

Global Command and Control System - Army (GCCS-A)

SUMMARY

- The Global Command and Control System-Army (GCCS-A) is a critical external interface for force readiness and projection in the Global Command and Control System-Joint (GCCS-J 4.0) Operational Test and Evaluation (OT&E).
- During FY04, GCCS-A system testing took place as a component of GCCS-J interoperability testing.
- During the Interoperability test with GCCS-J 4.0(a), Joint Operational Planning and Execution System, both GCCS-J and GCCS-A were unsuccessful.
- GCCS-A 4.0 software is currently undergoing developmental testing at Ft. Hood, Texas.
- Operational testing for GCCS-A 4.0(b) is projected for 2QFY05 and 4QFY05 during follow-on operational testing with GCCS-J.



The GCCS-A is a critical external interface for force readiness and projection.

SYSTEM DESCRIPTION AND MISSION

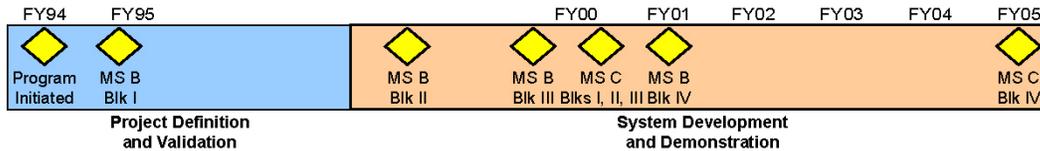
GCCS-A is the Army implementation of the U.S. Global Command and Control System. It provides Army Commanders at all echelons of command with a single, integrated, scalable C4I system that processes, correlates, and displays geographic track information on friendly, hostile, and neutral land, sea, and air forces. It is integrated with available intelligence and environmental information to support command decision-making. GCCS-A is implemented at fixed command centers and as the command and control portion of mobile command centers. GCCS-A fields a baseline system consisting of core functions and a set of mission specific subsystems. Additional subsystems, as well as core upgrades and new functions, will be fielded in future releases. This will allow GCCS-A to evolve as warfighter requirements change, or as new requirements are added.

GCCS-A expands existing C4I baseline capabilities through the evolutionary, incremental implementation of hardware and software releases. Incremental implementation provides commanders with state-of-the-art C4I capabilities that keep pace with evolving operational requirements and technological advances. Central to the success of incremental implementation is adherence to a government standards-based architecture that uses open commercial system hardware, and software that maximize use of non-developmental items. Although incremental implementation is encouraged, GCCS-A must comply with the Defense Information Infrastructure Common Operating Environment to ensure interoperability with Joint and other Army C4I systems.

While GCCS-A brings its own C4I capabilities, a key goal of GCCS-A is to serve as the host for other independently-built applications using the common operating environment. GCCS-A can be used as a building block for C4I systems that range in size from a single server and client workstation, through a large multi-server, multi-client architecture. A wide variety of applications supporting various warfare areas can exist in that architecture. The strength of this approach is the ability to combine disparate warfare areas into a single view of the tactical situation and the ability to share that view with other tactical users both inside and outside of the command.

ARMY PROGRAMS

TEST AND EVALUATION ACTIVITY



- GCCS-A participated as an interfacing system during the GCCS-J 4.0(a) Operational Tests in January 2004 and June 2004.
- GCCS-A developmental testing has been ongoing at the Central Technical Support Facility at Ft. Hood, Texas, since May 2004.

GCCS-J, Version 4.0 (GCCS-J v4.0), is designed to improve data fusion and display, more intuitive graphic interfaces, system automation, security, web enabling, and overall system reliability and maintainability. OT&E evaluated GCCS-J capabilities in operationally realistic environments at Combatant Command headquarters, supporting component headquarters, and other sites worldwide. The test covered the mission areas that are in the requirements identification document. The Requirement Identification Document mission area focused on force planning, deployment, redeployment, employment, and sustainment.

TEST AND EVALUATION ASSESSMENT

During both operational tests with GCCS-J, the GCCS-A server used for interfacing with the Joint Operation Planning and Execution System (JOPES) was not sized properly to process large volumes of traffic. When subjected to the threshold level of stress loading, JOPES transactions severely backlogged the GCCS-A server. System operators had to log off the network, shut the system down, clear the queues, and restart the operations. Any backlog of this nature adversely influences mission accomplishment. The GCCS-J JOPES architecture also experienced performance and synchronization issues, therefore requiring the entire JOPES architecture to be re-evaluated.

GCCS-A plans an update to the Test and Evaluation Master Plan (TEMP) in 2QFY05 to address support testing of GCCS-A Version 4.0. As part of the updated TEMP, GCCS-A must submit a proposed Interoperability Key Performance Parameter for approval.

The Interoperability Key Performance Parameter, and associated Information Exchange Requirements, is required before the Joint Test Interoperability Command can certify GCCS-A as interoperable. The GCCS-A program, the Army Test and Evaluation Command, and Joint Test Interoperability Command are making progress in testing interoperability. Due to redesign of the network and resizing system hardware, operational testing for GCCS-A 4.0 has slipped six months. GCCS-A 4.0(b) will participate in exercises Roving Sands and Red Flag at Fort Bliss, Texas, during 2QFY05. GCCS-A is also scheduled for a Limited User Test in 4QFY05.