

Advanced Combat Direction System (ACDS)

Primary Purpose The Advanced Combat Direction System is a centralized, automated command and control system, collecting and correlating combat information. It upgrades the Naval Tactical Data System (NTDS) for aircraft carriers and WASP class amphibious ships as well as adding the capabilities to TARAWA class ships. A core component of CV/CVN/LHD/LHA class combat systems, ACDS provides the capability to identify and classify targets, prioritize threats and initiate engagements, vector interceptor aircraft to targets, and exchange targeting information and engagement orders within the battle group and among different service components in the joint theater of operations.

Sub-Functions ACDS is a central repository of all tactically significant tracks for the battle group as well as own ship. It consists of equipment, computer programs, and personnel engaged in collecting, correlating, displaying, and disseminating ship and force track information, evaluating track threat potential, assigning weapons, generating and disseminating force orders, monitoring individual and force engagements, and controlling aircraft.

Equipment Requirements Data Processing Group: AN/UYK-43A (V) Computer set (ACDS DSP/TMP) (Block 0/1); TAC-4 Computer Set (DMP) (Block 1), RD-358 (V) 5/UYK or RD-358A (V) UYK Digital Data Recorder/Reproducer; AN/USQ-69 (V) Data Terminal Set: OJ-172 (V) I/O Console and associated peripherals (Block 0/1), Peripheral Emulation System (PES) (replaces RD-358, AN/UYH-3, AN/USQ-69) (LHD 7) Multi LAU Cabinets. Data Display Group: OJ-451 (V) 9/UYQ-21 Computer Display Console; OJ-535 (V) 2/UYQ-21 (V) Display Control Console (Block 0/1): UYQ-70 Display Console (Block 1), Shipboard Display Emulator (LHAs); IP-1357 / UYQ-21 (V) Digital Data Indicator; LS-653/654A/UYQ21 Console Intercommunications Units, Large Screen Display (LSD); and associated peripherals (Block 0/1).

Connectivity Requirements No requirement for monitoring own-ship operations. Communications and data link (LINK 11/14/16) required for monitoring force operations.

Crypto Requirements None

Normal Locations Installed in CV/CVN/LHD/LHA class ships, and

shore sites including SCSC Wallops Island, CDSA Dam Neck, Raytheon Electronic Systems, Integrated Combat System Test Facility San Diego, and Fleet Combat Training Center-Atlantic.

Information Managed

Tactical air, surface, subsurface and electronic warfare environments.

Products Created

Data analysis and data reduction for operational programs and hardware configurations. The system also creates a "picture" based upon software analysis for display of Detect, Control, and Engage (DCE) functions on AN/UYQ-70, AN/UYQ-21 and Large Screen display devices.

Lead Service/Contractor

U.S. Navy/CDSA Dam Neck (Block 0) and Raytheon Electronic Services, San Diego, California (Block 1).

Current Fielding Status

The ACDS upgrade is divided into two phases, Block 0 and Block 1. The Block 0 interim system replaces obsolete NTDS computers and display devices with modern equipment and incorporates both new and upgraded software. Block 1, has completed development, and operates with the equipment provided under ACDS Block 0 while implementing significant improvements in software performance and capabilities. The Block 1 upgrades include modifiable doctrine, Joint Tactical Information Distribution System (JTIDS) and Link-16 for joint and allied interoperability, increased range and track capacity, multi-source identification, National Imagery and Mapping Agency (NIMA)-based maps. The upgrades will ensure that ACDS will continue to meet projected threats that may be encountered. ACDS Block 0 is deployed in nine aircraft carriers, seven Wasp (LHD-1), and five Tarawa (LHA-1) class amphibious assault ships. ACDS Block 1 is installed in three aircraft carrier and two WASP Class amphibious assault ships. ACDS Block 0 and Block 1 ships will transition to SSDS MK 2 in accordance with the Maritime Force Protection Plan.

Known Problems

Although ACDS Block 1 OPEVAL in February 1998 was unsuccessful and included discrepancies in HMI and Reliability, Maintainability, and Availability (RM&A) the program has since incorporated reliability and maturity improvements, completed Navy and Joint Link certification, and is conducting concurrent, COTF observed, testing in conjunction with CEC. No new enhancements/capabilities will be added to the ACDS Block 1 operational computer program as transition to SSDS has begun.

DIICOE Compliance Rating N/A

Point of Contact PEO (TSC) PMS 461E2, (703) 602-2504
ext 102 Mr. C. R. Trude
TrudeCR@NAVSEA.NAVY.MIL

Updated by LCDR Tom Wester, USN, CCSC-01

Advanced Field Artillery Tactical Data System (AFATDS)

Primary Purpose Automated support of the maneuver commander with timely, accurate, coordinated fires and command and control.

Sub-Functions Tactical artillery fire direction, target management, fire support planning, fire mission processing, movement control, and artillery mission support. Also allows maneuver commander's input for High Value and Priority Targets and preplanned triggers. Integrates artillery, mortar, naval gunfire, close air support and air support functions.

Equipment Requirements The Component Control Unit (CCU) contains two 18 GB hard disk drives drive, 1 GB RAM, internal/external LAN card, JAZZ Drive with 2 MB capacity, CD-ROM drive with 600 MB capacity, 1.4MB floppy drive, UPS for 10 min back up, and 2 internal Tactical Communications Interface Modules (TCIM) cards (each allowing for 2 digital nets). Also can be operated on UCU AN/GYG-3 (V).

Connectivity Requirements VHF and HF radio, STU-III 9600 Baud, UHF/SATCOM capable, JVMF BOM with Mil Std 188-220A protocol to communicate with TCO (uses OTH-Gold).

Crypto Requirements Vinson family and KG-84.

Normal Locations Battery Operations Centers, Artillery Fire Direction Centers at battalion level and higher, Fire Support Coordination Centers, Force Fires Coordination Center, Tactical Air Command Center, Direct Air Support Center, Rear Area Operations Center, Supporting Arms Coordination Centers and selected C2 nodes within the US Army and US Marine Corps.

Information Managed Fire plans, target lists, fire support coordination measures, maneuver control measures, enemy/friendly unit locations, firing unit and ammunition information (FireCaps, GURFs, etc.), meteorological and survey information, BDA and movement control.

Products Created Target lists, fire plans, air support requests, order to fire, Fire Support Annex and appendices, and situation reports.

Lead Service/Contractor U. S. Army TRADOC/Raytheon Systems Company. Location: 1010 Production Road, Fort Wayne, IN 46808.

Current Fielding Status Currently fielding Software version 98 to I MEF and expect full USMC distribution NLT end

of FY-2002. Army fielding began in FY-96 and continues through FY-07.

Known Problems

Seamless integration of intelligence/sensor data into the target selection process.

DIICOE Compliance Rating

Level 6.

