

Distributed Common Ground System - Army (DCGS-A)

V3

(version 1.0)

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ICoE - Mil Intelligence School

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Table Of Contents

- 1.0 System Description
- 2.0 Target Audience
- 3.0 Assumptions
- 4.0 Training Constraints
- 5.0 System Training Concept
 - 5.1 New Equipment Training Concept (NET)
 - 5.2 Displaced Equipment Training (DET)
 - 5.3 Doctrine and Tactics Training (DTT)
 - 5.4 Training Test Support Package (TTSP)
- 6.0 Institutional Training Domain
 - 6.1 Institutional Training Concept and Strategy
- 7.0 Operational Training Domain
 - 7.1 Operational Training Concept and Strategy
- 8.0 Self-Development Training Domain
 - 8.1 Self-Development Training Concept and Strategy
- A Milestone Annex
- B References
- C Coordination Annex

This System Training Plan (STRAP) is preliminary.
Front end analysis (mission, task, job) is ongoing. ICoE - Mil Intelligence School will amend and update this STRAP as details solidify.

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1.0 System Description

The Distributed Common Ground System-Army (DCGS-A) program was created in response to the Department of Defense (DoD) Distributed Common Ground / Surface System (DCGS) Mission Area Initial Capabilities Document (MA ICD), which captured the initial requirements for an Intelligence, Surveillance, and Reconnaissance (ISR) Family of Systems (FoS) that will contribute to Joint and combined Warfighter needs. (These requirements were further defined across the DCGS FoS through the DCGS-Enterprise ICD released in February 2009.) The Information Systems - Capability Development Document (IS-CDD), that this STRAP supports, covers development, production and fielding requirements for all DCGS-A Increments.

DCGS-A is the Army's flagship system for Intelligence, Surveillance and Reconnaissance (ISR) tasking of sensors, processing of data, exploitation of data, and dissemination of data (TPED), information and intelligence about the threat, weather, and terrain. DCGS-A will operate across all echelons (from the Company-level Intelligence Support Team (CoIST) to the Army Service Component Command (ASCC)), all security and network domains (Unclassified, Secret, Top Secret (Joint Worldwide Intelligence Communications System (JWICS) and National Security Agency Network (NSANet)), to include coalition networks), and within and across all computing environments. DCGS-A will operate in and across the mission environments in which Soldiers operate, differentiated by varying network bandwidth requirements, latency and high bit-error rate, a Disconnected, Intermittent and Limited (DIL) bandwidth environment, System size/Weight/Power-Cooling (SWaP-C) limitations, environmental factors, and location performance. DCGS-A provides the Operating Force conducting decisive action operations and through all phases of training and deployment with a fully compatible ISR ground processing system capable of supporting each Computing Environment (CE).

The purpose of the DoD DCGS program is to establish an operational/tactical ISR enterprise that supports Joint Task Force Commanders and below. The DCGS Enterprise is a subset of an overall Defense Intelligence Information Enterprise (DI2E), which includes component commands, theater ISR organizations and capabilities, the Defense intelligence combat support agencies and ties into other National intelligence organizations. DCGS-A is an essential capability and integral part of realizing the Army's Geospatial Enterprise to deliver a Standard and Sharable Geospatial Foundation (SSGF).

DCGS-A, as an information system, will be developed across multiple increments as defined by Requirements Definition Package (RDP) and Capabilities Drop (CD). The focus of Increment 1 is the development of a single software baseline for information and ISR processing, exploitation, and

dissemination. These requirements were Joint Requirements Oversight Council (JROC) approved in the DCGS-A Increment 1 Capabilities Production Document (CPD) which will serve as the Increment 1 RDP. Increment 1 begins a transition to Cloud-based advanced analytics to provide users with significantly enhanced ISR and SSGF processing and exploitation capabilities, to reduce forward footprints, and maximize the user base at all echelons. Pre-Programmed Product Improvements (P3I) will continue to be developed for insertions as well as new technologies at the maturity level to meet those objective requirements defined in the Increment 1 CPD.

Increment 2 expands on the capabilities provided by Increment 1 by adding capabilities at the Army and below echelons while developing new, enhanced, and leap-ahead ISR and SSGF enterprise capabilities to align with the Intelligence Community (IC) and Army's Contemporary Operating Environment (COE) and transformation objectives. Increment 2 will include capabilities from and eventually displace the Space Operations System (SOS) and the Guardrail Ground Baseline (GGB). Increment 2 and beyond will build upon emerging technologies such as an artificial intelligence system capability, additional exploitation tools and capabilities on the explosive growth in unstructured data (social networks and smart devices), giant leaps in "Cloud" capability, interoperability with the Army's Joint Tactical Ground Station (JTAGS), the Theater Net-centric Geolocation (TNG) system, and On The Move (OTM) capabilities. These requirements will be defined in future RDP and CD as necessary to ensure DCGS-A provides the data, information, intelligence, situation awareness, and interoperability needed to support the Warfighter.

DCGS-A will be interoperable with select Unified Action Partners and will be able to coordinate and collaborate with them to exchange relevant intelligence, geospatial, and operational information. DCGS-A will enable collaboration for planning and sharing of threat, weather and geospatial information with Joint and Multi-national partners to support coordination and synchronization of activities in order to enhance the cooperative creation, communication, rehearsal and execution of mission orders. The DCGS-A-provided SSGF will create an updateable, common map foundation and accurate display to support critical mission command information, intelligence, and other Warfighting Function (WfF) data tailored to a unit's mission, task, and purpose, such as maneuver, Situational Awareness (SA), Geospatial Intelligence (GEOINT), precision targeting, etc.

The core functions of the DCGS-A are: tasking of sensors, processing of data, exploitation of data, and dissemination of intelligence information about the threat, weather, and terrain/operational environment at all echelons through the receipt and processing of select ISR sensor data; control of

select Army sensor systems; intelligence synchronization, ISR planning, reconnaissance and surveillance integration; fusion of sensor information; direction and distribution of relevant threat, non-aligned, friendly and environmental weather; and the ability to host, manage, and provision the SSGF to all COE (CEs).

DCGS-A will incorporate the Portable Multi-function Workstation (P-MFWS), the Fixed Multi-function Workstation (F-MFWS), the GEOINT Workstation (GWS), the Intelligence Fusion Server (IFS), the Cross Domain Solution Suite (CDSS), the Tactical Ground Station (TGS), the Operational Ground Station (OGS), and the Intelligence Processing Center Versions 2 and 3 (IPC-2 and IPC-3) in its full deployment.

The P-MFWS interfaces with the IFS and provides maneuver visualization and dissemination of intelligence products at all echelons, company to Echelons Above Corps (EAC). The P-MFWS provides a user interface for the operator to collaborate, synchronize and integrate organic and non-organic collection elements with operations, and to evaluate technical data and information on behalf of a commander. The P-MFWS provides a robust set of nontraditional intelligence analysis tools for use in stability and support operation environments.

The IFS provides a robust multi-intelligence database management and replication capability and threat situational awareness. IFS provides a suite of core Processing, Exploitation and Dissemination (PED) applications for intelligence analysis and storage. The IFS has core PED applications on a server to provide users the analytic and storage capability to support intelligence operations in a full spectrum environment. Access to the IFS is gained through the P-MFWS by the use of programs and through network connections. The IFS permits access to the Brain or any DCGS-A portal.

The TGS, AN/TSQ-179 v2, an extensive upgrade to the former Common Ground Station (CGS), provides hardware and software to receive and exploit Geospatial Intelligence data to include Full Motion Video (FMV), Imagery (Electro Optical, Multi Spectral, Synthetic Aperture Radar and Infrared) and Moving Target Indicator (MTI) as well as supporting ELINT data. Real time and Near Real Time Receipt of this data is accomplished with a suite of antenna systems to include the Surveillance Control Data Link (SCDL), Global Broadcast Service (GBS), Joint Tactical Terminal (JTT), One System Remote Video Terminal (OSRVT), Multi Directional Antenna System (MDAS) and Tactical Common Data Link (TCDL). Exploitation is performed using robust laptops networked to the TGS within an Analysis Control Element (ACE) or Tactical Operations Center (TOC). The TGS can receive MTI and FMV data OTM. The TGS is mounted on an up-armored Multi-Wheeled Vehicle (HMMWV) and is powered by 18KW generator.

The OGS, AN/TYQ-224, provides an accelerated capability for Tasking, Collection, Processing, Exploitation and Dissemination (TCPED) of Tactical, Theater and National sensors in support of Army Commanders. The OGS leverages the Army and DoD information collection infrastructure, in addition to an organic capability, to move data to where it needs to be and when it needs to be there; to provide operators an interface to airborne intelligence assets which process and store received data. The shelter includes data link equipment required to interface with airborne assets and the computer hardware required to process data. Independent networks are provided for National Security Agency Network (NSANet), Joint Worldwide Intelligence Communications System (JWICS), and Secure Internet Protocol Router Network (SIPRNet) operations. It also provides network access for Combined Enterprise Regional Information Exchange (CENTRIX) and Non-Secure Internet Protocol Router Network (NIPRNet).

The GWS is a DCGS-A workstation specifically designed for Geospatial and Imagery Intelligence Processing, Exploitation and Dissemination. It provides geospatial analysts and imagery analysts within tactical and operational army units the ability to process, view, exploit, transmit and store geospatial and imagery information via Army area communications from brigade to EAC. It serves as the core system to manage army tactical geospatial data for use by army commanders and their staff and to enable Army Warfighting Functions (WFF). The GWS receives and processes initial geospatial data, raw imagery, FMV, reports and information received from multiple geospatial, imagery and FMV intelligence sensors via the network or Army tactical/operational intelligence ground processing centers. It provides access to multiple image libraries via network connection. The GWS provides geospatial data, analysis products, maps and updates in support of geospatial intelligence terrain analysis and visualization.

The CDSS enables DCGS-A Increment 1 Release 2 system to interoperate across multiple security enclaves with the capability of auto-sanitization among Military Intelligence (MI) products passing through the security boundaries, leveraging the richness of data provided throughout the infrastructure. The CDSS product must be controlled from either the Top Secret / Sensitive Compartmented Information (TS/SCI) US Only or the Secret US Only security level and have been granted an individual Top Secret and Below (TSABI) or Secret and Below (SABI) 'ticket' in each unit to which they are fielded. Each Cross Domain Solution (CDS) granted a TSABI ticket in a CDSS may connect to as many as three Top Secret level and to as many as four Secret level networks, all simultaneously. Each CDS granted a SABI ticket in a CDSS may connect to as many as three Secret level and as many as four Unclassified level networks (if the latter were to exist and to be required), all simultaneously. The software

products to provide CDS capabilities may be selected from the entire portfolio of products, which: (a) have gained a place on the Unified Cross Domain Management Office (UCDMO) maintained "Baseline List of Validated Cross Domain Products"; (b) can be installed on an x86 platform; and (c) are not rule-based. The software products on the UCDMO Baseline List, which can be updated as often as weekly, will be monitored and reviewed by the PM DCGS-A IA Team for appropriateness to DCGS-A requirements. At least annually, the "best of breed" UCDMO Baseline List products will be recommended for retention or to supersede the then current software products installed on the CDSS. The initial set of CDS products being installed on the CDSS hardware consist of: 1) For a Top Secret US Only Controlled CDSS a) Trusted Thin Client version 1.3.4 (TTC v1.3.4), an Access CDS capability approved on the UCDMO Baseline List of Validated CDS for TSABI use (Load Directives to begin being issued in late FY-13/or early FY-14; may not be available at LUT) b) Tactical Communications Support Processor version 9.0 (TCSP v9.0), a Transfer CDS capability supporting United States Message Text Format (USMTF), United States Signals Intelligence Directive (USSID), and DD-173 message formats which is approved on the UCDMO Baseline List for TSABI use (Load Directives for units already fielded a DE ACE, IPC-1, and/or OGS already issued and each new CDSS being fielded is being fielded with TCSP pre-installed) c) Trusted Gateway System version 3.4 patch 7, a Transfer CDS capability supporting more than 1,500 file types which is approved on the UCDMO Baseline List for TSABI use (Each new CDSS being fielded is being fielded with TGS pre-installed.) 2) For a Secret US Only Controlled CDSS, which will not begin to field until FY-15 due to delays in procurement and in the processing of individual unit SABI tickets a) TTC v1.3.4 as above, as validated for SABI use on the UCDMO Baseline List b) TCSP v9.0, as above, for the ten units to be fielded a stand-alone (not with a collocated Top Secret Only Controlled CDSS) DCGS-A Secret US Only Controlled CDSS, following its sponsorship onto the UCDMO Baseline List for SABI use and issuance of its SABI tickets c) TGS v3.4ptf8 or later, as above, a validated for SABBI use on the UCDMO Baseline List d) For Secret controlled CDSS fielded in conjunction with a TS controlled CDSS, another (to be selected) CDS product on the UCDMO Baseline in lieu of the TCSP, which can support streaming video transfers to support TGS interoperation with similar non-US systems (such as the United Kingdom's ASTOR system). 3) The Trusted Gateway System requires the Purefile application on both high side and low side IFS. Purefile provides the services for scanning supported attachment files like word documents, pdf documents, etc.

The IPC-2 is a fully integrated intelligence system capable of performing information processing, networking, and communications. Cloud technology is integrated into the IPC-2 sub-system and will be initially deployed in DCGS-A

Increment 1 Release 3 as a complementary (rather than an integrated) data storage capability provided by the IFS. IPC-2 will provide a V3 capability as well as a Cloud capability in a single vehicle configuration. The two systems will service the same DCGS-A users with slightly different approaches in data access. The V3 capability provides a DCGS-A user the ability to query intelligence data from a DCGS-A Brain, which is a centralized data repository in a thick client environment. The Brain ingests data from national, theater and other external databases, structures and stores them. When a query is performed in V3, the DCGS-A analyst is required to analyze results that are presented and determine which reports/data are relevant to mission objectives. Depending on the number of reports that are presented, this task can become cumbersome and time consuming. The Cloud capability affords the DCGS-A analyst the ability to query the same set of intelligence data in the Brain through a thin client capability. The Brain data is ingested into the Cloud where complex data analysis techniques are performed to build relationships between reports/ data. These relationships are established through entity associations (i.e. People, Places, Events, Organizations, etc.). These attributes are aligned within the Cloud and allow a user to perform precision searches that align with the context of what is being requested. This approach reduces the time taken to sift through large numbers of reports typically presented through a V3 capability.

Designated as a Major Automated Information System (MAIS) by the Under Secretary of Defense on 29 March 2010, DCGS-A will provide the flexibility and oversight to plan for and incorporate evolving technology. The JROC approved the DCGS-A Operational Requirements Document (ORD) on 9 July 2004. In accordance with the DoD Instruction 5000.2, the ORD was converted to a Capability Development Document (CDD) and JROC approved on 31 October 2005. The JROC approved the DCGS-A Inc 1 CPD on 09 April 2012.

DCGS Family of Systems related documents: DoD DCGS MA ICD, 13 August 2004; DCGS-A Operational Mission Summary/Mission Profile, 9 July 2004; Information Support Plan (ISP) for DCGS-A V3.0, 16 November 2007, Version 1.2; DCGS-Enterprise ICD, 22 July 2008; Army Geospatial Enterprise Policy, 8 June 2010; the JROC approved Joint Direct-Support Airborne Intelligence Surveillance and Reconnaissance (JDSAIRS) ICD, 9 September 2010, Catalog of Approved Requirements Documents (CARDS) # 15010 (used as a basis for Brigade Combat Team (BCT) intelligence requirements and metrics as partial objectives DCGS-A capabilities will provide); ASA(ALT), COE Implementation Plan, Appendix L (Geospatial), 25 July 2011. Other previously approved Joint Capabilities Integration and Development System (JCIDS) Documents: Joint Staff approval of the Interoperability and Supportability Certification of the DCGS-A ISP, Version 6.8, 6 December 2011; approved on 9 January 2012.

All instances to Training Developer (TNGDEV) throughout this STRAP refer to New Systems Training and Integration Directorate (NSTID) at the United States Army Intelligence Center of Excellence (USAICoE). All instances to Materiel Developer (MATDEV) throughout this STRAP refer to Program Manager DCGS-A (PM DCGS-A). All instances to Combat Developer (CBTDEV) throughout this STRAP refer to the Training and Doctrine Command (TRADOC) Capabilities Manager - Sensor Processing (TCM-SP) at USAICoE.

