

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

Executive Summary

- Defense Intelligence Systems Agency (DISA) development focused on implementing high priority capability enhancements, software corrections, and infrastructure improvements to Global Command and Control System – Joint (GCCS-J) Global, Joint Operation Planning and Execution System (JOPES), and Status of Resources and Training System (SORTS).

GCCS-J Global

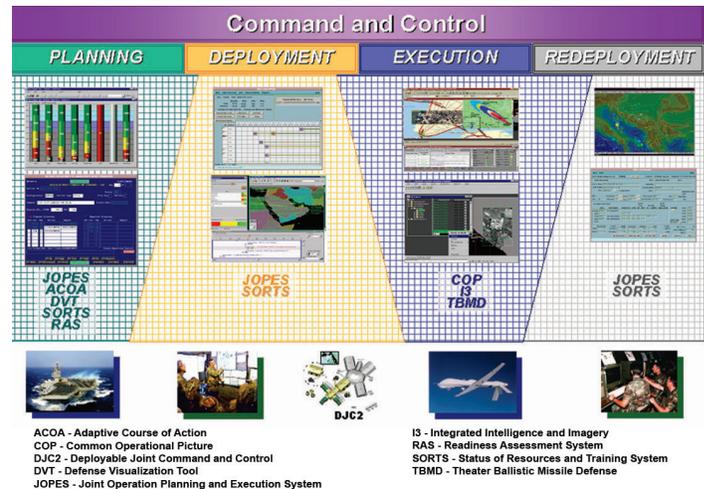
- DISA developed GCCS-J Global v4.2.0.8 to provide operational enhancements, remediate security vulnerabilities, and correct Integrated Imagery and Intelligence application deficiencies. The Air Force 46th Test Wing and JITC completed combined developmental/operational test (DT/OT) and the program manager has resolved all major deficiencies identified during testing. Analysis of combined DT/OT data is still ongoing.

GCCS-J JOPES

- DISA developed GCCS-J JOPES v4.2.1 to support development and modification of operational plans involving Intermediate Locations (ILOC), implementation of the Initial Transportation Tracking Account Number (TTAN) Framework, decoupling of the Deliberate Crisis Action Planning and Execution Segments (DCAPES), and infrastructure upgrades. While many of these enhancements functioned correctly, planners were not able to perform timely flow constraint analysis and mass edits of Unit Line Number records. Based upon OT&E results, DOT&E assessed GCCS-J JOPES v4.2.1 as not operationally effective, but operationally suitable.
- DISA held a GCCS-J JOPES v4.2.1 Acquisition Review Board on October 14, 2011, which resulted in a decision to forgo JOPES v4.2.1 fielding. Instead, DISA decided to develop a JOPES v4.2.0.2 to implement infrastructure upgrades and TTAN Framework. DISA also decided to develop a plan and request approval to begin incremental JOPES modernization, which will include further development and refinement of ILOC capabilities.

GCCS-J SORTS

- DISA developed GCCS-J SORTS v4.2.0.1 Updates 1 and 2 to implement software corrections to the SORTS communications processor, SORTS master database, Readiness Assessment System – Joint Tool and Readiness Assessment System – Input Tool. DOT&E determined that SORTS v4.2.0.1 Update 1 was operationally effective with limitations and operationally suitable. DISA completed the SORTS v4.2.0.1 Update 2 developmental test without any major deficiencies identified. Analysis of SORTS v4.2.0.1 Update 2 developmental test data is still ongoing.



- DISA transitioned SORTS program management responsibilities to the Defense Readiness Review System Implementation Office in late October 2011.

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 provide 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 v4.2 Global Release (Force Protection, Situational Awareness, Intelligence applications)
 - JOPES v4.2 (Force Employment, Projection, Planning, and Deployment/Redeployment applications)
 - SORTS v4.2 (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.

- Conduct contingency and crisis action planning.
- 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 user a fused battlespace picture.

Major Contractors

- Government Integrator – DISA
- Software Developers:
 - Northrop Grumman – Arlington, Virginia
 - SAIC – Arlington, Virginia
 - Pragmatics – Arlington, Virginia

Activity

- JITC conducted all testing in accordance with the DOT&E-approved Test and Evaluation Master Plan and test plans.

GCCS-J Global

- DISA developed GCCS-J Global v4.2.0.8 to provide operational enhancements, remediate security vulnerabilities, and correct Integrated Imagery and Intelligence application deficiencies.
- The Air Force 46th Test Wing and JITC conducted the GCCS-J Global v4.2.0.8 combined DT/OT at Eglin AFB, Florida, from August 22-26, 2011. Eleven users representing the 46th Test Wing, Headquarters Air Force Combat Command, and Central Command, participated in the OT&E. The Air Force 46th Test Wing and JITC collected additional OT&E data at DISA Headquarters, Fort Meade, Maryland, from September 19-23, 2011.