Point of Contact

Capt Adam R. Kubicki, USMC, AFATDS Project Officer
Marine Corps Systems Command C4I IS
(703) 784-0860
DSN 278-0860
FAX (703) 784-0141
email: kubickiar@mcsc.usmc.mil

Updated by

Captain Bob Landis, USAF, CCSC-01

Advanced Tactical Air Reconnaissance System (ATARS)

Primary Purpose	Provides an organic aerial reconnaissance platform to Marine Expeditionary Force and subordinate commanders.
Sub-Functions	Collect and record data-link digital Electro-optical (EO), Infrared (IR) and Synthetic Aperture Radar (HSAR) imagery in a near real-time basis. Provides day, night and all weather capabilities.
Equipment Requirements	Used in Lot XIV and up of the F/A-18D. Majority of equipment housed within 20mm gun space. Requires RUG II (radar upgrade) modifications to the APG-73 radar for SAR capability. Data link pod is required on station 5.
Connectivity Requirements	To use the ATARS data-link, the ground based Navy-Joint Service Image Process System (N-JSIPS), JSIPS, or Tactical Exploitation Group (TEG) will be required. The wiring for the data-link pod will reside solely on station 5 of the aircraft. Challenges still exist in transferring large image files (up to 1 gigabyte) from squadron locations to the rest of the MAGTF.
Crypto Requirements	To be determined.
Normal Locations	Fixed-Wing Marine Aircraft Groups (MAG) within the Marine Aircraft Wings (MAW).
Information Managed	ATARS captures and disseminates (via data link or tape) EO, IR, and SAR imagery to TEG for exploitation.
Products Created	ATARS, working in conjunction with ground-based systems, creates digitally exploitable imagery. The Squadron Ground Station (SGS) or Tactical Exploitation Group (TEG) can produce digital imagery in a variety of formats (NITF, TIFF, JPEG, etc.) on either 8mm tape, CD-R, or 19mm tapes.
Lead Service/Contractor	United States Navy/Lockheed.
Current Fielding Status	Basic ATARS and SGS is IOC. FOC will not be accomplished for two years. Data link and TEG follow-on test and evaluation (FOT&E) scheduled for Spring 2001.
Known Problems	Tape recorders and tapes used in the F/A-18 have a high failure rate.
DIICOE Compliance Rating	Not rated.

Point of Contact

Captains Burton and Kelly (VX-9)
BurtonA@vx9.chinalake.navy.mil
KellyBP@navair.navy.mil
Program Office: Mr Brian Scalpino
ScalpinoBJ@navair.navy.mil

Updated by

Capt V. J. Bunch Sr, USMC, CCSC-01.

Afloat Planning System (APS)

Primary Purpose	Provide shipboard capability for planning, distributing, and employment support of TOMAHAWK Land Attack Missile (TLAM) missions. Provides a three dimensional representation of the target area and flight path and prepares precise aiming points. APS is the shipboard version of a shore-based Cruise Missile Support Activity (CMSA).
Sub-Functions	Mission planning, intelligence, mission analysis, mission route analysis, route planning, and perspective scenes.
Equipment Requirements	Three TAC-4 workstations (TLAM planning system afloat (TPSA) and mission distribution system (MDS)) and the digital imagery workstation suite afloat (DIWSA).
Connectivity Requirements	LAN (Ethernet), STU-III, generic front-end computer processor (GFCP) Software version 4.3.3 and 4.3.5, known as GFCP-I for surface ships. Software version 5.1.1 and 5.2.2, known as GFCP-II or APSV14, are for submariners.
Crypto Requirements	None.
Normal Locations	US Navy aircraft carriers (CV/CVN's), four rapid deployment suites (RDS's), and four shore sites.
Information Managed	National imagery, TLAM missions, and routes.
Products Created	Intelligence databases, routes, missile route analysis, route planning, and perspective scenes.
Lead Service/Contractor	US Navy/ GDE, Inc., Boeing Afloat, and TIBURON System Inc.
Current Fielding Status	NSWCDD Dahlgren and NMITC installations completed. All CVNs have been fielded. The Annual Systems Review (ASR) meeting was held 15-16 Nov 99. ASR provided input on the latest status on fielded systems and provided the fleet an overview of improvement and enhancements.
Known Problems	No known problems. However, APS support detachments have been formed to support the fleets and CINCs.
DIICOE Compliance Rating	Not rated.
Point of Contact	LCDR McFadden, USN. TOMAHAWK Command and Control, PMA 281. Phone: (301) 757-6146.

Internet: <http://www.tci.navy.mil>

Updated by

CPT Eve M. Geyer, USA, CCSC-01

Air Defense Communications Platform (ADCP)

Primary Purpose	The Air Defense Communications Platform (ADCP) receives, processes, transmits, and distributes tactical data link information within the Marine Air-Ground Task Force and other services.
Sub-Functions	An approved Engineering Change Proposal (ECP) to the ADCP will commence in 3rd QTR FY01. Once the ECP is fielded, it will provide the MACS Commanders an option for the ADCP to either function as an ADCP or Modified ADCP. In the ADCP mode, the ADCP controls the JTIDS terminal and performs the standard primary mission/function of the ADCP. In the Modified ADCP mode, the ADCP interfaces to the AN/TYQ-23 V(4) via a Multi-Channel Interface Unit. This mode adds Fiber Optic Data and Voice link from the ADCP to the AN/TYQ-23V(4), and the AN/TYQ-23 V(4) controls the JTIDS terminal.
Equipment Requirements	Consists of radio and computer equipment housed in a Lightweight Multipurpose Shelter, mounted on a heavy High Mobility Multipurpose Wheeled Vehicle. ADCP tows a diesel generator for electric power.
Connectivity Requirements	N/A
Crypto Requirements	N/A
Normal Locations	Marine Air Control Squadrons (MACS).
Information Managed	The ADCP provides Tactical Ballistic Missile target data from the AN/TPS-59V(3) radar set to joint service units via the Joint Data Network.
Products Created	N/A
Lead Service/Contractor	United States Marine Corps
Current Fielding Status	In 3rd Qtr FY01, the ADCP ECP to interface with the AN/TYQ-23V(4) will commence. Fielding of the ECP will be horizontally, and will be fielded at approximately the same time as the AN/TYQ-23V(4). During the fielding of the ECP, the ADCP software will be baselined.
Known Problems	ADCP is not a modular design; pieces are not reusable by other systems.
DIICOE Compliance Rating	Not compliant.
Point of Contact	Mr. Lawrence A. Bochenek, ADCP/MADCP Project Officer, MARCORSYSCOM PM AD (C4IAD), Quantico VA. Commercial (703) 784-0783, DSN 278-0783,

Updated by

Email bochenekla@mcsc.usmc.mil

Capt Justin Wilson, USMC, CCSC-01.