2.0 Target Audience

The target audience for DCGS-A training includes Soldiers in varying grades, Military Occupational Specialties (MOS) and officer branches in the Active, Reserve and National Guard components with needs ranging from awareness to specific training requirements for analysts, operators, maintainers and decision makers.

The Soldiers, Airman, and Officers with the following MOSs, Air Force Specialty Code (AFSC), and Branches will be required to setup/tear down, operate, or maintain the system:

U.S. ARMY ENLISTED:

- 12Y (Geospatial Engineer)
- 18F (Special Forces Intelligence Analyst)
- 35F (Intelligence Analyst)
- 35G (Geospatial Intelligence Imagery Analyst)
- 35L (Counter Intelligence (CI) Agent)
- 35M (Human Intelligence (HUMINT) Collector)
- 35N (Signals Intelligence (SIGINT) Analyst)
- 35P (Cryptologic Linguist)
- 35S (Signals Collector/Analyst)
- 35T (Intelligence and Electronic Warfare (IEW) Systems Maintainer/Integrator)
- 35X (Chief Intelligence Sergeant)
- 35Y (Chief Counterintelligence/Human Intelligence Sergeant)
- 35Z (SIGINT Senior Sergeant/SIGINT Chief)

U.S. AIR FORCE ENLISTED:

- 1W0X1 (Weather Airmen)

WARRANT OFFICER:

- 125D (Geospatial Engineering Technician)
- 350F (All Source Intelligence Technician)
- 350G (Imagery Intelligence Technician)
- 351L (Counter Intelligence Technician)
- 351M (Human Intelligence Collection Technician)
- 352N (Traffic Analysis Technician)
- 353T (Intelligence Systems Integration / Maintenance Technician)

OFFICER:

- FA40 (Space Operations Officer)
- FA34A (Strategic Intelligence Officer)
- 12A (Engineer Officer)
- 35D (All Source Intelligence Officer)
- 35E (CI/HUMINT Operations Officer)
- 35F (HUMINT Intelligence Officer)
- 35G (Signals Intelligence/Electronic Warfare Officer)

U.S. AIR FORCE OFFICER:

- 15WX (Weather Officer)

3.0 Assumptions

Prerequisites for Training:None.

Significant Changes to Military Occupational Specialty (MOS) structure:None.

Involvement with other organizations:All DCGS-A Training Aids, Devices, Simulators, and Simulations (TADSS), to include the DCGS-A Target Signature Array (TSA) and Interactive Multimedia Instruction (IMI) built by the MATDEV, will be in coordination with Program Executive Office for Simulation Training and Instrumentation (PEO STRI). Authorities to Operate (ATO), Certificate of

Net worthiness (CON), and local network authorizations are met and maintained for all appropriate security domains per 7th Signal Command ATO between DCGS-A and LAN WARNet.

Changes to Combined Arms Training Strategy (CATS):The CATS Program Manager (PM) works with training proponents to determine what CATS to develop, review, revise, and update, based on the currently fielded and future DCGS-A software capabilities and available funding.

Changes to existing course content/structure:Courses, for the MOSs listed in paragraph 2.0, will be responsible for modifying their own training material when a new version of DCGS-A software is implemented. Technical Bulletins (TB) may require changes to course content when / if they are applied to versions of DCGS-A that are actively used throughout the Army.

4.0 Training Constraints

Constraint Type	Probable Impact	Mitigating Efforts
<p>Security: The full DCGS-A suite of systems requires access to applicable classified networks (NSANet, JWICS, SIPRNet), appropriate classified facility availability, and storage/access to classified training material in order to conduct all DCGS-A training.</p>	<ul style="list-style-type: none"> - Units and institutions will not be able to conduct/receive DCGS-A training if appropriate training material is unavailable due to limited access/storage capabilities. - Units and institutions will not be able to conduct/receive DCGS-A training if they do not have access to applicable classified networks and secured facilities. 	<ul style="list-style-type: none"> - Ensure institutions and units conducting/receiving classified DCGS-A training have the appropriate architecture to access, obtain and store classified information/material and conduct/receive classified training up to TOP SECRET / SCI. - Ensure ATOs, CON, and local network authorizations are met and maintained for all appropriate security domains per 7th SIG Command ATO between DCGS-A and LAN WARNet.
<p>NET / DTT: DCGS-A training is very complex and requires an in-depth TSP, the appropriate MOSs to train a full DCGS-A suite, and also the appropriate amount of MOS qualified students needed to train all components of</p>	<ul style="list-style-type: none"> - Based on the elaborate multi-tasking environment of DCGS-A and the complexities of the tasks, training Soldiers to work and operate within this atmosphere will be a challenge without the appropriate training material and products. 	<ul style="list-style-type: none"> - In order to accomplish NET, a highly detailed and comprehensive DCGS-A Training Support Package (TSP) is critical to successful accomplishment of training. - Leaders training, collective exercise, and New

<p>DCGS-A effectively.</p>	<ul style="list-style-type: none"> - Due to a lack of MOS qualified instructors, New Equipment Training (NET) and Doctrine and Tactics Training (DTT) / Tactics, Techniques, and Procedures (TTP) training will be degraded. - Without MOS qualified Soldiers present during training, specific portions of the system will not be effectively trained. <p>Overall, the unit's ability to utilize DCGS-A will be degraded.</p>	<p>Material Introductory Brief (NMIB) need to be conducted.</p> <ul style="list-style-type: none"> - Ensure that the appropriate NET and DTT instructors are adequately qualified to train DCGS-A components. - Gaining units will need to ensure that the appropriate INT specific MOS qualified Soldiers attend in order to maximize training and unit training certification.
<p>Sustainment Training: DCGS-A system critical tasks and concepts require a thorough sustainment training capability to ensure operator/analyst skills don't deteriorate over time.</p>	<p>It is difficult for Soldiers to sustain the requisite critical tasks and skills to operate the system without appropriate tools beyond Lesson Plans. There is a need for interactive teaching from IMIs and simulations.</p>	<p>The DCGS-A Material Developer (MATDEV) must develop a comprehensive leave behind TSP (to include IMIs) for sustainment and an embedded training capability IAW the Intelligence and Electronic Warfare Tactical Proficient Trainer (IEWTPT) concept. This capability will be enabled by the DCGS-A Target Signature Array (TSA). Also, operational</p>

		training sites and programs (to include Mission Training Complex (MTC), Foundry, Mission Command Training Program (MCTP), and Combat Training Centers (CTC)) will need to be utilized to support sustainment training of DCGS-A.
<p>DCGS-A Maintenance Training / Support:</p> <ul style="list-style-type: none"> - Currently, DCGS-A maintainers (35T MOS) do not have adequate Army required certifications. - The 35T MOS does not have the required Counter Intelligence (CI)/Polygraph to perform maintenance tasks on NSANet component of DCGS-A system. 	<p>DCGS-A Maintainers will not be able to be trained on or troubleshoot the majority of issues that could arise during DCGS-A training without the proper U.S. Army required certifications and CI/Polygraph.</p>	<ul style="list-style-type: none"> - Ensure that the Program Objective Memorandum (POM) is appropriately annotated to support the funding requirements needed to certify DCGS-A maintainers on the required U.S. Army computer / network certifications in order to properly support DCGS-A during training for the life of the system. - Ensure that 35Ts acquire a CI/Polygraph in order to maintain the NSANet component of the DCGS-A system.

Table 1

5.0 System Training Concept

The DCGS-A training concept is the same for Active Army / U.S. Army Reserve / Army National Guard (AA/USAR/ARNG) and follows the Battle Command Training Strategy (BCTS) and Mission Command Training Strategy Implementation Plan (MCTS-IP) which identifies four training phases:

- **Phase 1:** Establish the skills - Institutional, Mission Training Complexes (MTC), IMIs, and NET
- **Phase 2:** Integrate skills - Mission Command System Integration (MCSI) and Collective Training
- **Phase 3:** Sustain skills - Soldier Professional Military Education (PME), Collective Training, IMIs, and MTC
- **Phase 4:** Delta Training - MTC, NET, and IMIs

Notes:

1. For detailed information refer to BCTS, dated 22 MAR 10 and the MCTS-IP, dated 28 FEB 12.
2. Although not mentioned in the BCTS or MCTS-IP, the Army Foundry Intelligence Training Program and IEWTPT are a part of Phase 3 of the MCTS-IP four phase Mission Command Networks and Systems Training and Education Methodology listed above.

DCGS-A will be implemented across the entire Army and therefore requires a holistic training strategy that spans across the institutional, operational, and self-development training domains. The MATDEV will provide the Institutional Training Domain with required licenses and PM delivered training sets and kits and/or Non PM delivered Commercial Off The Shelf (COTS) training sets and kits equivalents, capable of running all current operational DCGS-A software platforms. The MATDEV will coordinate and assist in identifying resource requirements for the establishment and integration of DCGS-A across the Operational training domain. The MATDEV will provide Self Development materials at the time of NET. The TNGDEV will identify all training support requirements necessary to execute the system training strategy. MATDEV will develop all system related training development activities utilizing the TRADOC Analysis, Design, Development, Implementation, and Evaluation (ADDIE) process IAW TR 350-70 and associated TRADOC pamphlets with all training and doctrinal analysis data documented using the Combined Arms Center (CAC) - approved automated development system. The DCGS-A MATDEV, as the Total Life Cycle System Manager (TLCSM), in coordination with appropriate agencies will plan, resource, and upgrade software, and/or DCGS-A training sets and kits (only if delivered by the PM) to support the installation and use of DCGS-A in

the Institutional Training Domain, Operational Training Domain, and Self Development Training Domain.

Training Support Package (TSP):The MATDEV is responsible for the development of the TSP. Training for all DCGS-A configurations, in all training domains, will be supported by the DCGS-A TSP. The TSP will train and sustain individual and collective tasks/skills to develop proficient Soldiers, leaders, staffs, and units. All training products, TADSS - primarily the DCGS-A TSA, and all other training related materials will be included in the DCGS-A TSP. All DCGS-A system related training products will be validated by the TNGDEV prior to Operational Tests and NETs.

New Equipment Training (NET):NET provides the initial transfer of knowledge on the operation and maintenance of DCGS-A equipment from MATDEV to the tester, trainer, training developer, supporter, and user throughout the Institutional and Operational Training Domains. NET will assist commanders achieve operational capability in the shortest time practical by training Soldiers on how to operate and maintain DCGS-A equipment and by providing unit leaders with training support components needed to sustain proficiency of operators and maintainers on DCGS-A equipment after NET. DCGS-A NET will be planned, scheduled, resourced, and conducted by the MATDEV utilizing a New Equipment Training Team (NETT). The MATDEV will coordinate plans for NET training and training support with the TNGDEV, CBTDEV, testers, and users Army Commands (ACOM), Installation Management Command (IMCOM), Army Service Component Commanders, and Direct Reporting Units (DRU). A New Materiel Introductory Brief (NMIB) will be conducted by the MATDEV and will include TNGDEV representatives approximately 180 days prior to NET. The MATDEV will provide budgetary projections and funding requirements to support the conduct of the NMIB and will include the TNGDEV representatives in those projections and requirements.

Doctrine and Tactics Training (DTT):The TNGDEV will develop and conduct the DTT IAW AR 350-1, TR 350-70, the Army Learning Model (ALM), TP 525-8-2 w/C1 06Jun2011, the CAC - approved automated development system, and implemented IAW with this STRAP. The TNGDEV will identify the requirement for DTT upon receipt of the draft New Equipment Training Plan (NETP) from the MATDEV. DTT provides the principle employment concept, and the "how to" TTP presented through battle drills, simulations, and situational training exercises.

Test Training Support Package (TTSP):The TTSP is developed by the TNGDEV. It outlines the method and procedures to evaluate and certify individual and collective pre-assessment training (who, where, and how training is to be certified) in support of a new system Operational Test (OT), Initial Operational Testing and Evaluation (IOT&E) or Limited Users Test (LUT) during

the acquisition process. The TTSP includes the training for system operation, current and emerging doctrine, and maintenance. The TTSP will be developed IAW TR 350-70 and implemented IAW with this STRAP.

Institutional Domain:DCGS-A institutional training will concentrate on the operator / maintainer level individual tasks. It will also expose Soldiers to mission oriented collective task training and leaders to leader task training. Leader Training will ensure that Leaders can identify the components of the DCGS-A and their capabilities as a force multiplier, as well as understand the specific architecture tailored for unique unit operations. The DCGS-A institutional training will specifically address and emphasize analyst collaboration and promote information sharing to ensure analysts with differing specialty areas take full advantage of DCGS-A capabilities.

Operational Domain:DCGS-A operational training will concentrate on system and collective level tasks utilizing the DCGS-A TSP, TADSS (DCGS-A TSA), and IMIs in support of the overall Combined Arms Training Strategy (CATS) and BCTS and MCTS-IP concepts.

Self Development Domain: DCGS-A self development training will concentrate on individual tasks utilizing DCGS-A IMIs (internal and external to Portable - Multi Function Workstation (P-MFWS)), TADSS, DCGS-A embedded TSP/ Soldier Training Package (STP), and the DCGS-A Technical Manual (TM).

Maintenance Training:DCGS-A will be supported by using Army's two-level maintenance concept in accordance with (IAW) AR 750-1, Army Materiel Maintenance Policy. Institutional/NET maintenance training will consist of remove and replace procedures, network administration, system administration, system emplacement and displacement procedures, Fault Detection / Fault Isolation (FDFI), and TM familiarization. Sustainment maintenance training will consist of off-system repair and return to supply task - those tasks that are required to return components, subassemblies, and/or end items to a serviceable condition. MOS 35T or Field Software Engineers (FSEs) will also perform system administration function, load software as needed, and revive the system if there is a system crash.

The DCGS-A maintenance concept emphasizes replacing defective components at Field Level (Unit/ Direct Support) by MOS 35T, supervised by the associated Warrant Officer MOS 353T. Initially, contractor FSEs are used to provide over-the-shoulder technical support and maintenance action assistance for new systems. However, as the unique DCGS-A institutional training (to include maintainer training) comes on line, the need for FSEs to provide hardware maintenance support will be reduced over time.

5.1 New Equipment Training Concept (NET)

NET provides the initial transfer of knowledge on the operation and maintenance of DCGS-A equipment from MATDEV to the tester, trainer, supporter, and user of all Institutional and Operational Training Domains. During NET, DTT will initially be accomplished utilizing a presentation in a classroom setting prior to DCGS-A Common Core training block. DTT will also be integrated throughout the NET (all blocks) utilizing lessons learned in employing the system in operational environments. Per AR 350-1, the MATDEV will develop a NETP in coordination with the TNGDEV, CBTDEV, gaining commands, test agencies, and other agencies with every new, improved, or modified materiel system based upon the approved Material Requirements Document (MRD). A New Materiel Introductory Brief (NMIB) will be conducted by the MATDEV approximately 180 days prior to NET. The MATDEV will provide budgetary projections and funding requirements to support the conduct of the NMIB. The TNGDEV will develop DTT training material and conduct DTT during NET IAW AR 350-1, TR 350-70 and this STRAP.

NET to the institutional domain will be accomplished using Instructor and Key Personnel Training (IKPT). Integrated Practical Exercises (PE) will be provided throughout the IKPT to assess the student's progress and will consist of situation-based training vignettes supporting a current operational scenario. Students (Instructors / Key Personnel) who do not meet the given Standard for a PE during IKPT will repeat the failed block of instruction. Therefore, a block of time specifically for retraining will be included in the Program of Instruction (POI).

