

## Distributed Common Ground System – Army (DCGS-A)

### Executive Summary

- To resolve problems discovered during the IOT&E in 2012, the Army reconfigured the system as Release 1 with only the Secret enclave components. OSD approved the full deployment of this configuration. The Army developed Release 2 to address the capabilities that did not work effectively in Release 1, to include re-adding the Top Secret/Sensitive Compartmented Information (TS/SCI) enclave.
- The U.S. Army Electronic Proving Ground tested Distributed Common Ground System – Army (DCGS-A) Release 2 in two developmental test (DT) phases:
  - DT1: A lab test conducted at Aberdeen Proving Ground, Maryland, from January 30 through February 28, 2014. The Program Office conducted regression testing to resolve Priority 1 and 2 software problems, which were discovered during DT1.
  - DT2: Conducted September 13 – 27, 2014, at Fort Huachuca, Arizona, using a representative operational network.
- DOT&E intends to issue an operational assessment of DCGS-A based on the DT2 results.
- DOT&E will make a full evaluation of the operational effectiveness, operational suitability, and survivability of DCGS-A Release 2 after the Army completes the DCGS-A operational test planned for May 2015 during the Network Integration Evaluation 15.2 event.

### System

- DCGS-A provides an organic net-centric Intelligence, Surveillance, and Reconnaissance (ISR) capability at the brigade level by combining 16 stove-piped legacy applications into one comprehensive network, including TS/SCI.
- To resolve problems discovered during the IOT&E in 2012, the Army reconfigured the system as Release 1 with only the Secret-level components. OSD approved the full deployment of this configuration.
- The Army developed Release 2 to address the capabilities that did not work effectively with Release 1. Release 2 is intended to provide enhanced capabilities to include:
  - TS/SCI capability

### Activity

- From January 30 through February 28, 2014, the Army conducted DT1 for DCGS-A Increment 1, Release 2 at Aberdeen Proving Ground, Maryland.



- Workflows that are based on how an intelligence section would employ the system
- Methods for transferring entity data within the system and between systems more efficiently
- 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
- On December 4, 2014, USD(AT&L) approved modification to the acquisition strategy to allow Increment 1 to end with Release 2. Requirements that were allocated to Release 3, to include a cloud computing capability to support worldwide intelligence analysis and database synchronization, including disconnected or low-bandwidth environments, will now be allocated to Increment 2.

### Mission

Army intelligence analysts use DCGS-A to perform: receipt and processing of select ISR sensor data, intelligence synchronization, ISR planning, reconnaissance and surveillance integration, fusion of sensor information, and direction and distribution of relevant threat, non-aligned, friendly and environmental (weather and geospatial) information.

### Major Contractors

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

- The Army planned DCGS-A DT2 in response to the December 14, 2012, Full Deployment Decision Acquisition Decision Memorandum that required “a plan

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for a developmental test with a representative operational test network structure using the scenarios and data collection/reduction tools expected to be used for the operational test.”

- The Army conducted DT2 in Fort Huachuca, Arizona, from September 13 – 27, 2014. The Program Office resolved all Priority 1 and 2 software problems before starting DT2.
- The Electronic Proving Ground will publish a DT2 test report, and the Army Evaluation Center (AEC) will publish a DT2 assessment report. Further analysis of the DT2 data may lead to the requirement for additional corrective actions.

## Assessment

- After DT1, the Program Office continued regression testing for software fixes delivered through multiple fix cycles.
- There are cybersecurity issues that need to be addressed. Cybersecurity testing was conducted during the last week of DT2 to provide an update to the cybersecurity status.
- There are 121 Priority 3 and 293 Priority 4 software problems. All of these will need a workaround written and trained. The program is working on these actions but if not completed in a timely fashion, the performance in operational test could be affected.

- As of December 4, 2014, the AEC has yet not used DT2 data to assess key DCGS-A measures of performance in order to help evaluate system performance. As of this report, it is not clear the quality and quantity of data from AEC will be sufficient to evaluate key measures allocated to DT2 in the approved Test and Evaluation Master Plan. Any unanswered measures must be addressed during the Limited User Test planned for 2015.
- DOT&E will publish an operational assessment report based on the DT2 results, and will make a full evaluation of the operational effectiveness, operational suitability, and survivability of DCGS-A Release 2 after the Army completes the DCGS-A Limited User Test planned for May 2015 during the Network Integration Evaluation 15.2 event.

## Recommendations

- Status of Previous Recommendations. The Army addressed all previous recommendations.
- FY14 Recommendation.
  1. The Army should conduct the Limited User Test incorporating the lessons learned from the DT2.