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 (TTP) and rigorously measuring the extent to which their use improves operational outcomes. JT&E projects may develop products that have implications beyond TTP. Sponsoring organizations transition these products to the appropriate Service or Combatant Command (CCMD) and submit them 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), which are both focused on the needs of operational forces. 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 useable, interim test products. The JT&E Program charters two new Joint Tests annually. The JT&E Program managed eight Joint Tests in FY18. Projects annotated with an asterisk (*) were completed in FY18:

- Digitally Aided Close Air Support (DACAS)*
- Joint Counterair Integration (JCI)
- Joint Cyber Insider Threat (J-CIT)
- Joint Hypersonic Strike, Planning, Execution, Command and Control (J-HyperSPEC2)
- Joint Interoperability for Medical Transport Missions (JI-MTM)
- Joint Laser Systems Effectiveness (JLaSE)
- Joint Sense and Warn (J-SAW)
- Multi (enhanced) Domain Unified Situational Awareness (MeDUSA)

QRTs are intended to solve urgent issues in less than a year. The JT&E program managed 16 QRTs in FY18:

- Aviation Radio Frequency Survivability Validation (AVRFSV)*
- Critical Strategic Power Projection Infrastructure (CRSPPI)
- Intelligence Prioritization for Cyberspace Operations (IPCO)*
- Joint Accuracy of Nationally Derived Information (JANDI)
- Joint Ballistic Missile Defense (BMD) Overhead Persistent Infrared (OPIR) Operational Space Track (J-BOOST)*
- Joint Contaminated Human Remains (CHR) Recovery in a Chemical Environment (JCRCE)
- Joint Chemical Biological Radiological Nuclear (CBRN) Tactical Information Management (J-CTIM)
- Joint Enterprise Data Interoperability (JEDI)
- Joint Enhanced Emissions Control (EMCON) Procedures (JEEP)
- Joint Intelligence Production in a Cloud Environment (JIPCE)*
- Joint Intelligence, Surveillance, and Reconnaissance (ISR) to Tactical Data Link (TDL) Modernization (JITM)
- Joint Missile Seeker Defeat (JMSD)*
- Joint Optimization of Electromagnetic Spectrum (EMS) Superiority (JOES)
- Joint Procedures for Integrated Tactical Warning and Attack Assessment (ITWAA) of Hypersonic Glide Vehicles (HGV) (J-PITH)
- Joint Radio Frequency-Enabled Cyberspace Operations (JRF-ECO)
- Joint Sensor to Tactically Responsive Integrated Kinetic Effects (J-STRIKE)*

JOINT TESTS

DIGITALLY AIDED CLOSE AIR SUPPORT (DACAS) (CLOSED MAY 2018)

Sponsor/Start Date: Joint Staff J6/February 2016

Purpose: To develop, test, and evaluate standardized TTP 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:

- TTP 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 COUNTERAIR INTEGRATION (JCI)

Sponsor/Start Date: U.S. Indo-Pacific Command (USINDOPACOM)/February 2017

Purpose: To develop, test, and evaluate TTP 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. The JCI solution integrates joint DCA by pairing targets with the correct weapon system by focusing on sharing ID/Platform/Type in order to enhance joint DCA efficiency and lethality.

Products/Benefits:
- TTP that enables operators to integrate joint DCA forces in a CDO environment to improve tactical-level operations, enhance coordination between assets, and minimize exploitation of gaps in area coverage
- JCI consolidated procedures that support sharing of threat information across various land, sea, and air tactical-level platforms to optimize use of weapons and reduce possibility of fratricide
- Integration of Army, Air Force, Navy, and Marine Corps DCA assets to counter a peer threat in a CDO environment
- Validated findings that will lead to recommendations in standardizing C2 procedures and tactical message information

JOINT CYBER INSIDER THREAT (J-CIT)

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

Purpose: To develop, test, and deliver the Cyber Insider Threat Detection and Reporting (CIDaR) TTP to enable detecting and reporting of cyber insider threats prior to having a negative impact on national security interests.