The MATDEV will coordinate plans for NET training and training support with the TNGDEV, CBTDEV, testers, and users ACOMs, IMCOMs, Army Service Component Commanders, and DRUs. The MATDEV will field training locations at the same time the first unit on the same installation is fielded DCGS-A equipment IAW the Unit Set Fielding (USF) directive. The NET will consist of operator, maintainer, and leader level individual tasks culminating in a System Training Exercise. Integrated PEs will be provided throughout the training to assess the student's progress and will consist of situation-based training vignettes supporting a current operational scenario. Soldiers who do not meet the given standard for a PE will repeat the failed block of instruction. Therefore, a block of time specifically for retraining will be included in the POI. Training consists of a common framework of components that provides the tools needed to accomplish the interrelated intelligence operations. NET maintenance training will consist of remove and replace procedures, network administration, system administration, system emplacement and displacement procedures, FDFI, and TM familiarization. Leader Training will ensure that

Leaders can identify the components of the DCGS-A and their capabilities as a force multiplier, as well as understand the specific architecture tailored for their unit's operations. The System Training Exercise, using the DCGS-A TSA, will evaluate the unit's ability to operate and successfully integrate the DCGS-A system into their intelligence operations. The MATDEV will be responsible for designing, developing, and conducting the System Training Exercise with support from the TNGDEV. The TNGDEV will validate all training materials to include the System Training Exercise. The NETT will provide unit leaders with the leave behind Training Support Package which includes the items listed in paragraph 6.1.1.2.4 of this STRAP. The TSP will be utilized to sustain proficiency of operators and maintainers on DCGS-A equipment after NET. During NET, the NETT will train leaders on how to use training support for operators and maintainers. During DTT, the TNGDEV trains leaders on how to use training support for system employment.

Maintenance Training:The DCGS-A NET maintenance concept emphasizes replacing defective components at Field Level (Unit/ Direct Support) by MOS 35T, supervised by the associated Warrant Officer MOS 353T.

Unscheduled/Corrective maintenance will typically include:

- Fault detection
- Fault isolation to the Lowest Replaceable Unit (LRU) level
- Repair by removal and replacement of the LRU with a serviceable replacement LRU
- Retest to verify correctness of repair
- Return of the system to its operational condition

Documenting the failure history MOS 35T will also perform system and network administration functions, load software as needed, and revive the system if there is a system crash. The unit will create a Failure Report for each hardware and/or software failure, discard the failed LRU if non-reparable, or return it to the supply facility for repair/disposition.

5.2 Displaced Equipment Training (DET)

Not applicable

5.3 Doctrine and Tactics Training (DTT)

The TNGDEV will develop, resource, and conduct the DTT IAW AR 350-1 and TR 350-70 and implemented IAW with this STRAP. The TNGDEV will identify the requirements for DTT upon receipt of the DCGS-A draft NETP from the MATDEV.

The TNGDEV will identify the requirements and develop the DTT TSP. DTT will provide guidance to Leaders/Operators/Maintainers on how to employ the combat capabilities of DCGS-A across Unified Land Operations (ULO). DTT provides the principle employment concept and the "how to" TTP. DTT will cover system description, system function, manning requirements, communications architecture, supportability, employment, and system impacts on the staff. DTT will also describe how DCGS-A streamlines the intelligence analysis process and gives timely and accurate intelligence to commanders and their staffs. During NET, DTT will initially be accomplished utilizing a presentation in a classroom setting prior to DCGS-A training. DTT will also be integrated throughout the IKPT/NET utilizing lessons learned in employing the system in operational environments. Course Managers are responsible for incorporating DTT into all Non Commissioned Officer Education System (NCOES), Officer Education System - Warrant Officer (OES-W), Officer Education System (OES), and Command Courses that utilize DCGS-A in their curriculum. The TNGDEV will be responsible for ensuring that training materials reflect current DTT as DCGS-A capabilities evolve or when relevant doctrine changes. The TNGDEV will provide the current DTT materials to the institutional training domain during IKPT/NET or passed as an update to be incorporated into their course material.

5.4 Training Test Support Package (TTSP)

Per TR 350-70, the TNGDEV will develop, approve, and provide the TTSP to the Army operational tester for use in the evaluation of new system training in support of the Joint Capabilities Integration and Development System (JCIDS) process. The TTSP outlines the method and procedures to evaluate and certify individual and collective pre-assessment training (who, where, and how training is to be certified). The TTSP includes the training for system operation, current and emerging doctrine, and maintenance. The TTSP consists of the following:

- Current Approved DCGS-A STRAP
- Training schedule
- POI
- CATS
- STP
- Crew Drills
- List of training devices, embedded training components, and simulators
- Target audience

- Lesson Plans
- Practical Exercises
- Multimedia Packages
- Computer Based Training (CBT)
- Critical Task lists
- Exams
- Field manuals (FM) or changes to FMs
- TM or changes to TMs
- Test Training Certification plan
- Ammunition, Targets, and Ranges required for Training

6.0 Institutional Training Domain

6.1 Institutional Training Concept and Strategy

The MATDEV is responsible for providing DCGS-A software and PM delivered training sets or kits, if feasible, for the establishment and integration of DCGS-A in the institutional training domain. When it is not feasible for the MATDEV to deliver training sets and kits, the MATDEV will ensure that the software is capable of running on a purchased or already established institutional non PM delivered COTS training sets and kits architecture. Institutional classrooms will be fielded in accordance with the DCGS-A and HQDA G8 directives in collaboration with the Proponent. DCGS-A institutional training will concentrate on the operator / maintainer level individual tasks. It will also expose Soldiers to DTT, mission oriented collective task training, and leaders to leader task training. Leader Training will ensure that Leaders can identify the components of the DCGS-A and their capabilities as a force multiplier, as well as understand the specific architecture tailored for unique unit operations. DCGS-A institutional training will specifically address and emphasize analyst collaboration and promote information sharing to ensure analysts with differing specialty areas take full advantage of DCGS-A capabilities. The MATDEV is responsible for providing the resources for the establishment of a DCGS-A MI and Non-MI institutional training capability and IKPT. All institutional training materials, including those for IKPT and TADSS will be developed in the CAC - approved automated development system IAW TR 350-70 and associated TRADOC Pamphlets and provided in approved TRADOC and DoD formats. The collaborative and net centric training environment, enabled by the DCGS-A architecture, will be used in conjunction

with a constructive simulation and IEWTPT to enhance training of the individual and collective tasks. When available, the DCGS-A institutional training capability will interface with or simulate interface with other Mission Command Systems (MCS) to replicate realistic interoperability of DCGS-A.

The DCGS-A maintenance concept emphasizes replacing defective components at Field Level (Unit/ Direct Support) by MOS 35T, supervised by the associated Warrant Officer MOS 353T. Institutional maintenance training will support all DCGS-A components to include: IFS/P-MFWS/GWS/IPC-2/CDSS/TGS/OGS.

Military Intelligence Proponent Institutional Training - USAICoE:DCGS-A training migration will be dependent on system delivery / fielding and POR de-fielding schedule. As the DCGS-A program approaches its objective capability the institutional training strategy will expand / evolve. The USAICoE Thin Client Infrastructure will be utilized when possible IAW DA PAM 350-9 or as determined by USAICoE G6 to deliver full DCGS-A functionality and simulation capabilities. Institutional classrooms, with the exception of 35G (Imagery Analyst) and 35T (MI Systems Maintainer / Integrator) classrooms, will be fielded in accordance with the USAICoE Thin Client Infrastructure guidelines as specified by the USAICoE G6. The USAICoE Thin Client Infrastructure will be a server/client configuration utilizing a Commercial Off-The-Shelf (COTS) solution to deliver full DCGS-A functionality and simulation capabilities rather than using the operational system configuration and "ruggedized" tactical workstations. Unique classroom environments such as Army (35T) maintainer training and (35G) IMINT operator training will require Developmental Software Support Environments (DSSE) systems. The 35T will also require a TGS Maintenance Trainer (clam shell).

A System Training Exercise using DCGS-A at the Intelligence Combat Training Center (ICTC) will be included in OES curriculums and will include IEWTPT when a DCGS-A TSA has been developed by the MATDEV. The MATDEV will provide the training sets and kits and/or Non PM delivered COTS training sets and kits equivalents, capable of running all current operational DCGS-A software platforms to support DCGS-A training at the ICTC. The USAICoE G6 will determine the strategy for integrating DCGS-A into the ICTC training infrastructure.

Non Military Intelligence Proponent Institutional Training: PM delivered training sets and kits and/or Non PM delivered COTS training sets and kits equivalents, capable of running all current operational DCGS-A software platforms will be used when possible. DCGS-A training migration will be dependent on system delivery / fielding and POR de-fielding schedule. As the DCGS-A program approaches its objective capability the institutional training

strategy will expand / evolve. The DCGS-A embedded TSP will be a key part of the training foundation for Non-MI Proponent Institutional Training. Embedded TSP, NET, and IKPT will support the capability delivery, integration, and installation of DCGS-A for Non-MI Proponent Institutional Training.

6.1.1 Product Lines

6.1.1.1 Training Information Infrastructure

6.1.1.1.1 Hardware, Software, and Communications Systems

The Institutional Training Domain will require licenses and PM delivered training sets and kits and/or Non PM delivered COTS training sets and kits equivalents, capable of running all current operational DCGS-A software platforms as outlined in this section. The DCGS-A MATDEV, as the Total Life Cycle System Manager (TLCSM), in coordination with appropriate agencies (to include PEO STRI) will plan, resource, and upgrade DCGS-A hardware and software to support the installation and use of DCGS-A in the Institutional Training Domain. Hardware can include operator positions (P-MFWS), servers (IFS), GWS, TGS, OGS, IPC-2 and TADSS. If the existing USAICoE Thin Client hardware infrastructure is unable to operate current DCGS-A software, the MATDEV will either upgrade the hardware infrastructure or modify the software to run on the existing hardware infrastructure. Software can include all DCGS-A applications and IMIs.

USAICoE and USAES Institutional Classrooms:All institutional training curriculums will incorporate the use of DCGS-A applications as per USAICoE Commanding General (CG) and United States Army Engineer School (USAES) Commandant directives. The MATDEV is responsible for the fielding of software and the specific DCGS-A configurations required for institutional training. The MATDEV will provide PM delivered training sets and kits, when feasible. When PM delivered training sets and kits are not feasible the MATDEV must ensure that the software delivered runs or is modified to run on Non PM delivered COTS training sets and kits that already exist in the institution's system architecture to allow USAICoE and USAES to employ DCGS-A as designed. Required hardware changes that will allow USAICoE or USAES to perform its institutional training mission will be resourced through the appropriate POM processes. Specific institutional software license requirements for each application within the DCGS-A Architectural Framework (DAF) will be determined by the USAICoE G6 and Maneuver Support Center of Excellence (MSCoE) G6 in coordination with the CBTDEV and the MATDEV and will be based on a site survey. Specific software requirements analysis will be based on peak system usage.

USAICoE Classroom Architecture:Thin Client Infrastructure will support DCGS-A training at USAICoE. USAICoE Thin Client, in concert with Virtual Machine (VM) software, supports multiple instantiations of MI and MI Battle Command (BC) applications and analytical software such as the DCGS-A P-MFWS and Command Post of the Future (CPOF). USAICoE Thin Client architecture is the primary method of bringing training into the classroom. The USAICoE Thin Client architecture, which uses a client/server solution where by the client (or training workstation) is designed to be especially compact with the bulk of the data processing occurring at

the server. This enables system and application replication, negating the requirement for actual DCGS-A system hardware. USAICoE will develop and implement a sustainment/refresh plan for the Thin Client equipment. If the existing USAICoE Thin Client hardware infrastructure is unable to operate current DCGS-A software, the MATDEV will modify the software to run on the existing hardware infrastructure. The USAICoE Thin Client infrastructure will use enterprise licenses or site licenses and will be hosted on the USAICoE Thin Client platforms and associated servers supporting unclassified, collateral, and SCI processing. As with USAICoE, the USAR/ARNG will use the Thin Client solution for institutional training where feasible.

Maintainer / Integrators Classroom Architecture:The MATDEV will provide fully functional DCGS-A components, subcomponents and software for all current mobile DCGS-A configurations to support institutional maintainer training. The DCGS-A MATDEV will also resource a three dimensional high-fidelity TGS maintenance trainer "Clam Shell" configuration to support advanced maintainer training at the 35T MI Systems Maintainer/Integrator Course. The 35T Maintenance Labs require a total of 45 P-MFWS and 45 IFS to include peripheral equipment listed in Table 9, Paragraph 6.1.3.3 of this STRAP. The 35T Maintenance Labs will require 1 DSSE and 1 Clam Shell to support TGS Maintenance Training. The Clam Shell is preferred over a 2nd DSSE because the Clam Shell would allow for the installment of faults with relays and minimize wear and tear on a second DSSE. The DSSE and Clam Shell will allow access to TGS system components, racks, and cabling facilitating training of these components in a classroom environment. They will allow the instructor to develop problem scenarios into the hardware configuration for FDFI. Ongoing support will be transitioned to PEO-STRI. USAICoE will submit a life cycle management plan for the maintenance trainer to HQDA G-3/5/7, Department of the Army Management Office-Training Simulations (DAMO-TRS) for life cycle sustainment of the trainer. Other DCGS-A components (IPC-2, CDSS, OGS, and GWS) will be required for integration into the 35T Maintenance Labs as the components development/builds are completed and numbers required by the Institution to effectively train are determined.

New Systems Training Integration Directorate (NSTID):The MATDEV will resource all training and training development requirements of the TNGDEV. The TNGDEV requires a total of 4 complete DCGS-A suites (80 P-MFWS and 4 IFS) to facilitate the transition between software upgrades.

TRADOC Capabilities Manager - Sensor Processing (TCM-SP):The MATDEV will resource all DCGS-A hardware/software requirements of the CBTDEV. The CBTDEV will require 5 P-MFWS for software familiarization, test support, demonstrations, and TTP development.

Intelligence Experimentation Analysis Element (Intel-EAE):The USAICoE Intel-EAE will require the most current version of a complete DCGS-A Increment 2 suite. The Intelligence Experimentation Analysis Element (Intel-EAE) provides the capability to learn in uncertain and complex environments in order to provide examination and analysis to Doctrine, Organization, Training, Material, Leadership, Personnel, and Facility (DOTMLPF) problems. The DoD Science and Technology (S&T) community has specific technology gaps that are identified and being pursued. Intel-EAE experiments will quantify Intelligence capabilities' influence on ULO in Army 2020. In collaboration with community of practice partners, Capabilities, Development&Integration (CDI) sections will collaborate on overlapping efforts in support of Intelligence force modernization. Using simulation exercises, war games and Modeling&Simulations (M&S); a campaign of experiments will inform the design of the future Army that will provide Combatant Commanders with a full range of capabilities that guarantee the agility, versatility, and depth to Prevent, Shape and Win. A key element to replicating the future Intelligence capability lies within the DCGS-A software baseline next generation capabilities.

Army National Guard Regional Training Institutes (RTI):The RTI DCGS-A training requirements are outlined in Table 2. The thin client or PM delivered training sets and kits and/or Non PM delivered COTS training sets and kits equivalents, capable of running all current operational DCGS-A software platforms solution may be acceptable. ARNG RTI training locations include Camp Williams, UT and Camp Clay, GA.

Army Reserve Institutional Classroom Architecture:The USAR DCGS-A training requirements are outlined in Table 2. USAR The Army School System (TASS) Battalions (BN) train Soldiers at regional locations throughout the United States. These institutional training organizations will use architectures as determined by USAR and supporting CIO G6. The USAR institutional training location is Fort Devens, MA.

Current Total License Requirements for USAICoE and the USAR/USARNG

Course / Activity / Location	IFS	P-MFWS	ArcGIS	ANB	ArcGIS Server 10.0
35F10	35	1053	-	-	70

Site Maverick (35F10)	5	120	-	-	10
35N	-	-	53	-	-
35M10	-	-	-	660	-
35T10/30	45	45	-	-	6
NSTID	4	80	-	-	-
TCM-SP	-	5	-	-	-
SOC	-	-	35	55	-
NCOA	12	198	-	198	24
MICCC	3	90	90	90	6
MIBOLC	6	180	180	180	12
IMSO	-	-	15	20	-
WOBC	4	121	-	121	8
Battlefield Weather Center	1	21	-	-	2
ICTC	12	312	462	300	24
Goodfellow AFB, TX	-	-	126	133	-
Fort Devens, MA	3	90	-	-	6
Camp Williams, UT	3	90	-	-	6
Camp Clay, GA	2	60	-	-	4

Intelligence Experimentation Analysis Element (Intel-EAE)	1	20	-	-	2
Totals	136	2485	961	1757	180

Table 2

USAICoE GEOINT Software Requirements

Course / Activity / Location	TGS	MI Screener	TerraGo Publisher for SOCET GXP	SOCET GXP Common Geo Services	SOCET GXP GeoAnalysis
35G10/30	2	325	50	100	257
35T10/30	3	-	-	-	-
Totals	5	325	50	100	257

Table 3

USAES (TCM Geospatial Lab):The TCM Geospatial Lab will require the most current and complete DCGS-A version of the GWS software (and the previous version still fielded) and hardware suites. The TCM Geospatial Lab will analyze and assess Geospatial Engineer problem sets and produce TTPs to reduce hindrance of newly fielded DCGS-A software and hardware solutions. This ensures the capability to learn in uncertain and complex environments in order to provide examination and analysis of DOTMLPF problems. The DoD S&T community has specific technology gaps that are identified and being pursued. USAES will quantify Geospatial Engineering capabilities' influence on ULO in Army 2020 concepts. In collaboration with community of practice partners, CDI sections will collaborate on overlapping efforts in support of USAES's force modernization.