Air Mobility Command Deployment Analysis System (ADANS)

Primary Purpose	Mission scheduling for aircraft, crew, and mission support resources to maximize the on-time delivery of cargo and passengers. AMC C2 legacy program supporting airlift and tanker planning, scheduling, and analysis during peacetime, crisis, contingency, and wartime.
Sub-Functions	Decision support tools to manage information on cargo, passengers to be moved, and the available airlift resources. Tools to schedule missions, analyze schedules, and to contribute the schedule to worldwide command and control systems. Tools to support the scheduling and management of air refueling assets are incorporated into the system.
Equipment Requirements	Client/Workstation operating system.
Connectivity Requirements	ADANS' primary communications media is via network (SIPRNET, etc.).
Crypto Requirements	System has classification of the network it is connected to; requires crypto appropriate for the network.
Normal Locations	ADANS is installed in HQ AMC/DOX, AMC's Tanker Airlift Control Center (TACC), and the alternate TACC. USTRANSCOM has five workstations for SAAM requirements validation, and USAFE has three workstations (two unclassified, one classified) in the Air Mobility Operations Control Center (AMOCC).
Information Managed	Short-range scheduling of air refueling. Airlift flow planning. Planning and tracking AMC aircraft resources. Scheduling for recurring missions by month. Special assignment airlift missions (non-recurring).
Products Created	Schedules produced by planning tools and reports.
Lead Service/Contractor	Developed by Oak Ridge National Laboratory. As of 17 January 1997, maintenance of the software has been assigned to Logicon, Inc. as part of the effort to migrate ADANS and the Combined Mating and Ranging Planning System (CMARPS) into a Combined Air Mobility Planning System (CAMPS).
Current Fielding Status	Scheduled to be replaced by the Combined Air Mobility Planning System (CAMPS), which integrates ADANS functionality with the Combined Mating and Ranging Planning System (CMARPS). The final version of ADANS (v22.1)

was scheduled for release in March 2001.
Termination is scheduled for February 2002.

Known Problems

None identified.

DIICOE Compliance Rating

One identified goal of CAMPS is to provide ADANS functionality in DIICOE compliant software; presumably ADANS is not compliant.

Point of Contact

Charlie Davis (project manager)
(423) 576-8418
(423) 574-8149 (FAX)
e-mail: DavisJC@ornl.gov

or

Michael Hilliard
(423) 576-4147
(423) 574-8149
e-mail: HilliardMR@ornl.gov

Updated by

Capt. David C. Morris, USMC, CCSC-01

Airspace Deconfliction System (ADS)

Primary Purpose	Provide airspace planners with capability to build an Airspace Control Order (ACO) from Combat Airspace Deconfliction Systems (CADS) or direct Airspace Control Measure (ACM) inputs. Also used in subsystem of Contingency Theater Automatic Planning System (CTAPS).
Sub-Functions	Air Tasking Order (ATO) execution to accommodate changing battlefield situation. Three dimensional representation of airspace information and implementation of the Common Mapping Standard (CMS).
Equipment Requirements	ADS uses CAF standard workstations and servers already resident in CTAPS.
Connectivity Requirements	ADS is a fully integrated application in CTAPS.
Crypto Requirements	None
Normal Locations	Joint Air Operations Center (JAOC), Navy Tactical Air Control System (NTACS), Marine Air Command and Control System (MACCS), Air Support Operations Center (ASOC), Control and Reporting Center (CRC).
Information Managed	ADS allows for the entry, viewing, and automated deconfliction of an Airspace Control Measures Request (ACMREQ). The ACO data is made available to APS and CAFMS for use with ATOs and may also be formatted and transmitted as a USMTF message.
Products Created	ADS is used to generate the Airspace Control Order (ACO).
Lead Service/Contractor	US Air Force, Air Combat Command
Current Fielding Status	Fielded.
Known Problems	None
DIICOE Compliance Rating	Same as CTAPS.
Point of Contact	https://wwwmil.acc.af.mil/sc/scc/content/arch/ads.html
Updated by	CPT Reginald E. Bryant, USA, CCSC-01

All Source Analysis System (ASAS)

Primary Purpose	ASAS is the cornerstone of the Army's "intelligence system of systems" supporting automatic intelligence analysis production dissemination and asset management. ASAS fuses threat information from all intelligence disciplines and provides correlated intelligence to maneuver commanders and staffs down to battalion level. Commanders use ASAS products to better comprehend enemy capabilities and intentions. At national and tactical levels ASAS receives and correlates data from national theater and tactical intelligence sensors/sources and correlates the information to produce a common picture of the ground situation. ASAS is the Army's premier intelligence analysis system.
Sub-Functions	ASAS assists intelligence managers to rapidly process and disseminate intelligence information, nominate targets, and manage Intelligence, Surveillance and Reconnaissance (ISR) assets.
Equipment Requirements	ASAS-Light: Panasonic Toughbook CF-71. ASAS RWS Block I: SPARC 10/20. ASAS RWS Block II: ULTRA 10 HCU, General Dynamics VCU. ASAS SS: SPARC 10/20 and ULTRA 2/5/10 systems. ACT-E: Two shelter mounted RWS Block IIs using ULTRA 10 HCUs. CCS: SPARC 20 and ULTRA 1 (SPARC 20 being upgraded this year to ULTRA 10 HCU). TWS: ULTRA 10 HCU.
Connectivity Requirements	SINGARS, NTDR, EPLRS, SATCOM, MSE, TRI-TRAC, JWICS, SIPRNET.
Crypto Requirements	BULK, END-TO-END.
Normal Locations	MI BDE, battalions, brigades, armored cavalry regiments (ACR), separate brigades, divisions, corps, and echelons above corps (EAC).
Information Managed	Message Handling, Intelligence Preparation of the Battlefield (IPB), Targeting, Electronic Warfare, Mapping, Geodesy, Charting, Threat Database, Intel Database, BDA, ISR Management, Situation Analysis, All-Source Analysis and Fusion.
Products Created	IPB, current enemy and friendly situation, imagery, maps, graphics, and other analytic products.
Lead Service/Contractor	U.S.ARMY Lockheed Martin Mission Systems (except for

ASAS-Light)
Austin Info Systems ASAS-Light

Current Fielding Status Block I - Fielded.
Block II - Fielding.
ASAS-L - Soon to be fielded.

Known Problems None

DIICOE Compliance Rating Not rated.

Point of Contact gtirk@pmif.belvoir.army.mil

Updated by Capt Thomas Jarman, USMC, CCSC-01

Ammunition Prepositioning Planning System (APPS)

Primary Purpose	Management of Class V(W) ground ammunition in support of contingency deployment and deliberate planning.
Sub-Functions	<p>The Ammunition Prepositioning and Planning System (APPS) performs the following sustainment functions during deliberate planning or crisis action response at the FMF and at MARCORSYSCOM:</p> <ul style="list-style-type: none">a. Accepts force flow information from MAGTF II or permits construction of forces from scratch.b. Properly computes the Class V(W) time-phased requirement by allowing operator adjustments for non-TPFDDed information and time-phasing which accommodates employment of forces not just deployment of forces.c. Sources that requirement from the Marine Ammunition Requirements Support Order (MARSO) or actual operational inventory.d. Allows for sharing of MARSO sourcing among all deployed MEFs.e. Forwards further sustainment requirements (operational shortfalls) to MARCORSYSCOM via SIPRNET.f. Allows MARCORSYSCOM to source from retail locations directly from inventory extract out of MAARS II.g. Constructs submittal to Single Manager for Conventional Ammunition (SMCA) for joint wholesale sourcing.h. Converts operational, retail and wholesale sourcing into format which can be hand loaded into MAGTF II pending reprogramming of MAGTF II under MAGTF II, Version 4.2 to directly accept the data and build the TPFDD in an automated manner.i. Analyzes the sourcing to compute the Logistics Supportability Analysis required for the Munitions Matrix in each plan.j. Will receive data files from Marine Corps Ammunition Accounting and Reporting System (MAARS II), Marine Air-Ground Task Force-II/Logistics Automated Information System (MAGTF II/LOGAIS), email, SIPRNET via diskette or similar media.
Equipment Requirements	Microcomputer, Pentium 166Mz (minimum), Windows 95 (32 bit operating system), minimum 80Mb available (120 preferred), minimum 32 MB RAM, one CD-ROM drive. If classified data is entered, computer must be suitable for handling classified data.
Connectivity Requirements	Direct connectivity is not required.