Products/Benefits:
- CIDaR TTP that includes planning and network management considerations for configuring and utilizing existing organizational organic hardware and software to monitor user activities by analyzing data and log files
- CIDaR TTP that provides procedures for Cybersecurity Service Provider operators to analyze and report insider threat events
- CIDaR TTP that supports regulatory guidance, strategies, and directives that mandate an insider threat program

JOINT HYPERSONIC STRIKE, PLANNING, EXECUTION, COMMAND AND CONTROL (J-HYPERSPEC2)

Sponsor/Start Date: U.S. Strategic Command (USSTRATCOM)/August 2018

Purpose: To develop, test, and evaluate C2 concept of operations (CONOPS) that enable warfighters to effectively plan and promptly employ hypersonic weapons to fully capitalize on this emerging capability.

Products/Benefits:
- CONOPS supporting planning and execution decisions for hypersonic weapons whether land, air, or sea launched; planning addresses command relationships, resource allocation, organization structure, authorities, and whether centralized or distributed; execution decisions address considerations for targeting to achieve strategic- and operational-level effects to include identifying risk
- Enables effective employment of hypersonic weapons to provide a highly responsive, long-range, non-nuclear strike option for distant, defended, and/or time-critical threats when forces are denied access, not available, or not preferred

JOINT INTEROPERABILITY FOR MEDICAL TRANSPORT MISSIONS (JI-MTM)

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

Purpose: To develop, test, and evaluate standardized TTP 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 high energy laser (HEL) weapon systems with weaponeering and

collateral damage estimation (CDE) methodology within the Joint Targeting Cycle.

Products/Benefits:
- Joint Targeting Cycle procedures for Laser Weaponeering and CDE
- Integration of HEL systems into the Joint Targeting Cycle focusing on capabilities analysis, weaponeering, and damage estimation
- Development of HEL weapon Joint Munitions Effectiveness Manual (JMEM) data for use by weaponeers with joint targeting systems as part of the JMEM Weaponeering 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 HEL system development and acquisition as well as with integrating HEL into the operational environment
- TTP for the integration of HEL weapon systems into joint and Service operations in order to engage enemy targets according to the commander's intent

JOINT SENSE AND WARN (J-SAW)

Sponsor/Start Date: U.S. Air Forces in Europe (USAFE) – Air Forces Africa (AFAFRICA) and USINDOPACOM/August 2018

Purpose: To test and evaluate a concept of employment (CONEMP) and TTP to integrate a portable surveillance system into existing U.S. and coalition integrated air defense system architecture for use in air warning and defense engagement command and control.

Products/Benefits:
- CONEMP and TTP that provide CCMDs with specific technical and operational processes and procedures to integrate tracks into a Theater Air Defense System, manage track identification and evaluation, and provide the ability to warn U.S. defended assets for passive and active defense response
- Improved air defense systems that enable earlier sensing and warning to U.S. and allied defensive capabilities for threat response and consequence mitigation
- Integration of passive sensors against air threats that enable defense of the homeland from attack and defend allies from aggression
- Validated findings that will lead to recommendations to improve selected elements of doctrine, organization, training, materiel, leadership and education, personnel, and facilities

MULTI (ENHANCED) DOMAIN UNIFIED SITUATIONAL AWARENESS (MEDUSA)

Sponsor/Start Date: USINDOPACOM and U.S. Northern Command (USNORTHCOM)/February 2018

Purpose: To test and evaluate non-materiel solutions supporting the development of standardized displayable common operational picture (COP) information layers within the unclassified domain, the transfer of the layers via a cross domain solution to the classified domain, and the utilization of products from the SIPRNET COP.