Using simulation exercises and war gaming specified operating environments, this campaign of experiments will inform the future Army that will provide Combatant Commanders with a full range of capabilities that guarantee the agility, versatility, and depth to Prevent, Shape and Win. A key element to replicating the future Geospatial Engineering capability lies within the DCGS-A software baseline next generation capabilities. DCGS-A capability is required to support representative capabilities.

USAES Directorate of Training and Leader Development (DOTLD):The USAES DOTLD will be resourced with a DCGS-A hardware/software capability through the DCGS-A program. The USAES DOTLD will require 1 GWS software and hardware suite for familiarization, training development, test support, demonstrations, and TTP development.

USAES Classroom Architecture:USAES will train the GWS software applications and components associated with Geospatial Engineering to USAES Soldiers during institutional training. The DCGS-A MATDEV will field a PM delivered training sets and kits and/or Non PM delivered COTS training sets and kits equivalents, capable of running all current operational GWS software platforms solution for the required hardware and software configuration USAES will develop and implement a sustainment/refresh plan for the DCGS-A equipment initially provided by the MATDEV. However, if the existing hardware infrastructure is unable to operate current software, the MATDEV will either upgrade the hardware infrastructure or modify the software to effectively run on the existing hardware infrastructure.

Total classroom Positions required throughout USAES

Facility Description	GWS	IFS ArcGIS Servers	20 TB RAID Servers	Globe Servers
AIT / NCOES / WOES	258	3	3	3
DOTLD	1	1	1	1
TCM Geospatial Lab	1	1	1	1

Total	260	5	5	5
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Table 4

NOTES:

1. As determined by USAES, the GWS workstations required will be a COTS solution, not the actual two person GWS workstations.
2. USAES will develop and implement a sustainment/refresh plan for the DCGS-A equipment initially provided by the MATDEV. However, if the existing hardware infrastructure is unable to operate current software, the MATDEV will either upgrade the hardware infrastructure or modify the software to effectively run on the existing hardware infrastructure.

USAES GWS Software Requirements

Software Required	TerraGo Pub for ArcGIS	ERDAS	ESRI ArcGIS Desktop	ArcGIS Server Software	Terra Builder	Terra Explorer	ENVI	Globe Client Software	Globe Server	LiDAR feature Extraction Tool
Totals	260	60	260	5	60	60	260	260	5	47

Table 5

Other Non-MI proponent institutional equipment requirements: Several non-MI proponent schools require DCGS-A systems for Mission Command training, collaboration, and familiarization. Applicable DCGS-A software and hardware (in the form of a COTS solution, where feasible) will be provided by DCGS-A MATDEV.

- **Space and Missile Defense / Army Forces Strategic Command (SMDC/ARSTRAT):** The MATDEV will deliver DCGS-A equipment as identified in the DA G8 Lines of Accounting (LOA) and software toolsets associated with space

software applications to SMDC/ARSTRAT for institutional training. The MATDEV will also coordinate with SMDC/ARSTRAT to deliver appropriate software licenses. All space analysis, space support and space planning tool software applications and components which become part of DCGS-A will be trained at SMDC/ARSTRAT to fully leverage the interoperability DCGS-A provides SMDC/ARSTRAT. SMDC/ARSTRAT requires 1 IFS and 30 P-MFWS with associated space operations applications and licenses for ERDAS, STK, and ENVI for all 30 P-MFWS. SMDC/ARSTRAT also has a requirement of 1 GWS server and 17 GWS positions with licenses for ArcGIS, SOCET GXP, ENVY, VPC, and PICTE. All hardware will be PM delivered training sets and kits and/or Non PM delivered COTS training sets and kits equivalents, capable of running all current operational DCGS-A software platforms.

- **U.S. Army Sergeant Major Academy (USASMA):** The MATDEV will resource and deliver DCGS-A workstations and associated equipment to support USASMA institutional training requirements.
- **TRADOC Centers of Excellence (CoE):** The MATDEV will resource and deliver DCGS-A workstations and associated equipment shown in Table 6 to support applicable TRADOC CoE institutional training requirements per the MCTS to facilitate MCS interoperability training, collaboration, and integration.
- **Warrant Officer Career College (WOCC):** The MATDEV will resource and deliver DCGS-A workstations and associated equipment to support WOCC institutional training requirements per the MCTS to facilitate MCS interoperability training, collaboration, and integration.
- **Command and General Staff College (CGSC), Digital Learning Development Center (DLDC):** The MATDEV will resource and deliver DCGS-A workstations and associated equipment to support CGSC/DLDC institutional training requirements per the MCTS to facilitate MCS interoperability training, collaboration, and integration.
- **JFK Special Warfare Center and School (JFKSWCS):** The MATDEV will resource and deliver DCGS-A workstations and associated equipment to support USAJFKSWCS institutional training requirements as identified in the DA G8 LOA.
- **C2 Warrior School / Army Joint Support Team (AJST):** The MATDEV will resource and deliver DCGS-A workstations and associated equipment to support C2 Warrior School/AJST institutional training requirements. The C2 Warrior School affiliate located at Hulburt Field, FL will use a PM delivered training sets and kits and/or Non PM delivered COTS training sets and kits equivalents, capable of

running all current operational DCGS-A software platforms solution where applicable and will require 21 P-MFWS licenses, 1 RHDD, and 1 COTS Limited Analysis server.

- **505th Air Training Wing, Nellis AFB:** The MATDEV will resource and deliver DCGS-A workstations and associated equipment to support Air Force institutional training requirements of DCGS-A.
- **2nd Combat Weather Systems Squadron (2CWSS):** The 2CWSS located at Hulburt Field, FL may be tasked to use DCGS-A Weather Services for associated weather operator training and familiarization. Tasking has yet to be authorized from Air Force Staff. If tasked, the MATDEV will resource and deliver DCGS-A workstations and associated equipment to support 2CWSS institutional training requirements.
- **Air Force Reserve Center (AFRC):** The MATDEV will resource and deliver DCGS-A workstations and associated equipment to support AFRC institutional training requirements per the MCTS to facilitate MCS interoperability training, collaboration, and integration.

CoE and other Training Facilities Hardware Requirements

Facility Description	SIPR P-MFWS Positions	IFS
Sergeant's Major Academy	10	1
Field Artillery CoE	10	1
Signal CoE	6	1
Aviation CoE	6	1
Infantry School	5	1
Warrant Officer Career College (WOCC)	34	1
Command and General Staff College (CGSC), Digital Learning Development Center (DLDC)	2	0

C2 Warrior School	21	1
Army Joint Support Team (AJST)	11	1
505th Air Training Wing, Nellis AFB	2	1
2nd Combat Weather System Squadron	5	1
Air Force Reserve Center	3	1
Totals	115	11

Table 6

Note:All CoE and unique training facilities will use PM delivered training sets and kits and/or Non PM delivered COTS training sets and kits equivalents, capable of running all current operational DCGS-A software platforms and servers according to their organizational architecture; unless it is determined by the local command and the DCGS-A MATDEV that a ruggedized system is required to meet the training objectives.

6.1.1.1.2 Storage, Retrieval, and Delivery

Simulations for training scenarios will be available using the DCGS-A TSA and the IEWTPT TCC. The DCGS-A TSP and IMIs will be embedded in the DCGS-A software baseline. DCGS-A IMIs will also be located on the Army Distributed Learning System (DLS), maintained jointly by the MATDEV and Program Executive Office Enterprise Information Systems (PEO EIS). All DCGS-A training material will be maintained on all Intelligence Knowledge Network (IKN) websites to include IKN (Unclassified), IKN-SIPR (IKN-S), and IKN-Joint Worldwide Intelligence Communication System (IKN-JWICS). The IKN websites are listed below:

- **IKN:** <https://ikn.army.mil/portal>
- **IKN-S:** <https://ikn.army.smil.mil> or <http://icon-s.army.smil.mil>
- **IKN-JWICS:** <https://ikn.hua.ic.gov>

6.1.1.1.3 Management Capabilities

All DCGS-A systems, to include those at the institution, will have access to products developed via the Army's DLS associated websites.

6.1.1.1.4 Other Enabling Capabilities

Not Applicable

6.1.1.2 Training Products

IAW AR 350-1, the TNGDEV will develop and publish guidance for the development of training products and training support products developed by the MATDEV. The TNGDEV will also verify and validate all training products developed by the MATDEV. The MATDEV will program and budget for the development and production of training products for DCGS-A NET. The MATDEV will develop, store, and update accordingly (version capability updates) training products in approved digital storage locations. These approved locations will include, but are not limited to, the CAC - approved automated development system IAW TR 350-70 and associated TRADOC Pamphlets, DLS, and IKN for delivery and reflected through the Digital Training Management System (DTMS).

6.1.1.2.1 Courseware

The MATDEV will use the Army's DLS Life Cycle Management System (LCMS) to develop and create digitized training products and documentation and ALMS to enable user access and delivery of these products. This concept will be the foundation for training development and digitized documentation within the DCGS-A TSP. The TSP will be developed in compliance with Army Enterprise Architecture (AEA) under DoD Information Technology Standards Registry (DISR). Army Training Information Architecture (ATIA), Common Training Instrumentation Architecture (CTIA), and accepted DoD standards (i.e. Sharable Content Object Reference Model [SCORM]) will be implemented in the design and development of embedded and distributive learning products. Specific items planned for delivery are:

- LPs at key stroke level, formatted in the CAC - approved automated development system IAW TR 350-70 and associated TRADOC Pamphlets and provided in approved TRADOC, DoD, and ATIA formats (tutorials on basic functionality).
- There will be an IMI for all system user interfaces both operator and maintainer as applicable, at IMI level 4 IAW TP 350-70.

Note: IMIs will be incrementally delivered with growth toward level 4.

- Applicable software and hardware TMs.
- Software User Manual (SUM).

6.1.1.2.2 Courses

Courses that will utilize DCGS-A within their courses include Advanced Individual Training (AIT), Non-Commissioned Officer Education System (NCOES), Warrant Officer Basic Course (WOBC), Warrant Officer Advanced Course (WOAC), Warrant Officer Staff Course (WOSC), WOCC, Basic Officer Leadership Course (BOLC), Pre-Command Course (PCC), Military Intelligence Captain's Career Course (MICCC), CGSC/DLDC, C2 Warrior School, Engineer Captain's Career Course (ECCC), Tactical Space Operations Course (TSOC), Space Operations Qualification Course (SOQC), and the Battle Field Weather Course (BWC).

U.S. ARMY ENLISTED:AIT, NCOA

- 12Y (Geospatial Engineer)
- 18F (Special Forces Intelligence Analyst)
- 35F (Intelligence Analyst)
- 35G (Geospatial Intelligence Imagery Analyst)

- 35L (Counter Intelligence (CI) Agent)
- 35M (Human Intelligence (HUMINT) Collector)
- 35N (Signals Intelligence (SIGINT) Analyst)
- 35P (Cryptologic Linguist)
- 35S (Signals Collector/Analyst)
- 35T (MI Systems Maintainer/Integrator)
- 35X (Chief Intelligence Sergeant)
- 35Y (Chief Counterintelligence/Human Intelligence Sergeant)
- 35Z (SIGINT Senior Sergeant/SIGINT Chief)

U.S. AIR FORCE ENLISTED:BWC

- 1W0X1 (Weather Airmen)

WARRANT OFFICER:WOBC, WOAC, WOSC, WOCC

- 125D (Geospatial Engineering Technician)
- 350F (All Source Intelligence Technician)
- 350G (Imagery Intelligence Technician)
- 351L (Counter Intelligence Technician)
- 351M (Human Intelligence Collection Technician)
- 352N (Traffic Analysis Technician)
- 353T (Intelligence Systems Integration / Maintenance Technician)

OFFICER:BOLC, PCC, MICCC, CGSC/DLDC, ECCC

- FA40 (Space Operations Officer)
- FA34A (Strategic Intelligence Officer)
- 12AW2 (Geospatial Engineer Officer)
- 35D (All Source Intelligence Officer)
- 35E (CI/HUMINT Operations Officer)
- 35F (HUMINT Intelligence Officer)
- 35G (Signals Intelligence/Electronic Warfare Officer)

U.S. AIR FORCE OFFICER:BWC

- 15WX (Weather Officer)

6.1.1.2.3 Training Publications

The MATDEV will develop all applicable training publications and provide them as part of the initial institutional fielding or system software upgrade. All training publications will be a part of the TSP and covered under paragraph 6.1.1.2.4.

6.1.1.2.4 Training Support Package (TSP)

The DCGS-A TSP will provide a structured training program that supports operator, maintainer and leader training. The MATDEV will develop the TSP using the TRADOC ADDIE process and the CAC - approved automated development system IAW TR 350-70 and associated TRADOC Pamphlets. The DCGS-A TSP will include, but is not limited to, the POI, system Critical Task List (CTL), Lesson Plans (LP), student handouts, STPs, multimedia presentations (PowerPoint), and evaluations (to include an System Training Exercise scenario). The TSP will also include supporting data for training and evaluation, TM, SUM, integrated Embedded Training (ET) including IMIs, DCGS-A TSA to support IEWTPT IAW the IEWTPT STRAP, and any other TADSS needed to support institutional fielding.

6.1.1.3 TADSS

All TADSS will be included in the DCGS-A TSP and developed by the MATDEV. The training information infrastructure relies on an overarching constructive simulation architecture that drives constructive simulation scenarios to stimulate each DCGS-A operator workstation through the TSA component of the IEWTPT. The DCGS-A TSA within this architecture will support a fully functional collaborative and net centric training environment within all Proponent classrooms. It will replicate the system data/information exchange to include ISR platform simulations and analyst to analyst collaboration within the virtual classroom. The ICTC will incorporate DCGS-A system components and training capabilities, including the IEWTPT, to support collective operator training in the future force environment.

6.1.1.3.1 Training Aids

The DCGS-A MATDEV will provide or make available all current system training aids (developed to support NET and sustainment training) during fielding of DCGS-A to the institutional training domain. Any additionally required training aids outside the DCGS-A system TSP will be the responsibility of the institution. These aids will consist of but are not limited to student handouts, multimedia presentations, PowerPoint, and integrated ET.

6.1.1.3.2 Training Devices

DCGS-A MATDEV will resource the institutional training devices with associated hardware and software required to accomplish DCGS-A training. The IEWTPT is the supporting training device of DCGS-A. It is the USAICoE program of record training device, fielded by PEO-STRI. The IEWTPT consists of functional grouping of capabilities referred to as the TCC, TSA, and the constructive simulation. The TCC is a "server stack" (fielded within the Mission Command Training Support Program by PM IEWTPT) that supports non-system training of MI tasks and skills. The TCC leverages the National Simulation Center (NSC) developed constructive simulation to provide individual and collective training in support of MI Commanders training objectives. The TCC enhances constructive simulation data to replicate ISR payload collection. It also includes exercise control and management tools to support scenario development for MI trainers. The MATDEV is responsible for the resourcing and development of the TSA (IAW the IEWTPT CPD). The TSA is the primary training device intended to support DCGS-A system training. It serves as the ET capability for the system in "stand-alone" mode and the interface to the constructive exercise in the "networked" mode. The TSA creates a virtual data environment for DCGS-A operators/analysts to use operational system tools on manageable simulated data for training and evaluation. The DCGS-A TSA provides sustainment and proficiency training for the operators, crews, battle commanders, and the battle command staff; additionally, it provides an after action review (AAR) capability to assess and provide feedback on training proficiency. In the institutional training domain, the IEWTPT TCC is housed within the USAICoE Simulation Center (Sim Center) and is available for use in practical exercises and end of course training events. When the DCGS-A TSA is developed, it will be integrated into appropriate USAICoE training curriculums. The constructive simulation will consist of a scenario approved by the TNGDEV and implemented by the IEWTPT IAW with the IEWTPT CPD. The scenario must stimulate all facets of DCGS-A hardware and software functionality that will support the institutional domains ability to conduct a System Training Exercise.

