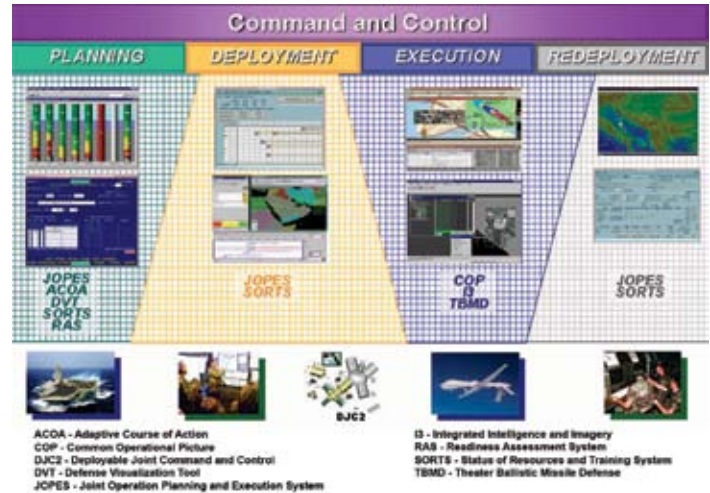# Global Command and Control System – Joint (GCCS-J)

Executive Summary
- The Joint Interoperability Test Command (JITC) tested a significant update to the Global Command and Control System - Joint (GCCS-J) Global Release version v4.1 at multiple sites during January 2007.
- JITC conducted operational testing of the GCCS-J Joint Operation Planning and Execution System (JOPES) v4.1 at multiple sites during September 2007.
- The operational testing was conducted in accordance with a DOT&E-approved Test and Evaluation Master Plan and operational test plans.
- The GCCS-J Global Release v4.1 is operationally effective, suitable, and survivable.

System
- GCCS-J is a command, control, communications, computers, and intelligence system consisting of hardware, software (commercial off-the-shelf and government off-the-shelf), procedures, standards, and interfaces that provides an integrated near real-time picture of the battlespace necessary to conduct joint and multi-national operations.
- GCCS-J consists of three main components:
    - GCCS-J v4.1 Global Release (Force Protection, Situational Awareness, Intelligence applications)
    - JOPES v4.1 (Force Employment, Projection, Planning and Deployment/ Redeployment applications)
    - Status of Resources and Training System v4.0 (Force Readiness and Sustainment applications)
- GCCS-J consists of a client/server architecture using open systems standards, government-developed military planning software, and an increasing use of World Wide Web technology.

Mission
- Joint Commanders utilize the GCCS-J to accomplish command and control.
- Commanders use GCCS-J:
    - As an integrated, scalable command and control, communications, computers, and intelligence system
    - To link the National Command Authority to the Joint Task Force, component commanders, and Service-unique systems at lower levels of command
    - To process, correlate, and display geographic track information on friendly, hostile, and neutral land, sea, and air forces, integrated with available intelligence and environmental information to provide the warfighter a fused battlespace picture

Activity
- JITC conducted operational testing of the GCCS-J Global Release v4.1 from January 25-31, 2007, at U.S. Central Command, U.S. Pacific Command, and the Joint Staff Support Center in the Pentagon. Testing focused primarily on the situational awareness and intelligence mission areas.
- JITC conducted operational testing of the GCCS-J JOPES v4.1 from September 17-21, 2007, at multiple sites, including U.S. Transportation Command, U.S. Joint Forces Command, U.S. Southern Command, U.S. Northern Command, U.S. Pacific Command, U.S. European Command, U.S. Special Operations Command, and at the Joint Staff Support Center, Pentagon. Several combatant command components and Service major commands also participated in GCCS-J JOPES v4.1 operational testing.

- The Defense Intelligence Agency and JITC conducted security testing of both GCCS-J Global Release and JOPES.
- JITC conducted interoperability testing of GCCS-J Global Release v4.1 and JOPES v4.1.

Assessment
- Operational testing of GCCS-J Global Release v4.1 and its critical interfaces was adequate. GCCS-J Global Release v4.1 system performance met or surpassed that of the legacy system, GCCS-J Global Release v4.0.2. The GCCS-J Program Management Office corrected software problems detected during operational testing and performed regression testing to validate fixes.

- The Navy Integrated Tactical Environmental System (NITES) did not perform correctly during operational testing. The Navy PMO for NITES developed corrective actions and JITC conducted regression testing and validated fixes.
- JITC successfully conducted interoperability testing of critical interfaces. Interoperability testing with the Marine Corps' Command and Control Personal Computer (C2PC), a non-critical interface widely used for displaying the common operational picture on a personal computer, was not successful. The DISA GCCS-J and the Marine Corps C2PC PMOs did not develop fixes for problems found during the operational testing. Joint users must continue using the legacy version of C2PC until the two program offices coordinate corrective actions.
- Operational testing of GCCS-J JOPES v4.1 was adequate with some exceptions for non-critical interfaces. JITC used a deliberate planning scenario to generate, source, and validate JOPES movement requirements. All key performance parameter requirements were successfully demonstrated. The JOPES system also demonstrated the capability to handle loading well beyond the specified requirement using an artificial loading tool.
  - Core JOPES v4.1 functionality performed very well. As part of the JOPES v4.1 release, the DISA GCCS-J PMO moved the Advance Course of Action and the Deployment Visualization Tool Web-based applications from a local server environment to the JOPES strategic server enclaves. Moving these applications increased the time to load and execute these applications for some users to an operationally unacceptable level.
  - JITC adequately performed interoperability testing on 12 critical interfaces and one non-critical interface with JOPES v4.1; all performed satisfactorily except the Joint Forces

Requirements Generator II (JFRG II). The JFRG interface had one critical failure that the Marine Corps JFRG II Program Management Office subsequently fixed and successfully regression tested.
- The Defense Intelligence Agency and JITC conducted information assurance evaluations of all GCCS-J releases tested in FY07. GCCS-J has no outstanding critical security deficiencies.
- The GCCS-J Global Release v4.1 system is operationally effective, suitable, and survivable.
- DOT&E has not made an operational effectiveness, suitability and survivability determination of JOPES 4.1. The operational test revealed the need for software changes. The evaluation of changes is ongoing.

Recommendations
- Status of Previous Recommendations. The GCCS-J Program Management Office is making progress on DOT&E's two FY06 recommendations.
- FY07 Recommendations.
  1. The DISA GCCS-J PMO and JITC should improve JOPES operational testing by locating the four test servers in the same geographical locations as the strategic server enclaves.
  2. After fielding GCCS-J Global Release v4.1 and JOPES v4.1, JITC should examine the performance of the fielded system and its key interfacing systems and then use that information to improve operational test adequacy.
  3. The Joint Staff J3 should review legacy combatant commander systems/applications designated as having non-critical interfaces with GCCS-J to ensure that all critical interfaces are addressed in future GCCS-J operational testing.