Products/Benefits:
- Validated technical processes and procedures for generating standardized unclassified domain products and displaying them on a SIPRNET COP in order to enhance commanders' situational awareness and understanding within their areas of responsibility
- Senior Leader Guide with best practices and lessons learned for gaining situational awareness utilizing unclassified COP information on a consolidated SIPRNET COP
- Decreased resource requirement and human input error through machine-to-machine data exchange leading to better synchronization or de-confliction of information
- Increased situational awareness and understanding through the use of an enhanced comprehensive view of data on a single COP

QUICK REACTION TESTS

AVIATION RADIO FREQUENCY SURVIVABILITY VALIDATION (AVRFSV)
(CLOSED APRIL 2018)

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:
- TTP for rotary-wing aircraft to maintain freedom of maneuver against and defeat RF threats
- Validated helicopter RF counter procedure for use in Army Techniques Procedure Manual 3-04.2
- Collected high fidelity data to be utilized in modeling and simulation to support future TTP development
- Utilization of test results to drive Aircraft Survivability Equipment recommendations to shape future DOD requirements

CRITICAL STRATEGIC POWER PROJECTION INFRASTRUCTURE (CRSPPI)

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

Purpose: To develop Interagency Infrastructure Assessment (IIA) TTP to enable the assessment of selected 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 TTP, with an accompanying implementation plan, to prescribe all aspects of manning, agreements, funding support, and coordination to initiate an IIA program of record
- TTP providing users with the necessary tools to assess force flow vulnerabilities within a contested environment due to state or non-state actors
- Reports stemming from use of TTP will be stored on a digital database used by U.S. Transportation Command, the Department of Transportation, the Transportation Security Administration, and other government agencies allowing access to all reports in a timely manner

INTELLIGENCE PRIORITIZATION FOR CYBERSPACE OPERATIONS (IPCO)
(CLOSED AUGUST 2018)

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

Purpose: To develop and assess TTP 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:
- Transitioned a smart book to USSOCOM and USINDOPACOM; contains TTP steps that provide a deliberate method to increase understanding of cyberspace information requirements for input into an intelligence estimate and coordination with planning elements
- These TTP improve the timing and production of required basic level intelligence preparation of the operational environment products used by the joint force and facilitates the integration of cyberspace operations into the planning and execution of joint operations

JOINT ACCURACY OF NATIONALLY DERIVED INFORMATION (JANDI)

Sponsor/Start Date: USINDOPACOM/October 2017

Purpose: To determine the root causes of errors; refine and validate TTP to mitigate positional errors when publishing nationally derived information generated onto the tactical datalinks; and determine the source of positional errors.

Products/Benefits: TTP required to update the Operational Tasking Data Link documents for USINDOPACOM, Pacific Air Forces, and Pacific Fleet based on project test results.

JOINT BALLISTIC MISSILE DEFENSE (BMD) OVERHEAD PERSISTENT INFRARED (OPIR) OPERATIONAL SPACE TRACK (J-BOOST)
(CLOSED MARCH 2018)

Sponsor/Start Date: USAFE-AFAFRICA/October 2016

Purpose: To develop TTP 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:
- TTP 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 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 TTP and provide TTP improvement recommendations for the safe recovery of chemically contaminated human remains. To validate procedure effectiveness and safety for mitigating hazards, preserving forensic evidence, and accomplishing preliminary decedent identification tasks.

Products/Benefits:
- Joint TTP for safe recovery of chemically contaminated human remains
- Evaluations on the utility and suitability of new human remains pouch capabilities

JOINT CHEMICAL BIOLOGICAL RADIOLOGICAL NUCLEAR (CBRN) TACTICAL INFORMATION MANAGEMENT (J-CTIM)

Sponsor/Start Date: USINDOPACOM/June 2018

Purpose: To identify gaps in current CBRN early warning and reporting processes and develop improved TTP for timely and effective protective posture decision support to friendly forces that enables continuity of operations under situations involving CBRN threats.

Products/Benefits: TTP will allow the joint community to conduct early detection of CBRN agents within the tactical environment and provide warfighters across all branches with the ability to quickly react to a CBRN attack in order to reduce the effects of such attacks.

JOINT ENTERPRISE DATA INTEROPERABILITY (JEDI)

Sponsor/Start Date: Department of the Army G-4/March 2018

Purpose: To develop a validated CONOPS to implement logistics data exchange standards among partners required for the Joint Logistics Enterprise to support Globally Integrated Operations as identified in the Chairman, Joint Chiefs of Staff Joint Concept for Logistics, and the Capstone Concept for Joint Operations: Joint Force 2020.

Products/Benefits: TTP will allow for logistical interoperability with allied partners from the United Kingdom, and the TTP will provide a greater level of sustainment to forces embedded within the ranks of a U.S. division.