Crypto Requirements None.

Normal Locations MARCORSYSCOM, Program Manager for Ammunition. USMC Ammunition Officer at MARFORLANT, MARFORPAC, MEFs. Marine Corps Detachment, U.S. Army Ordnance Missile and Munitions Center and School.

Information Managed Retains AWR MARSO data, inventory data, compares requirement to available assets for operational support.

Products Created Various Reports. Level 4 and Level 2 ULN detail. CIN worksheets.

Lead Service/Contractor USMC/MKI Inc.

Current Fielding Status Fielded since late CY98 delivery.

Known Problems MAGTF II, Version 4.2 was going to have a direct export/import link to APPS. Development of MAGTF II, Version 4.2 is delayed. Ad Hoc queries can provide the data to APPS. However, hand entry of the data developed in APPS (instead of direct automated entry) into MAGTF II is required.

DIICOE Compliance Rating Not rated.

Point of Contact Head, Plans Branch, PM for Ammunition, MARCORSYSCOM, GM13 Diane Smith, DSN: 426-0924.

Updated by Capt Farrell J. Sullivan, USMC, CCSC-01.

Amphibious Assault Direction System (AN/KSQ-1)

Primary Purpose	Provides CATF/CLF capability to launch, monitor, and control a surface amphibious assault and ground maneuver units from ranges up to 100 nautical miles.
Sub-Functions	Digital Data Communications System.
Equipment Requirements	Uses EPLRS/PLRS system integrated with GPS and GPS Interface Unit (GPSIU). Any platform with GPS/GPSIU connected to PLRS BUU makes a dynamic reference point; the AN/KSQ-1 displays on a GCCS-M like map background the PLI database generated by the EPLRS/PLRS master or net control station.
Connectivity Requirements	Requires EPLRS or PLRS.
Crypto Requirements	PLRS crypto KG-58/EPLRS KOK-13.
Normal Locations	Amphibious ships (ARG, LCACs and LCUs). EPLRS/PLRS man pack and surface vehicle units ashore (with or without GPSIU) and for AAVs.
Information Managed	Provides visual display and a map background to display position and location of LCAC and LCUs as well as other units with EPLRS/PLRS capability.
Products Created	None.
Lead Service/Contractor	EPLRS/PLRS: USA and Raytheon; GPSIU: USA and SECHAN; AN/KSQ-1: USN in combination with GOTS/COTS, EPLRS Downsize Net Control Station: USN in combination with GOTS/COTS
Current Fielding Status	Currently fielded in six Amphibious Ready Groups with Milestone III approval.
Known Problems	Ships without organic PLRS Master Stations have experienced some interface problems. This continues to be reduced with better GOTS/COTS upgrades.
DIICOE Compliance Rating	Level 5.
Point of Contact	Program Manager (PMS377) Capt. Wilkins JR, (703) 602-8511/ email: wilkinsjr@navsea.navy.mil
Updated by	Capt Earl W. Daniels, USMC, CCSC-01.

Army Company Information System (ARCIS)

Primary Purpose The purpose of ARCIS is to automate the day-to-day administration operations to support company personnel. These operations include recording personnel information about a soldier including rank, reenlistment dates, MOS skill descriptions, recording training and physical fitness information, generating company reports, family care packages and maintaining duty rosters, and leave information. In addition, various database maintenance functions can be performed including backing up and restoring files, transferring file, creating a diskette for transfer.

Sub-Functions

Equipment Requirements The CPU is an IBM compatible 386 or higher. The system requires a minimum of 4 MEGS of memory (1 conventional and 3 extended). ARCIS will run under DOS, Windows 95, 98. ARCIS will not run properly under Windows NT unless you have dual boot capabilities.

Connectivity Requirements CPU connected on a local area network.

Crypto Requirements N/A

Normal Locations The ARCIS system is usually located in the training office or the orderly room of the company.

Information Managed Field Systems Division-TAPC-FS - The ARCIS system is used For Official Use Only.

Products Created The ARCIS program has a number of reports. Commander Programs has sub-menus for general info, programs, training, and military justice. Reports Company has sub-menus for company reports and rosters/logs. 1SG Programs have sub-menus for duty rosters, leaves, sponsorship program, car registration, change mail address card, and daily status. Data Exchange has sub-menus for SIDPERS conversion, in/out processing, SIDPERS file transfer, export/import, UCAS/SOS, and ARCIS file transfer. User Packages has sub-menus DOS packages and shell to DOS. ARCIS Operations has sub-menus system administration, USER ID/Password, PIC, index rebuild, and ASF/OMF.

Lead Service/Contractor Commander
ATTN: TAPC-FSM-C
200 Stovall Street, Suite 2531
Alexandria, Va. 22332-0493

Current Fielding Status Used throughout the Army.
Current software version: ARCIS A15-01-00,
utilizing a graphic user interface (GUI).

Known Problems DOS based, not Windows based. ARCIS cannot run
on a PC loaded with Windows NT unless you have
the ability to dual boot to DOS.

DIICOE Compliance Rating N/A

Point of Contact Branch chief: Mrs. Wendy Leaked (DSN 221-
3799), Help desk analyst: SFC Martinez (DSN
221-3829), Mrs. Benyard (DSN 221-3843
Internet:
<http://www.perscom.army.mil/tagd/index.htm>

Updated by CPT Sang D. Han, USA, CCSC-01

Asset, Tracking, Logistics & Supply System II+ (ATLASS II+)

Primary Purpose To provide fully integrated supply, maintenance, and readiness capability operating in a client-server environment.

Sub-Functions Supply, maintenance, and readiness.

Equipment Requirements Pentium II Computer running Windows NT on the client side. Servers are HP servers with tape backup. Servers are using a SyBase database.

Connectivity Requirements Local Area Network, primarily done with Cat 5 cable or a phone line for client to server connectivity when using a remote access server. When deployed, a local area network for client to server connectivity, an AN/MRC-142 link between servers for server to server connectivity, and an e-mail link from the deployed unit CSS element to the supporting CSS element in the rear. The link from the deployed CSS to the CSS in the rear is for a transfer of supply requisitions.