35T Maintainer / Integrators:The MATDEV will provide fully functional DCGS-A components, subcomponents and software for all current mobile DCGS-A configurations to support institutional maintainer training. The DCGS-A MATDEV will also resource a three dimensional high-fidelity TGS maintenance trainer "Clam Shell" configuration to support advanced maintainer training at the MI Systems Maintainer/Integrator Course. The 35T Maintenance Labs will require 1 DSSE and 1 Clam Shell to support TGS Maintenance Training. The Clam Shell is preferred over a 2nd DSSE because the Clam Shell would allow for the installment of faults with relays and minimize wear and tear on a second DSSE. The DSSE and Clam Shell will allow access to TGS system components, racks, and cabling facilitating training of these components in a classroom environment. They will allow the instructor to develop problem scenarios into the hardware configuration for Fault Detection and Fault Isolation (FDFI). Ongoing support will be transitioned to PEO-STRI. USAICoE will submit a life cycle management plan for the maintenance trainer to HQDA G-3/5/7, Department of the Army Management Office-Training Simulations (DAMO-TRS) for life cycle sustainment of the trainer.

35G Geospatial Intelligence Training:The 35G Geospatial Intelligence Training course will require 2 DSSEs to support TGS training. The DSSE will allow for training TGS operations, to include establish communications.

6.1.1.3.3 Simulators

Not Applicable

6.1.1.3.4 Simulations

The training simulations DCGS-A uses must support individual entity identification and tracking (personalities/small platforms) as well as collective unit representation (from squad to subsequently higher echelons) to replicate all phases of modern combat operations. To accomplish this, DCGS- A must be compatible with current and future Entity Resolution Federations (ERF) and Multi-Resolution Federations (MRF) constructive simulations. This includes legacy constructive simulations such as Tactical Simulation (TACSIM) and Joint Conflict and Tactical Simulation (JCATS), and future simulations as part of Joint Land Component Constructive Training Capability (JLCCTC) such as Warfighter Simulations (WARSIM) and One Semi-Automated Forces (OneSAF). IEWTPT, as a simulation interface for individual ISR operator stimulation, will be a critical part of the DCGS-A training simulation architecture and must be planned by the MATDEV as a critical component of DCGS-A simulations architecture. Implementation of DCGS-A into existing training simulations center architectures requires careful consideration, a thorough site survey,

and will require MATDEV funding (within the boundaries of DCGS-A associated infrastructure upgrades) to ensure DCGS-A systems are realistically enabled within the total Live, Virtual, and Constructive Gaming - Integrated Training Environment (LVCG - ITE) training simulation environment. Training/simulation center integrators and exercise designers must be aware of these unique integration requirements for DCGS-A and the limitations of current simulations in order to take full advantage of DCGS-A systems for training. The DA G2 DCGS-A Simulation Tiger Team will determine , in collaboration with the MATDEV, PEO-STRI, and IMCOM what changes to existing simulations architectures are required to enable DCGS-A systems be fully and accurately utilized within the LVCG - ITE training simulations construct. These changes include three basic areas of consideration which must be addressed: installation, configuration, and integration. Each has critical subtasks, that if not addressed, can essentially preclude successful use of DCGS-A in a collective training exercise.

DCGS-A requires unique architecture interfaces for simulations and training center installation. Each organizational integrator must perform an internal assessment of their current Sim Center capabilities to take optimum advantage of DCGS-A integration. The DCGS-A MATDEV must develop simulations center integration guidelines and a tailored NET POI for training the Sim Center exercise and operations staff. This should include unique considerations and planning for DCGS-A simulations interfaces, information flow/data exchange, and integration with other MCSs.

6.1.1.3.5 Instrumentation

Not Applicable

6.1.1.4 Training Facilities and Land

Military Construction Army (MCA) funding will be sought by TRADOC if additional classrooms are needed to train DCGS-A. MCA will also be utilized for any electrical/environmental upgrades required by the DCGS-A training systems.

6.1.1.4.1 Ranges

Not Applicable

6.1.1.4.2 Maneuver Training Areas (MTA)

Not Applicable

6.1.1.4.3 Classrooms

The proponent and organizational G6 offices will determine the majority of classroom configuration and infrastructure, whether Thin Client or PM delivered training sets and kits and/or Non PM delivered COTS training sets and kits equivalents, capable of running all current operational DCGS-A software platforms or actual system components.

Maintainer/Integrators: Due to the drawdown of Field Software Engineer (FSE) support, the 35T IET/AIT, 35T NCOA, and 353T Warrant Officer maintainer courses will need three classrooms constructed and at least 28 new training positions emplaced to take over these tasks. One 35T10 classroom will need to be completed by the end of FY14 and the other 35T10 classroom along with the 35T30/40 NCOA classroom will need to be completed by the end of FY15.

6.1.1.4.4 CTCs

Not Applicable

6.1.1.4.5 Logistics Support Areas

DCGS-A MATDEV in coordination with USAICoE and/or USAES will conduct a logistics support analysis for institutional training areas prior to delivering institutional training equipment and resources. The MATDEV and the Proponents will coordinate with the PEO-STRI and Communications-Electronics Command (CECOM) Software Engineering Center (SEC) for Life Cycle Contractor Support (LCCS) beyond the initial POM at both MI and non-MI institutions.

6.1.1.4.6 Mission Training Complex (MTC)

6.1.1.5 Training Services

6.1.1.5.1 Management Support Services

The MATDEV will resource training management support services. DCGS-A will use a LCMS, IAW AR 70-1, for standardized development Sharable Content Object Reference Model (SCORM) and management of training modules and documentation.

6.1.1.5.2 Acquisition Support Services

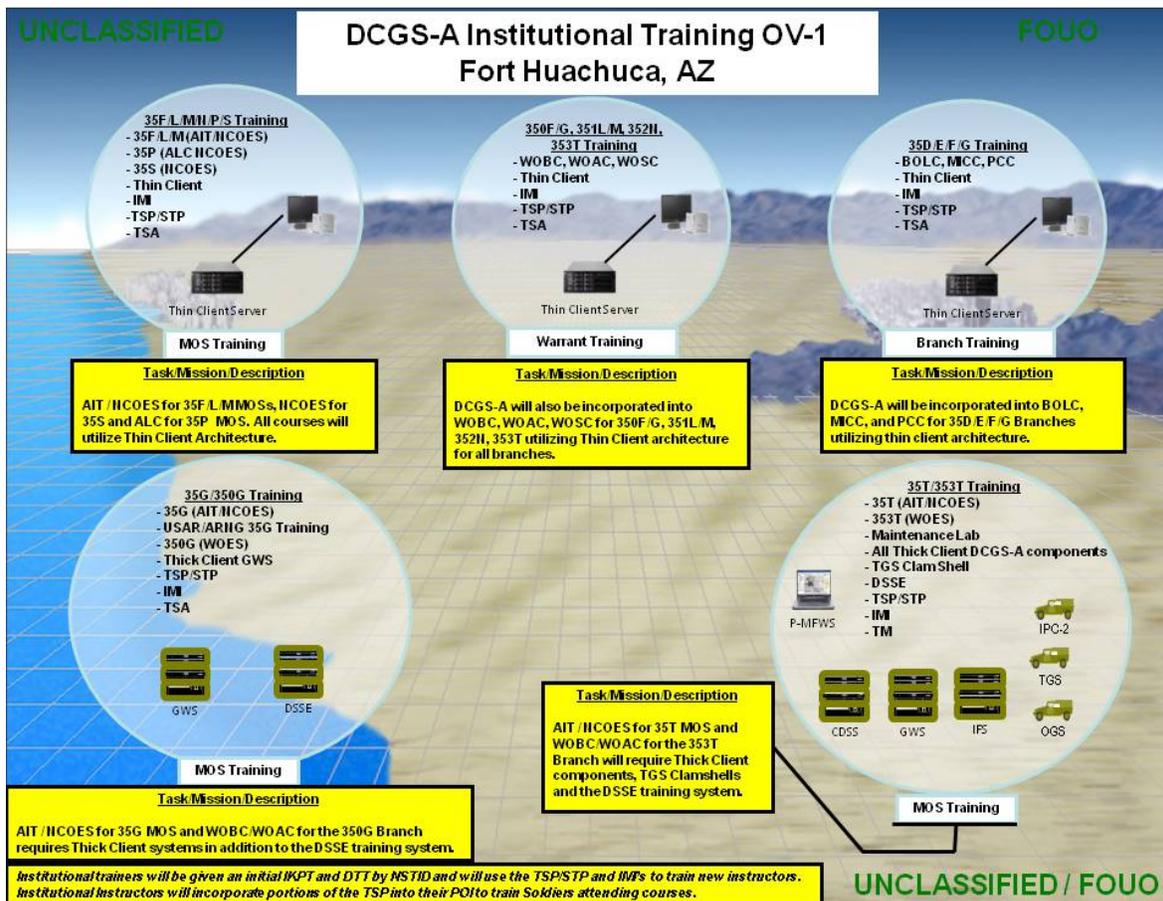
The DCGS-A acquisition strategy will comply with DoD's Army Equipment Modernization Plan.

6.1.1.5.3 General Support Services

The MATDEV will resource TADSS development, procurement, distribution, and sustainment and other services (where required).

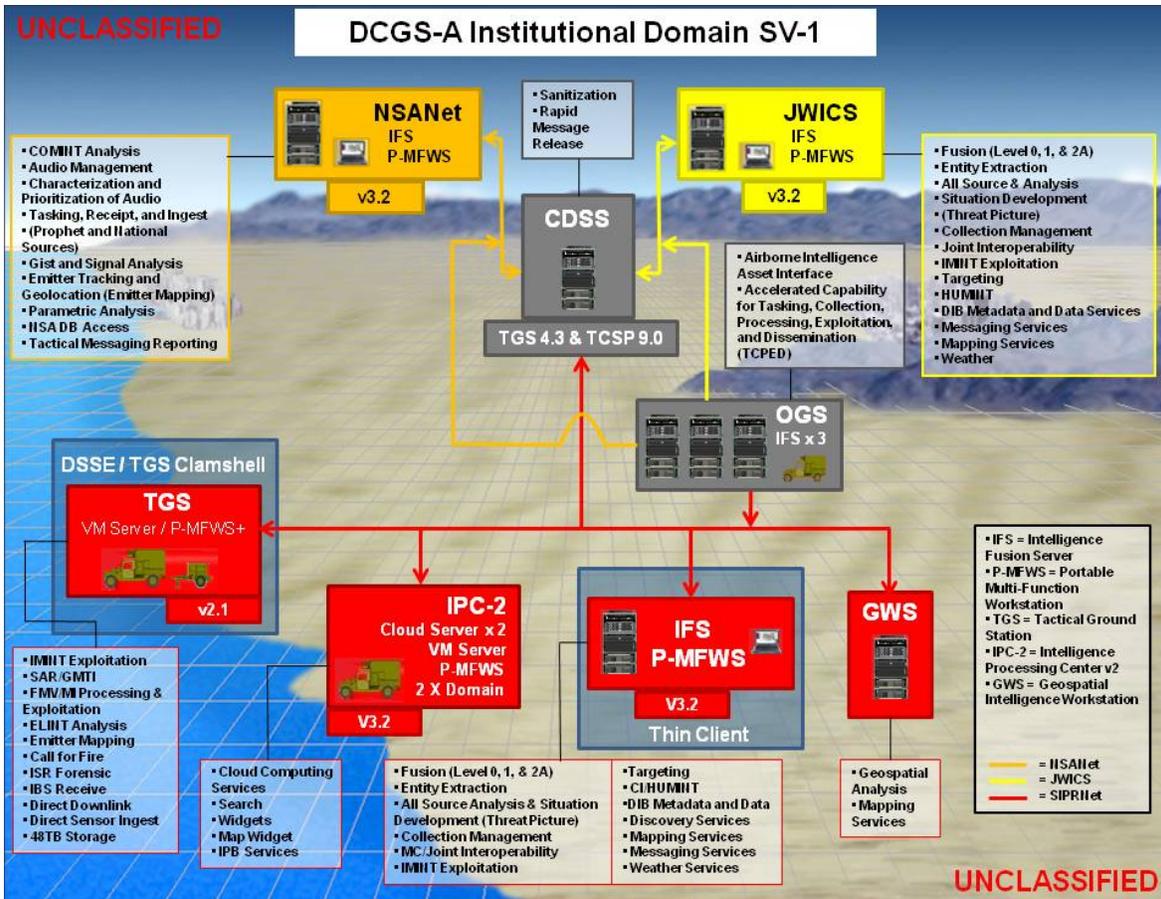
6.1.2 Architectures and Standards Component

6.1.2.1 Operational View (OV)



6.1.2.2 Systems View (SV)

6.1.2.3 Technical View (TV)



IKN access is required to access the following documents. DCGS_A_TV_P1 and DCGS_A_TV_P2 are the files that describe the technical view. The Technical View is comprised of two documents:

The two links below require the user to login to IKN before clicking on them or typing them in your browser.

- Part 1: <https://ikn.army.mil/apps/dms/files/65350>
- Part 2: <https://ikn.army.mil/apps/dms/files/65351>

6.1.3 Management, Evaluation, and Resource (MER) Processes Component

6.1.3.1 Management

6.1.3.1.1 Strategic Planning

DCGS-A training will support the Army transition to a modular force and the Army Force Generation (ARFORGEN) process. Institutional training will include these concepts and growth will be planned for institutional training towards objectives. References include FM 1-01 Generating Force Support to Organizations; the Army Campaign Plan (ACP), Coordinating Draft, Change 3, dated 10 Mar 2006; TRADOC Campaign Plan (TCP).

6.1.3.1.2 Concept Development and Experimentation (CD&E)

The Army G-2 Force Development Test and Evaluation (FDT&E) initiative findings and Brigade Combat Team (BCT) Modernization plan experiments and "spin outs" data collection results will be used by the MATDEV and the TNGDEV, where applicable, to support the concepts for the DCGS-A overarching training strategy.

6.1.3.1.3 Research and Studies

DCGS-A Manpower and Personnel Integration (MANPRINT) Management Plan, The Army Intelligence Master Plan (AIMP), Force Development Test and Evaluation (T&E), and the TCM Best of Breed (BoB) evaluation will be considered by the MATDEV and the individual CoE's for impact on institutional training.

6.1.3.1.4 Policy and Guidance

- AR 350-1 and AR 350-38
- TRADOC Regulations 350-70 and 71-20
- TRADOC Pamphlet 71-20
- TRADOC Pamphlets 350-70-1 thru 350-70-12
- Command training guidance
- Operations Order (OPORD) 00-01 (USAICoE Transformation) USAICoE
- Army Digital Training Strategy
- Battle Command Training Strategy
- Mission Command Training Strategy - Implementation Plan
- Joint Intelligence Training Strategy
- Current doctrinal guidance

6.1.3.1.5 Requirements Generation

The DCGS Capstone Requirements Document (CRD), DCGS Enterprise Initial Capabilities Document (ICD), the DCGS-A Information Systems - Capabilities Development Document (IS-CDD), and the DCGS-A Capabilities Production Document (CPD) provide the system requirements foundation for DCGS-A system training.

6.1.3.1.6 Synchronization

The fielding of the DCGS-A and associated TADSS will be synchronized by the MATDEV with the following as applicable:

- G-3/5/7 published Army Resourcing Priority List (ARPL)
- G-3/5/7 published Dynamic Army Resourcing Priority List (DARPL)
- Army G-8
- Basis of Issue Plan (BOIP)
- TADSS Distribution Plan
- ARFORGEN Cycle
- Institutional Training

6.1.3.1.7 Joint Training Support

DCGS-A institutional training in the ICTC will be capable of supporting Joint service requirements.

6.1.3.2 Evaluation

The Quality Assurance Office (QAO) provides oversight on all institutional training curriculums by evaluating classroom instruction and all associated training documentation and courseware.

6.1.3.2.1 Quality Assurance (QA)

Quality Assurance for the proponent will receive feedback from the users to ensure that training meets the user's need. Feedback will assist the proponent in correcting institutional training domain deficiencies as well as revising the training courses and materials.

