE and its follow-on, in support of JIPOE Step Four, Determine Adversary Course of Action.

JOINT INTERAGENCY - CYBER ENHANCED DETECTION AND MONITORING (JI-CEDM) (CLOSED JUNE 2017)

Sponsor/Start Date: Joint Interagency Task Force (JIATF) South/February 2016

Purpose: To develop TTPs that coordinate and utilize interagency cyber domain support from DOD, law enforcement, and intelligence community partners during detection and monitoring (D&M) missions. These TTPs promote the timely and efficient leveraging of internal and external cyber resources to support JIATF South requirements, eliminate redundancy, and maximize the impact of cyber domain information in conducting D&M operations.

Products/Benefits:

TTPs that identify specific procedures for the JIATF South staff to coordinate and utilize interagency cyber domain support from DOD, law enforcement, and intelligence community partners during illicit trafficking D&M missions.

JOINT INTERCONTINENTAL BALLISTIC MISSILE (ICBM) WEAPON CONVOY (JIWC) (CLOSED SEPTEMBER 2017)

Sponsor/Start Date: Air Force Global Strike Command/ June 2016

Purpose: To develop TTPs to maintain persistent situational awareness and C2 in support of nuclear convoy movement operations. The objective of the TTPs is to optimize use of the Wave Relay Tactical Assault Kit cloud relay system during ICBM convoy operations.

Products/Benefits:

- TTPs that define how to integrate airborne firepower into nuclear weapon movements
- Increased situational awareness for improved safety and security of nuclear weapon convoy movement operations
- Enhanced C2 between the convoy commander and missile wings for improved accident and/or incident response during nuclear weapon movements

JOINT MISSILE SEEKER DEFEAT (JMSD)

Sponsor/Start Date: USPACOM/June 2016

Purpose: To develop and assess a missile seeker defeat concept of employment and associated TTPs.

Products/Benefits:

Specific TTPs that enable Major Weapon Systems/aircraft to employ missile seeker defeat concept against an existing adversary threat.

**JOINT MULTI-INTELLIGENCE CORRELATION AND DISSEMINATION (JMCD)
(CLOSED SEPTEMBER 2017)**

Sponsor/Start Date: Twenty-Fifth Air Force/June 2016

Purpose: To develop and assess TTPs to manage, fuse, and amplify intelligence information from a variety of national sources in order to provide the most accurate and complete air picture possible.

Products/Benefits:

- TTPs that enable management, fusion, and amplification of intelligence information from a variety of organic and non-organic sources
- Streamlined correlation and adjudication of tracks in support of the Common Operational Picture (COP)
- Framework for Data Link Operators to rapidly analyze multiple or conflicting tracks from nationally derived sources where necessary to streamline dissemination to the warfighter

**JOINT PERSONNEL RECOVERY INFORMATION DIGITAL EXCHANGE (J-PRIDE)
(CLOSED OCTOBER 2016)**

Sponsor/Start Date: Joint Staff J7/June 2015

Purpose: To develop TTPs to pass critical information across existing hybrid networks between isolated personnel, recovery forces, and C2 nodes during joint personnel recovery (PR) missions.

Products/Benefits:

- Enhanced mission effectiveness and increased survivability due to mission critical information being formalized across operational and tactical PR nodes
- Standardized 15-line PR message format for use across joint forces

JOINT RADIO FREQUENCY-ENABLED CYBERSPACE OPERATIONS (JRF-ECO)

Sponsor/Start Date: USSTRATCOM and USPACOM/June 2017

Purpose: To develop a baseline CONOPS for the C2 of RF-enabled cyber operations.

Products/Benefits:

CONOPS for C2 of RF-enabled cyber operations.

JOINT SENSOR TO TACTICALLY RESPONSIVE INTEGRATED KINETIC EFFECTS (J-STRIKE)

Sponsor/Start Date: U.S. Army Pacific/February 2017

Purpose: To provide more timely and effective access for theater assets to sense and destroy high value enemy targets through the

seamless integration of intelligence, surveillance, reconnaissance, and targeting information between all domains and Services.

Products/Benefits:

TTPs to fully exploit cross-domain fires capabilities with currently available systems.

**JOINT TALON THRESHER THEATER INTEGRATION (JT3I)
(CLOSED FEBRUARY 2017)**

Sponsor/Start Date: USPACOM/October 2015

Purpose: To develop CONOPS that clearly define the optimal operating parameters of the Talon THRESHER system and standardize user operating procedures to enhance air domain awareness within theater C2 nodes, joint AOCs, and NTI cells.

Products/Benefits:

- Standardized operating parameters and procedures to utilize and disseminate Talon THRESHER data
- Enhanced analysis of air track patterns of behavior
- Timely output of correlated air picture in multiple security formats

**NIPR ENHANCED COMMON OPERATIONAL PICTURE (NE-COP)
(CLOSED SEPTEMBER 2017)**

Sponsor/Start Date: USPACOM/June 2016

Purpose: To enhance the commander's situational awareness by leveraging open-source and partner nation unclassified information contributions, allowing interoperability for the warfighter from the operational level to decision makers at the tactical and strategic levels during Phase Zero operations.

Products/Benefits:

A handbook that will allow global commanders to have consolidated documentation of unclassified COP tools and set the conditions for a redundant, accurate, and advanced COP across multiple classification levels within the DOD and key partner nations.

**OPTIMIZATION OF SOCIAL MEDIA AND OPEN SOURCE INFORMATION SUPPORT (OSMOSIS)
(CLOSED MAY 2017)**

Sponsor/Start Date: U.S. Central Command/February 2016

Purpose: To develop TTPs to enable commanders to rapidly and effectively gain near real-time situational awareness using globally published digital media (new and traditional media sources). This TTPs will enhance decision-making, planning, and execution of the Civil Affairs, Psychological Operations/Military Information and Support Operations, and Public Affairs missions.

Products/Benefits:

- TTPs and training guide to improve information gathering from traditional and non-traditional sources
- Access to data needed to create value-focused, fused information for analysis to enhance the situational awareness of commanders at the tactical, operational, and strategic levels

SPECIAL PROJECTS

**JOINT NATIONAL CAPITAL REGION ENHANCED
SURVEILLANCE TACTICS, TECHNIQUES, AND PROCEDURES
(J-NEST)
(CLOSED FEBRUARY 2017)**

Sponsor/Start Date: NORAD/October 2014

Purpose: To develop TTPs to incorporate emerging sensor capabilities into the NORAD and USNORTHCOM family of systems to support the air defense mission.

Products/Benefits:

- TTPs that enable tactical, operational, and strategic C2 nodes to more fully employ expanded detection, improved identification, and enhanced engagement of cruise missile threats to the national capital region
- TTPs on utilization of advanced equipment capabilities to execute an effective joint engagement sequence for cruise missile defense

FY17 JT&E PROGRAM