Crypto Requirements No internal Crypto. ATLASS II+ is unclassified and does not require secure transmission when used.

Normal Locations Consumer-level user unit (Battalions of the USMC). Consumer level units are tied to the Intermediate level supply and maintenance units via the local network, and to DLA via the Intermediate level supply account. No links to higher headquarters outside the MEF. ATLASS II+ will be used in all USMC ground element units once fielded.

Information Managed All inventory or property of the unit to include end items, consumable class IX repair parts and secondary repairables (at the SMU), supply requisitioning, supply accountability, and all of maintenance management to include readiness information.

Products Created Status reports for supply and maintenance management.

Lead Service/Contractor Space and Naval Warfare Systems Center, Chesapeake, Virginia is the Developer. MANTECH is the sub contractor doing development work. CACI is the subcontractor doing PDSS and implementation work. ATLASS II+ Program Office, Assistant Program Manager is LtCol Adams (703) 784-0875.

Current Fielding Status As of 26 April 2001, ATLASS II+ has been fielded to all II MEF units with the exception of CBIRF. That fielding will be taking place

during June of 2001. Fielding to I MEF will commence in April of 2001 and continue through all of the intermediate levels of the FSSG. Fielding to III MEF will commence in October of 2001 and will continue through all of the intermediate levels of the FSSG.

Known Problems

Problems with the ATLASS II+ software are identified by the Fleet and are submitted via the Software Maintenance Tracking System (SMTS) to the developer at SPAWAR, Chesapeake for review. The Configuration Control Board meets and reviews the trouble calls and gives them priorities. This work is then tasked to the developer and is included in the next scheduled maintenance release. The next such release is schedule for implementation during June of 2001 and will include approximately 50 change proposals/trouble reports/trouble calls.

DIICOE Compliance Rating

Level 5

Point of Contact

Major Bob Rackham (703) 784-0865 and Ms. Beth Barnettson (703) 784-0863. ATLASS Program Office.

Updated by

Capt Gary E. Delgado, USMC, CCSC-01.

Automated Identification Technology (AIT)

Primary Purpose	Provide tracking and visibility of shipment contents via an automated reporting system as shipments move throughout the theater of operations.
Sub-Functions	AIT includes Radio Frequency (RF) Tagging, Bar Codes, Optical Memory Cards, Smart Cards, and Contact Memory Buttons.
Equipment Requirements	Hand Held Interrogators (HHI), Monitor Stations, RF interrogators (RFI)
Connectivity Requirements	Modem or LAN (wire or wireless) connectivity from HHI and RFI to monitor stations.
Crypto Requirements	None.
Normal Locations	Theater Supply Support Activities, Strategic Movement Units.
Information Managed	In-transit visibility of shipment contents as shipment moves through theater.
Products Created	Reports available through In-theater Regional Server or Army Total Asset Visibility/MAGTF II systems.
Lead Service/Contractor	US Army/INTERMEC.
Current Fielding Status	Beginning October 2000 to all MEF and MARFORRES, spiral development with existing industry standards.
Known Problems	RF infrastructure must be installed in theater; concept is to migrate to satellite tracking coverage.
DIICOE Compliance Rating	Not Rated
Point of Contact	Major Craig Penrose, (703) 784-0983, penrosecb@mcsc.usmc.mil. Web info at: http://www.marcorsyscom.usmc.mil/ait/ait%5Fhome.htm
Updated by	CPT Brian North, USA, CCSC-01

Cargo Movement and Operations System (CMOS)

Primary Purpose CMOS is a base-level combat support system used to move cargo in peacetime, and cargo and passengers in support of contingencies. The electronic reporting of cargo movement makes CMOS a vital component of the logistics community's effort to provide in-transit asset visibility.

Sub-Functions Supports packaging and preservation, outbound surface and airfreight operations, inbound surface and air freight operations, deployment passenger processing, OCONUS airlift clearance authority functions.

Equipment Requirements

SYSTEM SERVER: Hewlett-Packard (HP) Apollo 9000 Series 700 Model 750 and HP 9000 D Class Enterprise Server super-minicomputer. Peripheral equipment associated with the central server includes a system console and an Uninterruptible Power Supply (UPS).

CLIENT WORKSTATIONS: Windows 95/98/NT microcomputers, Intermec 4400 Label Printer, Kyocera and LexMark laser printers, and Janus JR2020 Radio Frequency (RF) Automated Identification Technology (AIT) hand-held terminal and docking station.

ROUTERS AND CONNECTIVITY DEVICES: A combination of routers and connectivity devices may be used for communications connectivity at each site, depending on existing networks at the bases. Typically, for a server located at a base, a multi-port router at the Base Network Communications Center (BNCC) will connect the server to the base LAN or the T-1 data links. In turn, routers within the functional user office spaces do routing to the user terminals located at the user's workplace. For a multi-site system located at a DISA facility, the client systems at the bases will use the base infrastructure described above to connect to the server located at the DISA facility.

LABEL PRINTER: Accessed via Windows 95/98/NT Print sharing capability.

Connectivity Requirements The CMOS Version 5.0 features a client-server arrangement. The Hewlett-Packard (HP) 9000/700 series and D Class Enterprise Server super-minicomputer is the database and communications server providing client support to various local and remote system users. The server also provides the majority of system

technical security controls (e.g., discretionary access control, identification, authentication, and audit) through the ORACLE RDBMS and HP-UX Operating System. Users access the CMOS server from Intel-compatible client workstations through an Ethernet 802.3 Local Area Network (LAN). All CMOS functional users operate PCs as client workstations, which access the centralized ORACLE database via SQL*NET software that provides the actual Client-server sessions. Each workstation optionally may have additional peripherals attached such as a laser printer, thermal-transfer label printer, and/or a Hand-Held Terminal (HHT).

Crypto Requirements	Unclassified system.
Normal Locations	Functional work centers within base traffic Management Offices. Planning and Packaging Outbound Surface Freight, Inbound Surface Freight, Outbound Air freight, Inbound Air Freight, Air-lift Clearance Authority (Overseas locations only), Passenger Processing (Deployment Processing).
Information Managed	Unclassified information pertaining to the movement of DoD cargo. Description of cargo, special handling properties, historical movement data, routine movement document information, funds expenditures associated with cargo shipment via commercial means, etc.
Products Created	Various movement documents associated with cargo shipment by both military and commercial shipment modes. Shipping labels. Hazardous materials identification documents. Electronic Data Interchange (EDI) transaction sets.
Lead Service/Contractor	United States Air Force. SOFTWARE DEVELOPMENT CONTRACTOR: Litton-PRC inc., prime contractor; Anteon Corp., subcontractor.
Current Fielding Status	Installed at 192 USAF active duty, Guard and Reserve activities. Installed at 9 US Marine Corps sites. Installed at HQ National Security Agency. Installed at 1 US Army site (Ft. Hood, TX).
Known Problems	None
DIICOE Compliance Rating	Currently Level-3 compliant (non-certified). Further increase in level of compliance is contingent upon future TC-AIMS II migration efforts.
Point of Contact	Program Manager: Mrs. Susan Kirkland DSN: 596-5578

Comm: (334) 416-5578
E-mail: susan.kirkland@gunter.af.mil

Functional: Mr. Mike Howell
DSN: 596-2502
Comm: (334) 416-2502
E-mail: mike.howell@gunter.af.mil

Engineering: Mr. Steven R. Hosner
DSN: 596-2546
Comm: (334) 416-2546
E-mail: steven.hosner@gunter.af.mil

Updated by

Capt George W. Dickey Jr., USMC, CCSC-01

Combat Control System Mark 2 (CCS MK 2)

Primary Purpose Provides 'Los Angeles' and 'Ohio' class submarines with fire-control capabilities for Tomahawk missiles and torpedoes.