6.1.3.2.2 Assessments

The QAO performs assessments of all institutional courses by individual surveys, special surveys and classroom monitoring. Survey results are

provided to the Deputy Commander of Training and all relevant command sections related to a given survey.

6.1.3.2.3 Customer Feedback

Surveys prior to and after training and follow up surveys sent to the unit 6-9 months after leaving the institution are used by the QAO to ensure student feedback is considered when evaluating training, training documentation, and courseware.

6.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)

The USAICoE Lessons Learn team (tasked directly by the USAICoE CG) is part of an overall institutional and M.I. lessons learned effort that provides feedback on institutional training and system usage and applicability. Information identified as relevant to institutional training will be used to focus and shape institutional training improvements.

6.1.3.3 Resource

The DCGS-A MATDEV, as the TLCSM, will provide resources for institutional, training of DCGS-A. Training, Development and Integration (TD&I) and the office of the G-3 will submit the Structure and Manning and Decision Review (SMDR) to ensure the appropriate training resources prioritized and considered within the POM cycle.

DCGS-A MATDEV Training POM (\$ IN K)

	FY14	FY15	FY16	FY17	FY18	FY19
Contract Trainers	\$21,300	\$22,365	\$23,483	\$24,657	\$25,890	\$27,185
Contract Trainer Travel	\$1,702	\$1,787	\$1,876	\$1,970	\$2,069	\$2,172
Printing	\$61	\$64	\$67	\$71	\$74	\$78
Unit Travel	\$972	\$1,021	\$1,072	\$1,125	\$1,181	\$1,241
NSTID Travel	\$729	\$765	\$804	\$844	\$886	\$930
Total	\$24,764	\$26,002	\$27,302	\$28,667	\$30,101	\$31,606

Table 7

Note:Costs are derived from PM DCGS-A analysis.

Training Aids, Training Devices, Simulators, and Simulations (\$ IN K)

TADSS	FY14	FY15	FY16	FY17	FY18	FY19
Simulators	\$2,600	\$2,200	\$1,500	\$550	\$550	\$250

Simulations	\$100	\$100	\$100	\$30	\$30	\$30
GTA	\$50	\$50	\$50	\$25	0	0
Software	0	0	0	0	0	0
Equipment	0	0	0	0	0	0
Printing	0	0	0	0	0	0
Shipment	0	0	0	0	0	0
Sustainment	0	0	\$20	\$10	\$10	\$10
Total	\$2,750	\$2,350	\$1,670	\$615	\$590	\$290

Table 8

Notes:

1. Simulators based on historical vendor cost estimate of IEWTPT TSA (GDC4S-informal)
2. IMI development and initial extended scenario development costs for non-conventional and conventional threat environment, multi-INT focused (in house [USAICoE] historical).
3. GTA based on possible initial product development for complex task GTAs such as system set-up and initialization (in house [USAICoE] historical).
4. Sustainment costs based on percentage of FSE time to support, on site (home-station) simulator training facilitation and troubleshooting (in house [USAICoE] historical).

35T DCGS-A Maintenance Training Labs Requirements

Item	Nomenclature	35T10 DCGS-A LAB QTY O'Neil Hall RM 102	35T10/NCOA (shared) DCGS-A LAB QTY O'Neil Hall RM 138	NCOA DCGS-A LAB QTY O'NEIL Hall RM 108	Price Each	Price Total

*DCGS -A Server	*Dell PowerEdge T710	11	17	17	\$22,894.03	\$1,030,231.35
*DCGS -A Controller	*Dell PowerEdge T110 II	11	17	17	\$4,307.52	\$193,838.40
*DCGS -A Network Appliance	*NetApp FAS2040	11	17	17	\$23,424.87	\$1,054,119.11
*P- MFWS	Dell Latitude E6420 ATG	11	17	17	\$2,544.77	\$114,514.65
Uninterruptible Power Supply for Positions	APC Smart-UPS 2200VA LCD 120V	10	16	16	\$939.00	\$39,438.00
48- Port Gigab	Cisco Catalyst 3560E-	11	17	17	\$3,900.00	\$175,500.00

it Switc h	48TD					
21"Mo nitor	21"Flat- Screen Monitors	11	17	17	\$200.00	\$9,000.00
Keybo ards / Mice / Mouse pads	101-Key KB / 3- Button Optical Mice	12	18	18	\$30.00	\$1,440.00
2- port Keybo ard / Video / Mouse Switc h	2-port KVM, USB input / output	11	17	17	\$75.00	\$3,375.00
Desk for Posit ion	72-inch, sturdy for classroom use / monitor arm mount	10	16	16	\$700.00	\$29,400.00

Monit or Arms for Desk Posit ions		12	18	18	\$150.00	\$7,200.00
Chair for Desk Posit ion	Ergonomic	11	17	17	\$250.00	\$11,250.00
UPS for Instr uctor Posit ion	APC Smart-UPS XL 3000VA	1	1	1	\$1,450.00	\$4,350.00
*DCGS -A Centr al Cours eware Serve r	*Dell PowerEdge R910	1	1	1	\$23,280.93	\$69,842.79
Unint errup	APC Smart-UPS	1	1	1	\$1,150.00	\$3,450.00

table Power Suppl y for Serve r	2200VA RM 2U LCD 120V					
Rack with Termi nal	PowerEdge Rack 2420	1	1	1	\$1,122.87	\$3,368.61
24- Port Gigab it Class room Switc h	Cisco Catalyst 3560X- 24T-L	1	1	1	\$1,900.00	\$5,700.00
Plasm a Displ ay Units	65"Plasma Display	2	2	2	-	-
DCGS- A Mobil e Serve r	-	11	17	17	-	-

Software / License						
Windows Server 2003 or 2008 Software / License	-	12	18	18	-	-
Windows XP / Vista / 7 Software / License	-	11	17	17	-	-
Instructor Administrative	NASW-connected System	1	1	1	-	-

Use System						
SIPRNet Machine	SIPRNet Connected System	1	1	1	-	-
Smart Podium / Instructor Position	(Must hold same systems as student positions, with additional instructional materials as necessary)	1	1	1	-	-
*Secure Smart KVM Switch for Podium	(Must meet security guidelines for switching between	1	1	1	-	-

m / Instr uctor Syste ms	Classifie d / Unclassif ied Networks)					
Stylu s- writa ble smart scree n and displ ay for instr uctor		1	1	1	-	-
Uncla ssifi ed Resea rch Posit ions	NIPRNet- connected system	2	2	2	-	-
Upgra de Power in Class	O'Neil Hall, Rms 172&138 (FY13), 102	1	1	1	-	-

room	(FY14)					
Upgra de Air Condi tioni ng in Class room	O'Neil Hall, Rms 172&138 (FY13), 102 (FY14)	1	1	1	-	-
Upgra de Netwo rk Infra struc ture in Class room	O'Neil Hall, Rms 172&138 (FY13), 102 (FY14)	1	1	1	-	-
Add NIPRN et Drops	O'Neil Hall, Rms 172&138 (FY13), 102 (FY14)	3	3	3	-	-
Add SIPRN et Drop	O'Neil Hall, Rms 172&138 (FY13),	1	1	1	-	-

	102 (FY14)					
Add CMD Net Drop	O'Neil Hall, Rm 172 (FY13), 102 (FY14)	1	1	1	-	-
Add SECRET CMD Net Drop	O'Neil Hall, Rms 172&138 (FY13), 102 (FY14)	2	2	2	-	-
Upgra de Class room for SECRET T Open Stora ge	O'Neil Hall, Rms 172&138 (FY13), 102 (FY14)	1	1	1	-	-
Approximate Total Price (Less Software and Necessary Infrastructure Upgrades)						\$2,756,017.91

Table 9

Notes:

1. Items marked with "*" are MATDEV funded.
2. Based on analysis from the 35T Course at USAICoE.

7.0 Operational Training Domain

7.1 Operational Training Concept and Strategy

The MATDEV is responsible for providing the resources for the NET and fielding of DCGS-A in the operational training domain utilizing the Army's Planning, Programming, Budgeting, and Execution System (PPBES) process. As DCGS-A is fielded; units will receive DTT and a comprehensive NET; planned, scheduled and resourced by the MATDEV. The NET will provide leave behind training materials and embedded DCGS-A TSP. Embedded Training (ET) using the IEWTPT DCGS-A TSA, included as a component of the TSP, will be the foundation for sustainment training in the operational training domain. Tasks embodied in current systems which migrate to DCGS-A that are implied or trained as part of existing training strategies, will be provided as refresher training prior to or during the scheduled NET by the POR MATDEV, the DCGS-A MATDEV, or as a combined effort, as applicable. The DCGS-A embedded TSP will provide numerous training tools to support sustainment training such as NET POI, TM, Tasks, PEs, ET (IMIs and IEWTPT with realistic training vignettes), and a training website supporting access to the training information repository via IKN and DCGS-A TSA with access to IEWTPT providing realistic training vignettes. Operational training for DCGS-A, in addition to the items identified in the TSP, will be supported by LVCG-ITE accessible by operational DCGS-A systems. The LVCG-ITE architecture will include home station MTC simulations capabilities (Joint Land Component Constructive Training Capabilities [JLCCTC] and "low overhead" simulations), regional training servers, Army Foundry Intelligence Training Program, and the TRADOC Training Brain Operations Center (TBOC) (once implemented). Unit Commanders will use: AR350-1; ADR and ADRP 7.0; Army Training Network (ATN); CATS; DTMS and other guidance to plan and execute training enabled by the DCGS-A TSP. The Commander may choose the training approach and venue which best accommodates the local training requirements and objectives (METL). At the BCT level, unit training will be supported by IMCOM resourced unit (BCT) Sensitive Compartmented Information Facility (SCIF) areas which will allow daily operational DCGS-A system access for "tactical over-watch" or "reach" access. This home-station to operational environment access will give the Commander the option for "over the shoulder" Live Environment Training (LET) while in garrison. The DCGS-A MATDEV will resource all training systems and licenses for the Operational Training Domain IAW the DCGS-A CPD IS-CDD BOIP.

7.1.1 Product Lines

7.1.1.1 Training Information Infrastructure

7.1.1.1.1 Hardware, Software, and Communications Systems

DCGS-A operational hardware and software will provide the foundation and infrastructure for DCGS-A training in the operational domain (to include home-station training). The MATDEV will provide the Ground Intelligence Support Activity (GISA) and appropriate DCGS-A server capability to serve as a hub for CONUS based units who desire to use operational SIPRNet and/or JWICS data supporting individual and collective sustainment training.

DCGS-A sustainment training at Foundry, CTC, Mission Training Complexes (MTC), and the MCTP will require DCGS-A systems for "white cell", "High Con", training development, and selected classroom instruction. These systems will be provided by The DCGS-A MATDEV IAW the IS-CDD BOIP (feeder data) and supported throughout the system lifecycle. The DCGS-A MATDEV will utilize Thin Client or PM delivered training sets and kits and/or Non PM delivered COTS training sets and kits equivalents, capable of running all current operational DCGS-A software platforms solution when possible. The requirements listed below are derived from the Mission Command Training Strategy (MCTS-IP) (28 Feb 2012):

DCGS-A P-MFWS&DCGS-A IFS System BOI Data (Operational Training Domain)		
Location	DCGS-A P-MFWS	DCGS-A IFS
AJST - Hulburt Air Force Base (AFB), FL	8	2
CAC-T TMD	5	1
C2 Digital Master Gunner (DMG)	2	1
C2 Mission Command Staff Integration Course (MCSIC) support CTD Lab	10	1
Fort Sam Houston	8	1
Signal - Fort Gordon DMG	4	4
Mission Training Complexes		

Fort Hood, TX - MTC Hub	34	1
Fort Bragg, NC - MTC Hub	36	2
Japan - MTC	6	1
Fort Lewis, WA (MTC)	32	1
Fort Carson, CO (MTC)	27	1
Fort Stewart, GA (MTC)	23	1
Fort Campbell, KY (MTC)	29	1
Fort Drum, NY (MTC)	24	1
Fort Knox, KY (MTC)	10	1
Fort Polk, LA (MTC)	10	1
Fort Riley, KS (MTC)	23	1
Fort Sill, OK (MTC)	7	1
Fort Bliss, TX (MTC)	23	1
United States Army Pacific (USARPAC), HI (MTC)	27	2
Fort Richardson, AK (MTC)	9	1
Fort Wainwright, AK (MTC)	8	1
OCONUS		
Eight Army (Korea)	22	1
United States Army Europe - Kaiserslautern and Grafenwoehr, GE	30	2
Joint Multinational Simulation Center (JMSC) - Grafenwoehr, GE	15	1

United States Army Africa (USARAF) - Vicenza, IT	5	1
Battle Projection Centers (BPC)		
Camp Shelby, MS (BPC)	6	1
Fort Dix, NJ (BPC)	6	1
Camp Attebury, IN (BPC)	6	1
Camp Bullis, TX (BPC)	6	1
Camp Parks, CA (BPC)	6	1
United States Army Reserve (USAR)		
1/75th Southern Training Division - Houston, TX	7	0
2/75th Atlantic Training Division - Fort Dix, NJ	7	0
3/75th Great Lakes Training Division - Fort Sheridan, IL	7	0
4/75th Gulf Training Division - Birmingham, AL	7	0
5/75th Pacific Training Division - Camp Parks, CA	7	0
USAR Intelligence Support Centers		
Southeast - Fort Gillam, GA	8	1
Northeast - Fort Dix, NJ	8	1
North Central - Fort Sheridan, IL	8	1
Western - Camp Parks, CA	8	1

Southwest - Camp Bullis, TX	8	1
United States Army National Guard (ARNG)		
Camp Dodge, IA MTC	15	1
Fort Indiantown Gap, PA MTC	5	1
Fort Leavenworth, MO MTC	13	1
Total	643	49

Table 10

Combat Training Center Requirments

CTC	Ops Group		LTP		Unit Use				Total
	P-MFWS	IFS	P-MFWS	IFS	P-MFWS	IFS	P-MFWS	IFS	
NTC	10	3	14	1	40	6	64	10	
JRTC	10	3	14	1	40	6	64	10	
JMRC	10	3	14	1	40	6	64	10	
MCTP	60	5	18	0	N/A	N/A	60	5	
Total	90	14	60	3	120	18	252	35	

Table 11

Note:Based on analysis from CTC-Directorate.

DCGS-A Foundry Site Requirements

Location	P-MFWS	IFS
Fort Hood	26	1
Fort Bragg*	28	2
Fort Lewis	26	1
Fort Bliss	26	1
Fort Campbell	26	1
Fort Carson	26	1
Fort Drum	26	1
Fort Riley	26	1
Fort Stewart	26	1
66th M.I. (Europe)	26	1
500th M.I.	26	1
Total	288	12

Table 12

Note: *Equipment will support the Fort Bragg, NC Foundry site and the GISA DCGS-A University

7.1.1.1.2 Storage, Retrieval, and Delivery

Simulations for training scenarios will be available using the DCGS-A TSA and the IEWTPT TCC. The DCGS-A TSP and IMIs will be embedded by the MATDEV in the DCGS-A software baseline. DCGS-A IMIs will also be located on the Army DLS. All DCGS-A training material will be maintained by the TNGDEV on all IKN websites to include IKN (Unclassified), IKN-SIPR (IKN-S), and IKN-Joint Worldwide Intelligence Communication System (IKN-JWICS). The IKN websites are listed below:

- IKN: <https://ikn.army.mil/portal>
- IKN-S: <https://ikn.army.smil.mil> or <http://icon-s.army.smil.mil>
- IKN-JWICS: <https://ikn.hua.ic.gov>

Training products such as (CATS Tasks and Drills) will be delivered to the operational forces through the DTMS.

7.1.1.1.3 Management Capabilities

All DCGS-A systems will have access to products developed via the Army's DLS associated websites.

7.1.1.1.4 Other Enabling Capabilities

Not Applicable

7.1.1.2 Training Products

The TNGDEV will determine the requirements, as well as verify and validate, all training products developed by the MATDEV IAW AR 350-1. DCGS-A is responsible for providing resources to initiate and maintain the operational relevance of the training capability for organizations equipped with DCGS-A. The MATDEV will develop, maintain, and store trainings products in approved digital storage locations. These approved locations will include, but are not limited to, the CAC - approved automated development system IAW TR 350-70 and associated TRADOC Pamphlets, DLS, and IKN for delivery to the operational forces and reflected through the DTMS.