JOINT ENHANCED EMISSIONS CONTROL (EMCON) PROCEDURES (JEEP)

Sponsor/Start Date: Naval Information Warfighting Development Center/June 2018

Purpose: To develop TTP to mitigate friendly systems vulnerabilities through determining which friendly emitters are detectable by adversary signals intelligence capabilities. Also, the project will measure the parameters critical for assessing U.S. systems as surrogates for adversary systems to inform TTP development.

Products/Benefits: TTP document with a matrix for tactical-level guidance.

JOINT INTELLIGENCE PRODUCTION IN A CLOUD ENVIRONMENT (JIPCE) (CLOSED JANUARY 2018)

Sponsor/Start Date: Air Combat Command/October 2016

Purpose: To develop TTP 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: TTP 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 INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (ISR) TO TACTICAL DATA LINK (TDL) MODERNIZATION (JITM)

Sponsor/Start Date: Air Combat Command A2/October 2017

Purpose: To develop a procedure for the integration of national ISR data into Link 16 architecture and to update Military Standard (MIL-STD) 6016.

Products/Benefits: TTP to employ updated MIL-STD 6016 for the communication of information directly from national ISR participants to TDL users; TTP improves the timeliness, accuracy, and completeness of national intelligence threat information being disseminated to tactical and operational warfighters.

JOINT MISSILE SEEKER DEFEAT (JMSD)
(CLOSED NOVEMBER 2017)

Sponsor/Start Date: USINDOPACOM/June 2016

Purpose: To develop and assess a missile seeker defeat CONEMP and associated TTP.

Products/Benefits: Specific TTP to enable fighter aircraft weapon systems to employ missile seeker defeat concepts against an existing adversary threat.

JOINT OPTIMIZATION OF ELECTROMAGNETIC SPECTRUM (EMS) SUPERIORITY (JOES)

Sponsor/Start Date: USINDOPACOM/June 2018

Purpose: To develop TTP for the integration of joint electromagnetic spectrum operations (JEMSO) functions into a standing JEMSO Cell for CCMD's effective use of the EMS for assured friendly C2 and to degrade adversary capabilities.

Products/Benefits: TTP to support JEMSO Cell functions to develop an EMS superiority strategy, mitigate adversary's abilities to contest friendly operations, coordinate authorizations for friendly forces, and tailor EMS signatures to limit friendly vulnerabilities.

JOINT PROCEDURES FOR INTEGRATED TACTICAL WARNING AND ATTACK ASSESSMENT (ITWAA) OF HYPERSONIC GLIDE VEHICLES (HGV) (J-PITH)

Sponsor/Start Date: Commander, NORAD-USNORTHCOM/ March 2018

Purpose: To develop and validate TTP to optimize the ITWAA C2 process to detect, identify, and characterize the hypersonic glide vehicle threat via the current space-based and terrestrial architecture.

Products/Benefits: TTP to optimize the ITWAA C2 processes; provide a means to identify and characterize HGVs employed by intercontinental ballistic missiles, intermediate-range ballistic missiles, and medium-range ballistic missiles; and define the roles and responsibilities among all stakeholders involved in the warning and assessment process.

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

Sponsor/Start Date: USSTRATCOM and USINDOPACOM/ June 2017

Purpose: To develop necessary processes for the C2 of RF-enabled cyberspace operations (RECO) by theater supporting Combat Mission Teams (CMT); these processes will serve as a baseline CONOPS.

Products/Benefits: Validated joint baseline CONOPS and TTP that will enable CMTs to remotely manage air-delivered, bi-directional RECO in order to degrade and disrupt an adversary's use of their cyberspace capabilities.

JOINT SENSOR TO TACTICALLY RESPONSIVE INTEGRATED KINETIC EFFECTS (J-STRIKE)
(CLOSED JULY 2018)

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 ISR and targeting information between all domains and Services.

Products/Benefits: TTP that allows USINDOPACOM to fully exploit cross-domain fires capabilities with currently available systems to use U.S. Air Force, U.S. Navy, and national technical means sensors to engage sea-based targets with land-based batteries.