Sub-Functions Submarine contact correlation, Over-The-Horizon Targeting (OTH-T), and Target Motion Analysis (TMA).

Equipment Requirements AN/UYK-43 & one UYK-44 Computer (being upgraded to AN/UYQ-70 processors).

Connectivity Requirements TADIXS-A, TADIXS-B, OTCIXS, LINK-11, LINK-16, GCCS, SSCIXS.

Crypto Requirements Electronic Key Management.

Normal Locations US Navy nuclear submarines (Los Angeles and Ohio class) submarine control room and remote displays.

Information Managed Sonar, navigation, and off-ship sensor and contact data for weapons control.

Products Created Targeting to applicable weapons systems and multiple contact management.

Lead Service/Contractor US Navy/Raytheon.

Current Fielding Status CCS MK 2 is currently fielded on about 25% of the submarine force; fielding will be completed in FY 07.

Known Problems The MIL-SPEC design of the system has limited functionality growth potential and system flexibility; an upgrade to COTS technology is underway.

DIICOE Compliance Rating Certified.

Point of Contact Mr. Paul Hixon, Program Manager. Phone (202) 781-1335

Updated by Capt Matthew A. Woodhead, USMC, CCSC-01

Combat Terrain Information Systems (CTIS)
(CTIS)

Primary Purpose	Combat Terrain Information System (CTIS) provides automated terrain analysis and visualization, terrain data base development/update/management/distribution, and graphics reproduction.
Sub-Functions	CTIS is a suite of systems consisting of the: Digital Topographic Support System-Heavy (DTSS-H), DTSS-Light (DTSS-L), DTSS-Deployable (DTSS-D), High Volume Map Production (HVMP) equipment, and DTSS-Survey (DTSS-S).
Equipment Requirements	Army Common Hardware Software 2 (CHS 2) Sun Ultra-2 workstations with 19-inch CRT displays or 20-inch flat panel displays, Hewlett Packard 750C, 755C or HP Design Jet 650C plotters, 126 GB RAIDS (256 GB for FY00 upgrade), full-color scanner, and associated peripheral equipment, including 11 GB of disk storage, a CD-ROM reader/writer, and various other digital input and output devices and various associated peripheral devices.
Connectivity Requirements	CTIS is configured for communications with other Army Battle Command CTIS Systems (ABC) over the ABCS LAN using either fiber optic or copper wire, and includes secure and commercial voice telephone capabilities.
Crypto Requirements	None.
Normal Locations	Echelons Above Corps (EAC). Utilized by Division terrain teams.
Information Managed	Digital terrain data/Digital Mapping Agency products, imagery. Produces laser terrain base intelligence products, mobility, line of sight, special products, avenues of approach, image maps, terrain updates.
Products Created	CTIS functional capabilities include creation of a variety of custom tactical decision aids (TDAs) including: 1) Intervisibility, 2) Mobility, 3) Tactical Dam Analysis Model (TACDAM), 4) IMETS, 5) Terrain Elevation, and 6) Special Purpose Products such as helicopter landing zones. TDAs generated on the CTIS can be output as Map Products that include all applicable marginalia.
Lead Service/Contractor	United States Army/Lockheed Martin
Current Fielding Status	DTSS-H: Fielded, System Upgrade (First 5 Systems) Feb 00 - Apr 00. DTSS-L: Milestone III Decision Jan 98, First Article Test Feb 00

- Apr 00. DTSS-D: Fielded, Cyclic Upgrade
Development Jan - Apr 00. HVMP: ACT II/III
Contract FY00 - FY01.

Known Problems

None

DIICOE Compliance Rating

Not rated.

Point of Contact

David E. Thacker, Project Director CTIS,
dthacker@tec.army.mil, COMM: (703) 428-6876,
DSN: 328-6876. Web info at :
<http://www.tec.army.mil>

Updated by

Capt Doug Mays, USMC, CCSC-01.

Command and Control Personal Computer (C2PC)

Primary Purpose	Command and Control Personal Computer (C2PC) is a Windows-based client software application designed to facilitate military command and control functions by improving situational awareness (SA) and to enhance operational and tactical decisions. When connected to a network, C2PC exchanges position tactical track data with UNIX based Tactical Data Base Management (TDBM) Systems such as Tactical Combat Operations (TCO) system, Intelligence Analysis System (IAS), and Global Command and Control System (GCCS) and provides a complete geographically based situational awareness capability including the capability to display the GCCS Common Operational Picture (COP) data. C2PC features include a robust TrackPlot, Routes planning, and Overlay Edit capability as well as the ability to embed ActiveX objects (MS Word, MS PowerPoint, sound files, etc.) into the tactical map display. In a stand-alone mode (not connected to a network), C2PC operators can produce operational graphics and input track data and upon reconnection to a networked TDBM track data will be synchronized. With this electronic connectivity, C2PC becomes a powerful tool for the commander by providing a Common Tactical Picture throughout his command.
Sub-Functions	Emulates Tactical Combat Operations (TCO) application in a PC environment.
Equipment Requirements	Recommended: Pentium Pro 400 Mhz processor with at least 128 MB RAM. Minimum: P5-120 MHz processor with 32MB RAM.
Connectivity Requirements	Connectivity to SIPRNET or NIPRNET via Windows NT based platform.
Crypto Requirements	Normal network security.
Normal Locations	USMC system for use from MEF operations centers down to squadron and battalion level operations.
Information Managed	Graphical situational awareness, tactical and strategic situations for all warfare areas, Course of Action graphics/overlays, imagery plan overlays and datum conversion to WGS 84.
Products Created	Graphic overlays exportable to Power Point as a .gif file for hardcopy printout. Overlays can be transmitted to other C2PC via the network. C2PC has embedded text file, but no logistics product capabilities.

Lead Service/Contractor	USMC, Marine Corps Systems Command (MARCORSYSCOM)/Inter-National Research Institute (INRI).
Current Fielding Status	Version 5.6.3 is currently fielded to all three MEFs down to the Battalion level. Version 5.8.x will be fielded in 4th quarter calendar year 2001. The new version has user configurable menus and tool bars, drag and drop tracks, edit undo/redo for overlays, GPS distance filtering, compare and merge tracks.
Known Problems	Conversion problems regarding overlay arrows between C2PC and Track Database Manager.
DIICOE Compliance Rating	N/A
Point of Contact	Program Manager Information Systems, Marine Corps Systems Command, Randy Ream, reamra@mcsc.usmc.mil, (703)784-0842.
Updated by	Capt Jamie Knapp, USMC, CCSC-01.