7.1.1.2.1 Courseware

The MATDEV will develop and create digitized training products and documentation to enable user access and delivery of these products. This concept will be the foundation for training development and digitized

documentation within the DCGS-A TSP. The TSP will be developed in compliance with AEA under DISR, ATIA, CTIA, and accepted DoD standards (i.e. SCORM) will be implemented in the design and development of embedded and distributive learning products. Specific items planned for delivery are:

- LPs at key stroke level, formatted in the CAC - approved automated development system IAW TR 350-70 and associated TRADOC Pamphlets and provided in approved TRADOC, DoD, and ATIA formats (tutorials on basic functionality).
- There will be an IMI for all system user interfaces both operator and maintainer as applicable, at IMI level 4 IAW TP 350-70.

Note: IMIs will be incrementally delivered with growth toward level 4.

- Applicable software and hardware TMs
- SUM

7.1.1.2.2 Courses

The following courses will require a current DCGS-A software training capability provided by the MATDEV:

Foundry: The Foundry program is an Army G2/INSCOM led and resourced training program that assists Commanders and G2s by serving as the foundation and coordination point to obtain MI training opportunities otherwise not available at the tactical echelon or through the institutional training system. Additionally foundry provides an interim solution to MI systems and concepts to assist commanders with sustainment training opportunities prior to objective DCGS-A TSP development/delivery and BCTS integration. The Army Foundry Intelligence Training Program is accomplished IAW AR 350-32.

Mission Training Complex (MTC): The MTC provides battle command and staff training, training support, and publications to Soldiers and units to prepare for ULO in Joint-Interagency-Intergovernmental-Multinational Operations (JIIM). PM delivered training sets and kits will be utilized, when feasible, to run the DCGS-A software. If it has been determined that PM delivered training sets and kits are not feasible, the MATDEV will ensure that the software is capable of running on non-PM delivered COTS training sets and kits purchased by or already existing in the MTC system infrastructure.

Mission Command Training Program (MCTP): MCTP conducts or supports combined arms training that replicates JIIM in a COE, at worldwide locations, in accordance with the ARFORGEN model. Training is provided for BCTs, Divisions, Corps, ASCCs, Joint Force Land Component Commander (JFLCCs), and Joint Task Force (JTFs) in order to create training experiences that enable the Army's

senior mission commanders to develop current, relevant, campaign-quality, joint and expeditionary Mission Command instincts and skills. The DCGS-A NET POI and leave behind TSP, to include tailored DTT, will be provided by the MATDEV to the MCTP staff at the time of fielding. PM delivered training sets and kits will be utilized, when feasible, to run the DCGS-A software. If it has been determined that PM delivered training sets and kits are not feasible, the MATDEV will ensure that the software is capable of running on non-PM delivered COTS training sets and kits purchased by or already existing in the MCTP system infrastructure.

7.1.1.2.3 Training Publications

The MATDEV will develop all applicable training publications and provide them as part of NET/Delta training. All training publications will be a part of the TSP and covered under paragraph 7.1.1.2.4.

7.1.1.2.4 TSP

DCGS-A TSPs will provide a structured training program that supports Soldier and leader training. The MATDEV will develop the TSP using the TRADOC ADDIE process and the CAC - approved automated development system IAW TR 350-70 and associated TRADOC Pamphlets. The DCGS-A TSP will include, but is not limited to, the POI, system CTL, LP, student handouts, STPs, multimedia presentations (PowerPoint), and evaluations (to include a System Training Exercise scenario). The TSP will also include supporting data for training and evaluation, TMs, SUM, integrated ET (IMIs), DCGS-A TSA to support IEWTPT IAW the IEWTPT STRAP, and any other TADSS needed to support NET and sustainment training.

7.1.1.3 TADSS

All training products, TADSS and training related materials will be included in the DCGS-A TSP and developed by the MATDEV. The training information infrastructure relies on an overarching constructive simulation architecture that drives constructive simulation scenarios to stimulate each DCGS-A operator workstation through the TSA component of the IEWTPT. The DCGS-A TSA within this architecture will support a fully functional collaborative and net centric training environment. It will replicate the system data/information exchange to include ISR platform simulations and analyst to analyst collaboration.

7.1.1.3.1 Training Aids

The DCGS-A MATDEV will resource applicable training aids required for DCGS-A operational training. These aids will consist of but are not limited to the student handouts, STPs, multimedia presentations (PowerPoint), and integrated ET.

7.1.1.3.2 Training Devices

The DCGS-A MATDEV will resource the operational training devices with associated hardware and software required to accomplish DCGS-A training. The IEWTPT is the supporting training device of DCGS-A fielded by PEO-STRI. The IEWTPT consists of functional grouping of capabilities referred to as the TCC, TSA, and the constructive simulation. The TCC is a "server stack" (fielded within the Mission Command Training Support Program by PM IEWTPT) that supports non-system training of MI tasks and skills. The TCC leverages the NSC developed constructive simulation to provide individual and collective training in support of MI Commanders training objectives. The TCC enhances constructive simulation data to replicate ISR payload collection. It also includes exercise control and management tools to support scenario development. The MATDEV is responsible for the resourcing and development of the TSA (IAW the IEWTPT CPD). The TSA is the primary training device intended to support DCGS-A system training. It serves as the ET capability for the system in "stand-alone" mode and the interface to the constructive exercise in the "networked" mode. The TSA creates a virtual data environment for DCGS-A operators/analysts to use operational system tools on manageable simulated data for training and evaluation. The DCGS-A TSA provides sustainment and proficiency training for the operators, crews, battle commanders, and the battle command staff; additionally, it provides an after action review (AAR) capability to assess and provide feedback on training proficiency. The constructive simulation will consist of a scenario approved by the TNGDEV and implemented by the IEWTPT IAW with the IEWTPT CPD. The scenario must stimulate all facets of DCGS-A hardware and software functionality that will support the institutional domains ability to conduct a collective capstone event.

7.1.1.3.3 Simulators

Not Applicable

7.1.1.3.4 Simulations

DCGS-A, as an operational intelligence system, provides access to multi-source, multi-INT data and information unlike any previous or legacy MI system. This unprecedented and robust capability drastically affects overarching simulations requirements in a way not previously realized. DCGS-A systems enable analysts to reach out, retrieve, sort, analyze, and report using "data mining", visualization, collaboration, and web based reporting tools. Metadata and associated information in a variety of structured and unstructured forms is available in multiple and assorted databases across the DCGS-A enterprise network. Previous legacy MI systems primarily relied on formatted, message based communications and more structured data access primarily distributed via USMTF; it was "push" system (for legacy) vice DCGS-A's "pull" of data. Considering this DCGS-A requires simulations and simulations interfaces for training which replicate this data environment or enterprise. DCGS-A training simulations must support individual entity identification and tracking (personalities/small platforms) as well as collective unit representation (from squad to subsequently higher echelons) to replicate all phases of modern combat operations. To accomplish this, DCGS-A must be compatible with current and future ERF and MRF. This includes legacy constructive simulations such as TACSIM and JCATS, and future simulations as part of JLCCTC such as WARSIM and OneSAF. IEWTPT, as a simulation interface for individual ISR operator stimulation will be a critical part of the DCGS-A training simulation architecture and must be planned as a critical component of DCGS-A simulations architecture.

Implementation of DCGS-A into existing training simulations center architectures (at CTC, MTC, and MCTP) requires careful consideration and a thorough site survey and may require MATDEV funding to ensure DCGS-A systems are realistically enabled within the total LVCG - ITE training simulation environment. Training/simulation center integrators and exercise designers must be aware of these unique integration requirements for DCGS-A and the limitations of current simulations in order to take full advantage of DCGS-A systems for training. The DA G2 DCGS-A Simulation Tiger Team (established 1QTR FY08) determined that several changes to existing simulations architectures were required to enable DCGS-A systems be fully and accurately utilized within the LVCG - ITE training simulations construct. These changes include three basic areas of consideration which must be addressed: installation, configuration, and integration. Each has critical subtasks, that if not addressed, can essentially preclude successful use of DCGS-A in a collective training exercise.

DCGS-A requires unique architecture interfaces for simulations and training center installation. Each organizational integrator must perform an internal assessment of their current Sim Center capabilities to take optimum advantage

of DCGS-A integration. The DCGS-A MATDEV must develop simulations center integration guidelines and a tailored NET POI for training the Sim Center exercise and operations staff. This should include unique considerations and planning for DCGS-A simulations interfaces, information flow/data exchange, and integration with other BCSs.

7.1.1.3.5 Instrumentation

Not Applicable

7.1.1.4 Training Facilities and Land

7.1.1.4.1 Ranges

Not Applicable

7.1.1.4.2 Maneuver Training Areas (MTA)

Not Applicable

7.1.1.4.3 Classrooms

Not Applicable

7.1.1.4.4 CTCs

CTCs enable units to train in unified land operations, executed through decisive action by performing army core competencies, guided by mission command. Units will train at CTCs by utilizing CTC fielded DCGS-A systems. CTC staffs also require DCGS-A workstations for "white cell" development and "High Con" support simulating the rotating unit's next higher headquarters and related intelligence activities. The DCGS-A MATDEV will program, resource, and field DCGS-A systems to CTCs according to the DA G8 LOA. CTC staffs will integrate DCGS-A system components, functionality, and applications within applicable CTC training events. Additionally, CTC staffs may require DCGS-A systems for LTP and ad hoc training/familiarization. The MATDEV will coordinate with the CTC Commander to ensure the appropriate DCGS-A network configuration is implemented. The DCGS-A NET POI and leave behind TSP, to include tailored DTT, will be provided by the MATDEV to the CTC staff at the time of fielding. The DCGS-A MATDEV, as the TLCSM, will be responsible for all hardware and software upgrades required to ensure CTC DCGS-A system remain current and operational.

7.1.1.4.5 Logistics Support Areas

The DCGS-A MATDEV will conduct a logistics support analysis for gaining units prior to delivering equipment and resources to ensure operational training requirements are adequately planned for and provided. The MATDEV and gaining units will coordinate with the PEO-STRI and CECOM SEC for LCCS beyond the initial POM.

7.1.1.4.6 Mission Command Training Centers (MCTC)

7.1.1.5 Training Services

7.1.1.5.1 Management Support Services

The MATDEV will resource training management support services. DCGS-A will use a LCMS, IAW AR 70-1, for standardized development SCORM and management of training modules and documentation.

7.1.1.5.2 Acquisition Support Services

The DCGS-A acquisition strategy will comply with DoD's revised information technology acquisition process IAW Army Modernization Plan 2012.

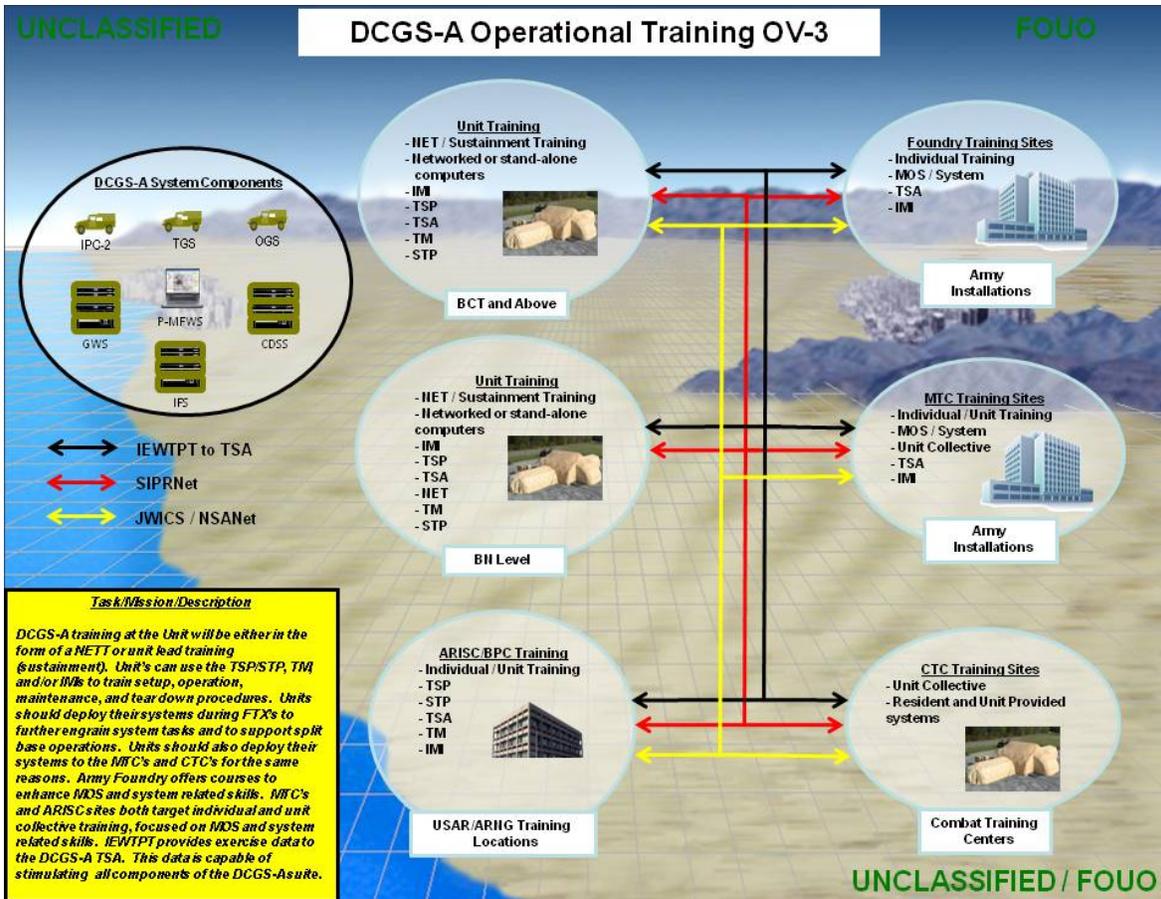
7.1.1.5.3 General Support Services

The MATDEV will resource TADSS development, procurement, distribution, and sustainment and other services (where required).

7.1.2 Architectures and Standards Component

7.1.2.1 Operational View (OV)

7.1.2.2 Systems View (SV)



7.1.2.3 Technical View (TV)

See paragraph 6.1.2.3.

7.1.3 Management, Evaluation, and Resource (MER) Processes Component

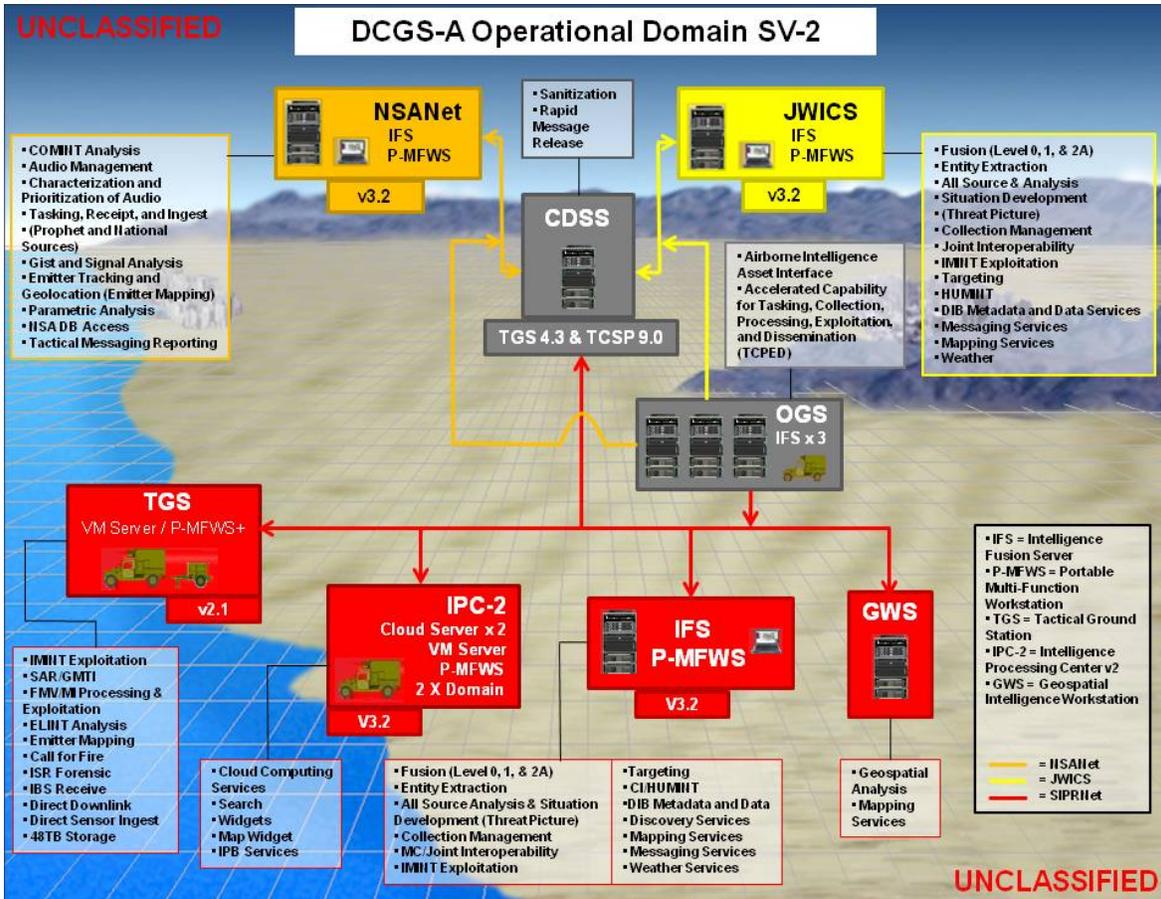
7.1.3.1 Management

7.1.3.1.1 Strategic Planning

DCGS-A training will support the Army ARFORGEN process.