GCCS-J JOPES

- DISA developed GCCS-J JOPES v4.2.1 to support development and modification of operational plans involving ILOC, implementation of the initial Transportation Tracking Account Number, decoupling of the DCAPEs, and infrastructure upgrades.
- JITC conducted OT&E of GCCS-J JOPES v4.2.1 in two phases. JITC conducted the first phase from March 28 to April 1, 2011. JITC resumed testing from May 2-6, 2011, to accommodate the Army Forces Command, which was unable to participate in the original test due to Base Realignment and Closure requirements. Regression testing and problem report resolution continued through July 22, 2011. Twenty-four users representing Pacific Command, Transportation Command, Central Command, Southern Command, Forces Command, Northern Command, Joint Forces Command, Headquarters Army, Headquarters Air Force, and Marine Forces Command participated in the OT&E.
- DISA held a GCCS-J JOPES v4.2.1 Acquisition Review Board on October 14, 2011, which resulted in a decision to forgo JOPES v4.2.1 fielding. Instead, DISA decided to develop an interim JOPES Release v4.2.0.2, within 4 to 6 months, to implement infrastructure upgrades, TTAN Framework, and other fixes from previous testing. DISA also decided to develop a plan and request approval to begin incremental JOPES modernization, which will include further development and refinement of ILOC capabilities.

GCCS-J SORTS

- DISA developed GCCS-J SORTS v4.2.0.1 Update 1 to implement software corrections to the SORTS communications processor, SORTS master database, and other readiness applications. DISA developed GCCS-J SORTS v4.2.0.1 Update 2 to implement software corrections primarily affecting the Army, Air Force, and Coast Guard.
- DISA conducted GCCS-J SORTS v4.2.0.1 Update 1 developmental test at DISA Headquarters, Falls Church, Virginia, from April 14-15, 2011. Developmental testers and operational users participated in the developmental test. JITC and developmental testers collected additional data on April 29, 2011.
- DISA conducted GCCS-J SORTS v4.2.0.1 Update 2 developmental test at DISA Headquarters, Fort Meade, Maryland, from September 6-14, 2011. Operational users from the Coast Guard and Air Force participated in the developmental test. DISA conducted GCCS-J SORTS v4.2.0.1 Update 2 regression testing from September 26 to October 21, 2011.
- DISA transitioned SORTS program management responsibilities to the Defense Readiness Reporting System Implementation Office in late October 2011.

Assessment

- JITC conducted GCCS-J combined DT/OT, or dedicated operational testing, and identified major deficiencies during the operational test phase resulting in extended operational testing or the need for additional regression testing. DISA should have identified many of these major deficiencies earlier in the testing process.

GCCS-J Global

- The Air Force 46th Test Wing and JITC completed combined DT/OT of Global v4.2.0.8 and the program manager has resolved all major deficiencies identified during testing. Analysis of combined DT/OT data is still ongoing.

GCCS-J JOPES

- While users were able to input ILOC information into the JOPES v4.2.1 system, planners were not able to perform timely flow constraint analysis and mass edits of Unit Line Number records to change ILOC data correctly. The ILOC implementation also introduced the potential for users to

inadvertently delete ILOC data from the database while attempting to only edit portions of the information using the Mass Edit feature. The ILOC flow constraint analysis requirements need further development by the Joint Staff J3 and the combatant commands, using mission threads or similar visualization methods, to clearly define the mission need and concept of operations. Other functional changes to JOPES v4.2.1 supporting the TTAN Framework, decoupling of DCAPEs, and infrastructure upgrades functioned correctly. Based upon OT&E results, DOT&E assessed GCCS-J JOPES v4.2.1 as not operationally effective, but operationally suitable.

GCCS-J SORTS

- JITC observed SORTS v4.2.0.1 Update 1 test activities to provide an independent assessment of the results. DOT&E determined that DISA implemented all software fixes effectively. However, insufficient Defense Readiness Reporting System – Navy interface data were collected to resolve effectiveness for this interface. SORTS v4.2.0.1 Update 1 was operationally effective with limitations and operationally suitable.
- JITC observed SORTS v4.2.0.1 Update 2 test activities to provide an independent assessment of the results. DISA completed developmental testing without any major deficiencies identified. Analysis of developmental test data is still ongoing.

Recommendations

- Status of Previous Recommendations. DISA addressed all previous recommendations.
- FY11 Recommendations.
 1. DISA should develop and field an interim JOPES release that addresses the most urgent user requirements that were successfully demonstrated during JOPES v4.2.1 testing.
 2. The Joint Staff J3 should coordinate and formalize ILOC requirements to ensure further development meets user needs.

DOD PROGRAMS