Command and Decision System (C&D) - AEGIS Display System (ADS)

Primary Purpose	C&D is the central processing element of the AEGIS weapons system, synthesizing all elements of ship and link information. ADS is the system that displays own ship sensors and datalink information.
Sub-Functions	Mission execution, safety-related, and mission planning decision processing.
Equipment Requirements	ADS equipment organized into groups - Embarked Command Display Group; Ownship (O/S) Command Display Group; Tactical Console Group; Support Group; Computational Group; and Test Set Group.
Connectivity Requirements	Connectivity handled within ship assets and passed via C&D.
Crypto Requirements	None, other than those internal to the ship.
Normal Locations	CG-47 (Ticonderoga) Class Cruisers and DDG-51 (Arleigh Burke) Class Destroyers.
Information Managed	Tactical and strategic situations for all warfare areas, force unit mission readiness status, force-related doctrine, force command structures, and current weapon inventories.
Products Created	Hardcopy printouts of all ADS displays and videotape of displays.
Lead Service/Contractor	USN/Lockheed-Martin.
Current Fielding Status	Currently used by USN vessels per above.
Known Problems	None.
DIICOE Compliance Rating	Not Rated.
Point of Contact	Chief of Naval Operations N865E1; Theater Air Warfare, CDR Pat Roane, DSN 225-7505
Updated by	Captain Chris Richie, USMC, CCSC-01

Commander's Tactical Terminal (CTT)
(CTT)

Primary Purpose	The CTT is a joint system that provides the war fighter access to information from selected national and theater level, near-real-time intelligence data broadcasts. This information is used to enhance the commander's ability to perform intelligence preparation of the battle space (IPB); maintain situational awareness (SA); receive indications and warnings (I&W); and provide additional targeting information.
Sub-Functions	CTT feeds information into a variety of connected intelligence, operations, air defense, and fire support nodes and systems.
Equipment Requirements	CTT consists of the USC-55 Tactical Command System with its components as the CD-81 Signal Data Processor, RT-1714 Radio Receiver/Transmitter, and cable assembly. CTT has three terminal configurations: CTT1, CTT2 (CTT/HR), and CTT3 (CTT/H3). CTT1 has one full-duplex channel for transmit and receive in TRIXS. CTT2 has two channels for receive in TRIXS, TIBS, TDDS and TADIXS-B. CTT3 has three channels for receive in TRIXS, TIBS, TDDS and TADIXS-B, and one channel for transmit in TRIXS and TIBS.
Connectivity Requirements	All operator selectable functions are manipulated through the host system interface. The CTT has an UHF frequency range of 225 MHz to 400 MHz. Channels are 5 KHz and 25 KHz bandwidth. The CTT provides HAVE Quick II (HQII) frequency hopping control and is frequency and bandwidth compatible with other HQII compatible systems. The CTT operates simultaneously with any number of HQII Nets without mutual interference.
Crypto Requirements	The CTT Communications Security (COMSEC)/Transmission Security (TRANSEC) Function contains two embedded COMSEC algorithms -- KGV-11 and KGR-96. CTT can be operated at the Special Compartmented Information (SCI) or SECRET collateral security levels. Each broadcast received by CTT has unique cryptographic key requirements.
Normal Locations	CTTs are found on fixed, mobile, airborne, and surface platforms. CTT is the most common Intelligence Broadcast Receiver (IBR) currently integrated into Marine Corps systems. CTTs are present in the Tactical Air Operation Center (TAOC) in the Sector Anti-Air Warfare Facility (SAAWF), and Tactical Air

Command Center (TACC) which are parts of the Marine Air Command and Control System (MACCS). Also CTT is found in the Tactical Electronic Reconnaissance Processing and Exploitation System (TERPES), and the Intelligence Analysis System (IAS). Army Systems include Guardrail Common Sensor (GRCS) (RC-12), GRCS Integrated Processing System (IPF), Joint Surveillance Target Attack Radar System (JSTARS) Common Ground Station (CGS), and the Patriot Operations Center. Air Force systems include Rivet Joint (RC-135), U-2 and Contingency Airborne Reconnaissance System (CARS) Deployable Ground Station (DGS). Navy systems include selected aircraft carriers, Aegis Cruisers, and destroyers.

Information Managed

The terminals allow users to receive Integrated Broadcast Service (IBS) networks: Tactical Reconnaissance Intelligence eXchange Service (TRIXS), Tactical Information Broadcast Service (TIBS), TRAP (Tactical Related Applications) Data Dissemination System (TDDS), and Tactical Data Information eXchange System-B (TADIXS-B). In addition to receiving, CTT transmits TRIXS or TIBS data on those respective networks (CTT3 only).

Products Created

CTT receives and transmits compatible broadcast intelligence derived data messages and exchanges those messages with a variety of connected user systems.

Lead Service/Contractor

US Army/Raytheon.

Current Fielding Status

System quantities fielded DOD wide: CTT1 unknown, CTT/HR 280, and CTT/H3 175. The USMC has 36 CTT2 and CTT3s. Fielding is complete.

Known Problems

CTTs frequently lose receive sync without operator notification and fails to regain sync without operator intervention. System is capable of processing incoming messages faster than it is able to output processed messages on its serial interface connection.

DIICOE Compliance Rating

None.

Point of Contact

Mr. David Whitney, HQMC, Intelligence Dept, Plans and Policy Division, Tactical Exploitation of National CAPabilities (TENCAP). Capt Thomas Gainor, USMC, MCCDC, WDID, Requirements, C4I, Intelligence Requirements. GySgt Michael Meyer, MarCorSysCom, C4ISR, PM Intelligence, IBR Project Officer.

Updated by

Capt Michael Brooks, USMC, CCSC-01.

Common Aviation Command and Control System (CAC2S)

Primary Purpose CAC2S will encompass the Marine Air Command and Control System (MACCS) missions and functions, replacing the current Command and Control (C2) suites of equipment and providing a consolidated, downsized, and automated capability to effectively integrate Marine aviation into joint and combined air-ground operations. The CAC2S will integrate aviation C2 functions into an interoperable system that supports the Marine Corps core warfighting competencies of Operational Maneuver From the Sea (OMFTS), Ship to Objective Maneuver (STOM), Sustained Operations Ashore (SOA), and Other Expeditionary Operations (OEO). The system will provide aviation planning, control, and execution functions in an environment designed to enhance efficiency and mission accomplishment of the six functions of Marine aviation.

Sub-Functions

Equipment Requirements

Connectivity Requirements

Crypto Requirements

Normal Locations All MACCS agencies.

Information Managed CAC2S will condense the applications of six separate ACE C2 systems into one combined and coordinated operational system.

Products Created

Lead Service/Contractor USMC/currently in source selection.

Current Fielding Status Contract to be awarded June '01.

Known Problems None.

DIICOE Compliance Rating Not rated.