7.1.3.1.2 Concept Development and Experimentation (CD&E)

The Army G2 FDT&E initiative findings and BCT Modernization plan experiments and "spin outs" data collection results will be used by the MATDEV and the TNGDEV, where applicable, to support the concepts for the DCGS-A



overarching training strategy.

7.1.3.1.3 Research and Studies

DCGS-A MANPRINT Management Plan, The AIMP, Force Development T&E, and the TCM BoB evaluation will be considered by the MATDEV and the individual CoE's for impact on operational training.

7.1.3.1.4 Policy and Guidance

- AR 350-1, AR 350-32, and AR 350-38
- ARTEP 34-308-31 MI Gunnery
- Applicable TRADOC regulations and pamphlets
- Command training guidance
- Army Digital Training Strategy
- Battle Command Training Strategy (BCTS)
- Mission Command Training Strategy - Implementation Plan (MCTS-IP)

- Joint Intelligence Training Strategy
- Current doctrinal guidance
- Unit SOP

7.1.3.1.5 Requirements Generation

The DCGS CRD, the DCGS-A CDD, the DCGS-A IS-CDD, and the DCGS-A CPD provide the system requirements foundation for DCGS-A system training.

7.1.3.1.6 Synchronization

The fielding of the DCGS-A and associated TADSS will be synchronized by the MATDEV with the following as applicable:

- G-3/5/7 published ARPL
- G-3/5/7 published DARPL
- BOIP
- TADSS Distribution Plan
- ARFORGEN Cycle
- Institutional Training

7.1.3.1.7 Joint Training Support

DCGS-A architecture, guided by the DoD DCGS concept, will support joint operational training.

7.1.3.2 Evaluation

A Post Fielding Training Effectiveness Analysis (PFTEA) conducted one year after the fielding of the system will solicit feedback. Upon completion of a PFTEA, appropriate action will be taken by the MATDEV to update/revise training materials. The PFTEA team will provide feedback to the users on findings and actions taken by USAICoE to correct identified deficiencies.

7.1.3.2.1 Quality Assurance (QA)

The TNGDEV will validate all training products developed by the MATDEV prior to incorporation into the Army TSS. The TNGDEV will provide feedback on the fit, form, and function of all training products. All training products will be tested by the Army Test and Evaluation Command (ATEC) during the DCGS-A OT.

The DCGS-A TNGDEV will be the primary QA asset ensuring all training products are accurate and complete.

7.1.3.2.2 Assessments

During NET, Instructors will conduct student checks and the TNGDEV will administer PE's to assess the student comprehension of the each lesson. A System Training Exercise will be conducted at the conclusion of NET to evaluate the overall system proficiency of the unit.

7.1.3.2.3 Customer Feedback

The TNGDEV will use AARs conducted during and at the conclusion of NET/DTT to ensure quality and content of the training satisfies unit requirements, compile all comments received and provide a copy to the MATDEV. The TNGDEV in coordination with the MATDEV will use responses to make immediate modifications and/or supplementations to the NET/DTT if needed.

7.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)

The USAICoE Lessons Learn team (tasked directly by the USAICoE CG) is part of an overall institutional and MI Lessons Learned effort that provides feedback on operational training and system usage and applicability. Information identified as relevant to operational training will be used by the Major Command (MACOM) to focus and shape organizational training improvements. All operational DCGS-A training events will include comprehensive AARs after each event in order to improve future training events.

7.1.3.3 Resource Processes

The DCGS-A MATDEV, as the TLCSM, will provide resources for operational training of DCGS-A. TD&I and the office of the G3 the SMDR to ensure the appropriate training resources prioritized and considered within the POM cycle. Operational training and sustainment training costs are incorporated in table 7 of paragraph 6.1.3.3.

8.0 Self-Development Training Domain

8.1 Self-Development Training Concept and Strategy

The Self Development Domain must be a robust component of the Professional Development Model (PDM) providing every Soldier and Army civilian clear understanding of what success looks like. The PDM can be found at <https://atiam.train.army.mil/soldierPortal/>.

The Army defines self-development as planned, goal-oriented learning that reinforces and expands the depth and breadth of an individual's knowledge base, self-awareness, and situational awareness. Self-development will complement what has been learned in the classroom and on the job, enhance professional competence, and help meet personal objectives. There are three types of self-development:

- **Structured self-development:** Required learning that continues throughout a career and that is closely linked to and synchronized with classroom and on-the-job learning.
- **Guided self-development:** Recommended but optional learning that will help keep personnel prepared for changing technical, functional, and leadership responsibilities throughout their career.
- **Personal self-development:** Self-initiated learning where the individual defines the objective, pace, and process.

The DCGS-A self development strategy will be enabled by the embedded TSP. Self development attributes will be:

- DCGS-A users will have access to the TSP via IKN, IKN-S, IKN-JWICS and DLS.
- DCGS-A TSP and IMIs will be embedded in the DCGS-A software.
- DCGS-A users will be able to use the TSP to conduct Self Development training on every DCGS-A component.
- The DCGS-A MATDEV develop and provide IMIs for all system user interfaces both operator and maintainer as applicable, at IMI level 4 IAW TP 350-70.
- Embedded Training (ET), included as a component of TSP, will be the foundation for the operational training domain and will be an enabler for the self-development training domain.

8.1.1 Product Lines

8.1.1.1 Training Information Infrastructure

8.1.1.1.1 Hardware, Software, and Communications Systems

Embedded Software, (TSP to include IMIs) will be accessible on actual DCGS-A system components. TSPs (to include IMIs) will also be accessible through IKN, IKN-S, IKN-JWICS and DLS through any system connected to the appropriate network.

8.1.1.1.2 Storage, Retrieval, and Delivery

The DCGS-A TSP (to include IMIs) will be available on IKN/IKN-S/IKN-JWICS, the Army DLS, and CD-ROM and will be supported by the MATDEV. The DCGS-A MATDEV will develop UNCLASSIFIED/FOUO DCGS-A IMIs that will be available to all Soldiers via DLS and will be accessible at all Digital Training Facilities (DTF). The IMI will follow DLS guidelines and will be SCORM compliant.

8.1.1.1.3 Management Capabilities

The DLS will be used to develop training products (IMI) delivered in the TSP. All DCGS-A systems will have access to products developed via the Army's DLS associated websites.

8.1.1.1.4 Other Enabling Capabilities

Not Applicable

8.1.1.2 Training Products

8.1.1.2.1 Courseware

The DCGS-A MATDEV is responsible for providing the TSP and IMIs for self development training to ensure system analysts maintain proficiency on all system applications and devices.

8.1.1.2.2 Courses

Not Applicable

8.1.1.2.3 Training Publications

The embedded DCGS-A TSP, resourced by the MATDEV, will be available for self development training.

8.1.1.2.4 Training Support Package (TSP)

See paragraph 6.1.1.2.4.

8.1.1.3 Training Aids, Devices, Simulators and Simulations (TADSS)

8.1.1.3.1 Training Aids

Not Applicable

8.1.1.3.2 Training Devices

Not Applicable

8.1.1.3.3 Simulators

Not Applicable

8.1.1.3.4 Simulations

Not Applicable

8.1.1.3.5 Instrumentation

Not Applicable

8.1.1.4 Training Facilities and Land

8.1.1.4.1 Ranges

Not Applicable

8.1.1.4.2 Maneuver Training Areas (MTA)

Not Applicable

8.1.1.4.3 Classrooms

Not Applicable

8.1.1.4.4 CTCs

Not Applicable

8.1.1.4.5 Logistics Support Areas

Not Applicable

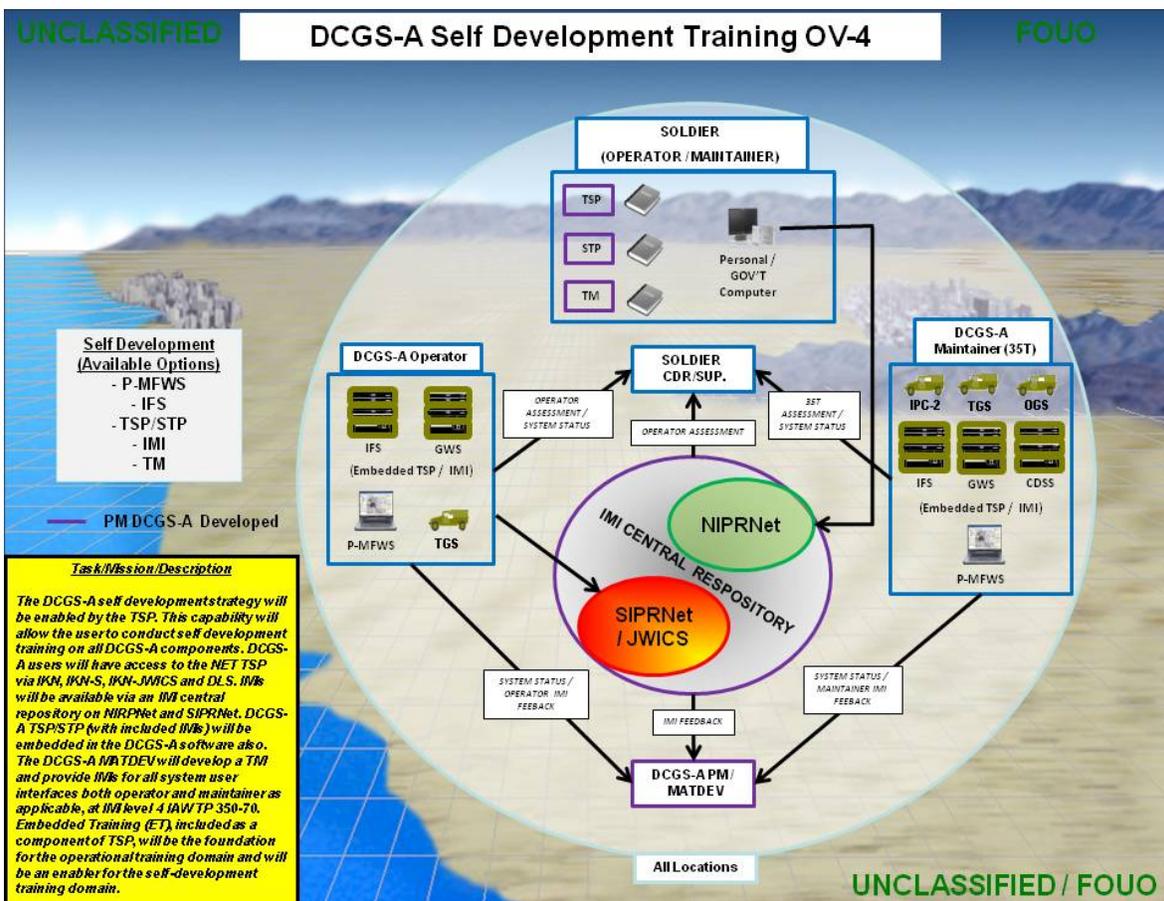
8.1.1.4.6 Mission Command Training Centers (MCTC)

8.1.1.5 Training Services

Not Applicable

8.1.2 Architectures and Standards Component

8.1.2.1 Operational View (OV)



8.1.2.2 Systems View (SV)

See Paragraph 7.1.2.2.

8.1.2.3 Technical View (TV)

See paragraph 6.1.2.3.

8.1.3 Management, Evaluation, and Resource (MER) Processes Component

8.1.3.1 Management

Not Applicable

8.1.3.2 Evaluation

IMI products developed for DCGS-A training will have an evaluation(s) developed within the application(s).

8.1.3.2.1 Quality Assurance (QA)

Not Applicable

8.1.3.2.2 Assessments

Commanders and supervisors will assess Soldier self development training of IMIs using the DLS. DCGS-A IMIs will have self checks and assessments to evaluate the effectiveness of the training.

8.1.3.2.3 Customer Feedback

The DCGS-A MATDEV will develop electronic surveys for all Self Development training products to include DCGS-A IMIs. These surveys will assist the MATDEV and PEO EIS in maintaining relevant IMIs and developing a more robust self development training product for future IMIs.

8.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)

Not Applicable

8.1.3.3 Resource Processes

Self-development and sustainment training costs are incorporated in paragraph 6.1.3.3.

A Milestone Annex

IKN access is required to access Annex A.

The link below requires the user to log in to IKN before clicking on it below or typing it in your browser.

<https://iknsp.army.mil/TDS/nstid/strap/Shared Documents/DCGS-A STRAP Annex A.docx>

B References

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- Information System Capability Development Document (IS CDD) for the Distributed Common Ground System-A (DCGS-A), DRAFT 18 April 2013.
- Operational Requirement Document (ORD) for the IEWTPT, 22 Sep 2004, Device #11-82.
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- Acquisition Decision Memorandum (ADM) DCGS-A Spirals 1-3 dated 20 Nov 2002.
- ADM for DCGS-A dated 8 Sep 2003.
- Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) STRAP, dated 20 Feb 04 and ORD, dated 22 Sep 2004.
- Battle Command Training Strategy (BCTS), Draft, dated 18 Jul 2007.
- Capability Production Document (CPD) for Distributed Common Ground System - Army (DCGS-A) (Mobile Basic), Draft Version 1.0, dated 24 Oct 2008.
- USAICoE G6 DCGS-A v3 Licensing Requirements, dated May 2012.

C Coordination Annex

Organization/POC (Date)	Summary of Comments Submitted (A/S/C)	Comments Accepted/ Rejected									Rationale for Non-Acceptance - S, C
		Accepted			Rejected						
		A	S	C	A	S	C	A	S	C	
v0.2.2 Richard P Athanas 2013/11/05 - 2013/11/08	Document Accepted As Written	0	0	0	0	0	0	0	0	0	-
v0.2.1 Approvals - James A Callahan 2013/11/05 - 2013/11/15	Document Accepted As Written	0	0	0	0	0	0	0	0	0	-

Key
Completed Review with Comments
Completed Review, No Comments
Active Review Occurring



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ATZS-DCT

30 October 2013

MEMORANDUM FOR Director, New Systems Training and Integration Directorate
(ATZS-CDI-N), 550 Cibequa Street, Ft. Huachuca, AZ 85613-7017

SUBJECT: Approval of System Training Plan (STRAP) for the Distributed Common
Ground System – Army (DCGS-A) STRAP

1. The DCGS-A STRAP is approved. Approved STRAP will be posted to the Central Army Registry (CAR) website: www.adtdl.army.mil.
2. Point of contact for this STRAP is Mr. Stephen McFarland, NSTID STRAP Manager (520) 533-5387 (DSN 821), stephen.j.mcfarland.civ@mail.mil.

A handwritten signature in black ink, appearing to read "Lisa K. Price".

LISA K. PRICE
COL, MI
Deputy Commander, Training