

Value of Intelligence Expanded by DCGS-A Enterprise
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Throughout the history of modern warfare, the ability to collect information has been a necessity the Army has been quite adept at performing. The difficulty; however, was pulling together multiple sources of information for a commander to utilize for their complete understanding of the battlefield, let alone providing an enterprise where collected information was of value to any Soldier regardless of the echelon they operate within. The Distributed Common Ground System-Army (DCGS-A) has proven itself worthy of this task under the duress of battle in both Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF).

DCGS-A is designed as a dedicated avenue for ingesting, fusing, analyzing, and disseminating information throughout the Army and associated defense agencies. The road to success for DCGS-A hasn't been easy, as the concept was developed during a time when battles were of a conventional nature against a regular Army as opposed to the irregular warfare fight the U.S. has been faced with over the past decade.

DCGS-A replaces nine families of systems (FOS) that had previously operated as stand-alone systems providing signals intelligence, image intelligence, terrain, weather, and moving target indicator information. Enabling these stand-alone systems to work together in a unified DCGS-A environment has come with some unique challenges which the program has worked through over the years, with the final solution of the DCGS-A Mobile Basic in sight.

“The plan originally entailed letting the Programs of Record (POR) run their course as DCGS-A was being developed; however, 9/11 put us back into a much larger

threat environment where the current force systems became the systems that were deployed supporting the fight in Operation Enduring Freedom and Operation Iraqi Freedom,” said Samuel Fusaro, deputy project manager for DCGS-A. “It became a financial challenge, not only developing the new capability, but also sustaining and enhancing the current systems, some of which had reached obsolescence of parts.”

Additionally, with more than eight years of combat, DCGS-A has had to account for various quick reaction capabilities (QRCs) and lessons learned out of the fight that needed to be integrated as well. “It is a fast moving train with the DCGS-A Version 3 (V3) and Mobile Basic teams both having to catch all of these new initiatives, along with these new air platforms that are pumping down extreme volumes of Full Motion Video (FMV) and other large data files that have to be processed, stored and retrieved, so just the size of DCGS in the fight is tremendous,” adds Fusaro.

As DCGS-A evolves, the program is tackling the issues that come from integrating nine separate FoSs, to include dealing with various vendors (each with their own logistics tail), as well as meeting the challenges disassociated programs bring in that they operate independently and have limited ability to integrate with one another. “The Army’s solution is ‘lets have one’, bring all those (PORs) under a single contract in order to integrate them all together so you have all the resident experts in their individual domain operating in a single environment,” said Lt. Col. Scott Hamann, Product Manager for DCGS-A Mobile Systems.

V3 and the future DCGS-A Mobile Basic are drastically changing the basic premise of how intelligence is collected and shared. Traditionally, intelligence has been looked at as an echelon asset (The level a person operates within was directly correlated

with what information was available to them). DCGS-A is allowing units to move away from the echelon approach into an enterprise solution.

The value and reliance on the intelligence DCGS-A is currently providing extends beyond just Army and sister service users. “When we initially stood up the brain (a data warehouse), we were getting 10,000 to 20,000 hits a month mostly from Army users,” stated Fusaro. “The number of requests has steadily increased to where now we are getting close to a quarter of a million hits a month with people querying the Central Command brain for data and the majority of those requests are from the other services and three-letter agencies.”

Currently 90 percent of the force is fielded with DCGS-A V3 systems. “DCGS-A goes to every Army unit from MP (Military Police) companies to engineers, it is not just an MI (Military Intelligence) system,” said Fusaro. “There are over 1,000 points of presence in one DCGS set when you take into account all of the units that we go to.”

Access to DCGS-A products will become more available in the near future for not only U.S. users but also for coalition partners in Afghanistan. During this fiscal year, a DCGS-A capability will be migrating into the U.S. Combined Enterprise Regional Information Exchange (CENTRIX) and the Afghan Mission Network, establishing a two-way ability to push data to our coalition partners and actually pull data from coalition systems.

“What we are doing is taking 50 percent of our Secure Internet Protocol Router (SIPR) systems and we are allocating those to CENTRIX International Security Assistance Force (ISAF) (CX-I) which we are doing by actually repurposing the systems with new drives to accommodate the CX-I. The only difference from an MI perspective

is the banner and the ability to connect to a network with a different piece of software,” said Stephen Morton, deputy product manager for DCGS-A Intelligence Fusion. “All of the analytics and the training a Soldier received with V3 would be the same whether you are on CX-I, SIPR or Joint Worldwide Intelligence Communications System (JWICS).”

Flexibility within the system is a goal DCGS-A has strived to maintain throughout the life of the program. The basic premise has been to make as many tools available to an analyst as possible, while allowing them to configure their workspace into a manner that is most conducive to them. In doing so, a concerted effort has been made to ensure the look, feel, and operation of the system is consistent with the advanced technology many of the young operators that utilize DCGS-A have grown up with. Both DCGS-A V3 and DCGS-A Mobile Basic incorporate user input in designing with user juries that allow analysts to perform hands-on experiments dedicated to the look and feel of the system, as well as ease of use.

“Bottom line is we try to mirror the commercial environment that our Soldiers have grown up with,” stated Fusaro. “As technology enhancements come forward like the iPhone’s ‘we have an App for that’, DCGS-A will have many applications readily available to the user.”

The Army, Navy, Air Force, and Marine Corps all have their own version of DCGS with nuances that meet each of their mission requirements with oversight coming from the Under Secretary of Defense Intelligence (USDI). USDI ensures synchronization amongst the services.

Within the next few years, DCGS-A users will receive a significant upgrade with the introduction of DCGS-A Mobile Basic. “The major difference with DCGS-A Mobile Basic is that it combines all capabilities of V3 with capabilities of the existing PORs into an integrated system that allows for ingestion of information at different security levels and fusion of the information much more quickly. The information is available for processing and generating the common operating picture (COP) and also allows users to perform collaboration,” said Kamman Lok, PM DCGS-A chief systems engineer. “The cycle is cut down significantly with the information at an operator's fingertips all in one system.”

In addition to bringing all of the PORs into one system, DCGS-A Mobile Basic will have the ability to add other capabilities as required, like machine foreign language translation, which was not previously provided by the PORs.

The combination of technological enhancements, along with the out-of-the-box thinking that Soldier users bring to the intelligence enterprise, will continue to ensure that the variations of how DCGS-A can be utilized in the future are virtually limitless.