

Distributed Common Ground System – Army (DCGS-A)

Executive Summary

- From May through June 2012, the Army Test and Evaluation Command conducted an IOT&E of the Distributed Common Ground System – Army (DCGS-A) Software Baseline (DSB) 1.0 system in an operationally representative field configuration. DOT&E evaluated the DSB 1.0 to be not effective, not suitable, and not survivable.
- The Army reconfigured the DSB 1.0 without the Top Secret (TS)/Sensitive Compartmented Information (SCI) enclave to mitigate the effectiveness and suitability shortfalls identified in DOT&E’s IOT&E report, and demonstrated fixes to the critical Information Assurance shortfalls. The reconfigured package is called Release 1.
- DOT&E released a memorandum in November 2012 that stated Release 1 will provide users with capabilities at least as good as those provided by the current systems. OSD approved the full deployment for Increment 1 in December 2012.
- DOT&E and the Army are preparing for developmental and operational testing of Release 2, which includes SCI capability at the brigade level.
- DOT&E published a report on October 21, 2013, in response to the House Armed Services Committee request to report on DCGS-A’s database interoperability.

System

- DCGS-A allows users to collect, process, fuse, and display intelligence information.
- DCGS-A is the information- and intelligence-processing centerpiece of the Army Intelligence, Surveillance, and Reconnaissance framework and is the enabler for all intelligence functions at the Division, Brigade Combat Team, Maneuver Battalion, and Company levels.
- The DSB 1.0 configuration established the architecture that will provided an organic net-centric Intelligence, Surveillance, and Reconnaissance capability by combining 16 stove-piped legacy applications into one comprehensive network, and providing an integrated TS/SCI capability at the brigade level.
- After the IOT&E report, the Army reconfigured the system as Release 1 with only the Secret enclave components. OSD approved the full deployment of this configuration.
- The Army is developing Release 2 to fulfill the capabilities that did not work effectively with DSB 1.0. Release 2 is intended to provide enhanced capabilities to include:
 - TS/SCI capability
 - Workflows that are based on how an intelligence section would employ the system

‘Low Side’ Components



DCGS-A Enabled Common Ground Station (DE-CGS)

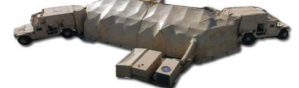


V3.1.6 ISR Fusion Server (IFS)



DCGS-A Enabled Digital Topographic Support System – Light (DE DTSS-L)

‘High Side’ Components



Mobile Basic Enclave

- Methods for transferring entity data within the system and between systems that are more efficient than DSB 1.0
- New entity database structure
- Enhanced fusion software for correlation of entity data
- New geospatial intelligence configuration
- New materiel solution for transfer of information across security domains
- The Army is developing Release 3 to include a cloud computing capability to support worldwide intelligence analysis and database synchronization including in disconnected or low-bandwidth environments.

Mission

Army intelligence analysts use DCGS-A Release 1 to support six Mission Command Capabilities:

- Display and share relevant information
- Provide a standard and shareable geospatial foundation
- Collaborate in voice, text, data, and video modes
- Execute running estimates of enemy force progress
- Interoperate across the joint, interagency, intergovernmental, and multinational forces

Major Contractors

- Lead System Integrator – Intelligence and Information Warfare Directorate, U.S. Army Communications-Electronics Research, Development, and Engineering Center – Aberdeen, Maryland
- Northrop Grumman Electronic Systems – Linthicum, Maryland

ARMY PROGRAMS

Activity

- From May through June 2012, the Army Test and Evaluation Command conducted an IOT&E of the DCGS-A DSB 1.0 system in an operationally representative field configuration. In October 2012, DOT&E provided an IOT&E report on the results of testing to the Milestone Decision Authority and Congress.
- The Army reconfigured the DSB 1.0 system without the TS/SCI enclave to mitigate the effectiveness and suitability shortfalls in the DOT&E IOT&E report and demonstrated fixes to the critical Information Assurance shortfalls. The reconfigured system is called Release 1. DOT&E provided an evaluation of Release 1 in a November 2012 memorandum.
- In December 2012, the Defense Acquisition Board approved full deployment of Release 1 and discussed the need for a comparative test of link analysis tools.
- In March 2013, the DCGS-A program manager ceased development of the initial cloud capability in favor of a new architectural approach developed by the intelligence community.
- DOT&E is working with the Army to comprehensively test and evaluate DCGS-A's capabilities compared to other commercially available tools. DOT&E continues to work with the Army to define and execute adequate comparative test; however, agreement on the content of that testing has not yet been reached.
- DOT&E published a report on October 21, 2013, in response to the House Armed Services Committee request to report on DCGS-A's database interoperability.

Assessment

- DOT&E evaluated the DSB 1.0 to be not effective and not suitable in the October 2012 report of the IOT&E.
- DOT&E evaluated the Release 1 configuration, without the TS/SCI enclave, to be at least as good as those provided by the current systems.
- As of November 2013, Release 2 software is still in development and preparing for developmental testing.
- There are insufficient test data to assess fully the worldwide synchronization of Army intelligence databases including operations in degraded communication environments. Full assessment of worldwide synchronization, including the cloud edge node, will be needed when the Army develops a new cloud functionality as part of Release 3.

Recommendations

- Status of Previous Recommendations. The Army is complying with the recommendation to conduct operational testing of all releases of DCGS-A Increment 1.
- FY13 Recommendations. The Army:
 1. Needs to continue to plan for and conduct Release 2 operational testing.
 2. Must plan for, resource, and execute an adequate comparative test of DCGS-A and other commercially available products.