Point of Contact Valerie Mosqueira DSN 278-5822 x237
MosqueiraVJ@mcsc.usmc.mil

Updated by Capt Mark Tobin, USMC, CCSC-01.

Common User Digital Information Exchange System (CUDIX)

Primary Purpose	Provides a bi-directional, ship-to-shore-to-ship, high speed digital data communications link between a ship and a NCTAMS or NAVCOMMTELSTA.
Sub-Functions	Subscriber stations use the NAVMACS as their terminal. The link consists of a signal Fleet Satellite Communications (FLTSATCOM) half-duplex channel. The link is dedicated to synchronous communications between the CUDIXS shore station and subscribers afloat. Each CUDIXS communications link can operate with up to 60 subscribers.
Equipment Requirements	C3 DTC2 Processors, E Systems VME Chassis, Avonics v(4) IG Group, Avonics RD-397 (v)1 Paper Tape Reader, 2 x 100 MHz Pentium Processors, CUDIXS PRP Software Release 1.3.
Connectivity Requirements	Fleet Satellite Communications (FLTSATCOM).
Crypto Requirements	Maximum Security Level - Top Secret.
Normal Locations	All NCTAMS plus NAVCOMMSTAT Stockton are equipped with CUDIXS systems, operating 2 nets. All Navy ships with NAVMACS installed can receive CUDIXS information.
Information Managed	AUTODIN traffic at GENSER and TS level.
Products Created	AUTODIN traffic at EMERGENCY COMMAND, FLASH, IMMEDIATE, PRIORITY, and ROUTINE precedence.
Lead Service/Contractor	US Navy
Current Fielding Status	Fielded
Known Problems	None
DIICOE Compliance Rating	Not rated.
Point of Contact	Mr. Lawrence G. Smith, DSN 354-2072
Updated by	CPT Brian North, USA, CCSC-01

Communications Air Support Central AN/TSQ-207 (CASC)

Primary Purpose The AN/TSQ-207 CASC replaces the AN/TSQ-155 Improved Direct Air Support Central (IDASC). The DASC is the principle Marine Air Command and Control System (MACCS) air control agency responsible for the direction of air operations directly supporting the ground combat element. It processes and coordinates requests for immediate air support and coordinates air missions requiring integration with ground forces and other supporting arms.

Sub-Functions Supports other tasking as required as a critical component of the MACCS.

Equipment Requirements The AN/TSQ-207 CASC consists of 5 HMMWV's, each mounted with a Lightweight Modular Shelter and an environmental control unit, and an M-116A3 trailer with a MEP-803 Tactical Quiet Generator. The CASC consists of a shelter suite, a communications suite, and an automation suite. The system is scalable, so equipment requirements can vary based on mission requirements. The following is the equipment located in each suite (actual amount will vary):

Shelter Suite
M-1097 HMMWV's
S-788/G Lightweight Multipurpose Shelters
M116A3 Trailers
B0002 18k BTU Environmental Control Units
MEP-803A or MEP-003A Generators
DRASH General Purpose Tents
Communications Suite
AN/GRC-171
AN/VRC-83
AN/VRC-102
AN/VRC-90
SB-3865
Automation Suite
SS-5 Ruggedized Laptop Workstation
SS-20 Ruggedized Workstation

Connectivity Requirements The CASC provides connectivity to the GCE's senior Fire Support Coordination Center, the ACE's Tactical Air Command Center, forward ground combat units, and both fixed and rotary wing aircraft.

Crypto Requirements The Communications Distribution System (CDS) in the CASC supports all radios and crypto devices in the MASS inventory. It also provides the operator the ability to override crypto from each operator's position.

Normal Locations Each MASS has received two AN/TSQ-207 systems.

Information Managed	The CASC primarily manages situational displays of the battlespace, the air tasking order, and requests for air support.
Products Created	The CASC has the capability to create hard copy of the information managed.
Lead Service/Contractor	USMC is the lead service, with MARCORSYSCOM, C4IAD serving as the program sponsor.
Current Fielding Status	The AN/TSQ-207 CASC achieved Full Operational Capability (FOC) in Jul '99, including MACG-18, MACG-28, MACG-38, MACG-48, and MCCES.
Known Problems	None.
DIICOE Compliance Rating	Not rated.
Point of Contact	Major Peter DeVine, MARCORSYSCOM, DASC Project Officer, (703) 784-0764
Updated by	Captain Robert J. Allen, USMC, CCSC-01

Computer Aided Embarkation System (CAEMS)

Primary Purpose	CAEMS is an automated information system that assists commanders at various echelons of the Marine Air Ground Task Force (MAGTF) in the planning, execution, and documentation of amphibious, MPF, and commercial load plans. As a supporting system, CAEMS is designed to accept initializing data from MDSS II, TC AIMS, or MDL as the point of departure for subsequent load planning evolutions.
Sub-Functions	CAEMS supports operation plan development and data entry with a fully featured database, including automatic validity and consistency checks, on-line "help", lookup functions, alternative data displays, and a full set of required embarkation documentation reports.
Equipment Requirements	IBM PC, 200mhz, 32mb Ram, and 2gig harddrive minimum.
Connectivity Requirements	None.
Crypto Requirements	None.
Normal Locations	Transportation Support Battalions, deploying units and supporting ships.
Information Managed	Ship characteristics and embarkation data.
Products Created	CAEMS provides an interactive graphic tool for producing amphibious ships, Military Sealift Command (MSC) ships in a withhold role, and Maritime Pre-positioning Force (MPF) ships load plans and associated reports.
Lead Service/Contractor	USMC/Stanley Associates.
Current Fielding Status	Current version is 6.0
Known Problems	None.
DIICOE Compliance Rating	Not rated.
Point of Contact	Maj Wilson, MARCORSSCOM C4I PMIS DSN 278-0877.
Updated by	Captain William Shannon, USMC, CCSC-01

Computer Aided Load Manifesting System (CALMS)
(CALMS)

Primary Purpose	Rapidly generate load plans and manifests for various series of C-130, C-17, C-141, C-5, KC-135, and KC-10 aircraft.
Sub-Functions	Ensures maximum utilization of aircraft assets. Reports load information in support of in-transit visibility. Provides a standard automated capability to store and edit information on air cargo increments. Allows user to pre-plan cargo loads used in peacetime and in times of war.
Equipment Requirements	IBM PC Compatible (desktop or laptop), 166Mhz processor, 16Mb RAM, 50Mb available on hard drive, 3 1/2" floppy disk drive, Super VGA video (800x600 resolution), Operating System (Windows 95, Windows 98, WinNT, Windows 2000, Windows Millennium Edition).
Connectivity Requirements	Stand alone system that facilitates rapid deployability. Interfaces with LOGMOD-B, Cargo Movement Operations System (CMOS), and MAGTF Deployment Support System (MDSS II).
Crypto Requirements	None.
Normal Locations	Any deploying unit. All services.
Information Managed	Loading specifications and limitations for the mentioned aircraft to create accurate and safe loading plans.
Products Created	Aircraft Load Plans, Deployment Equipment Lists, Chalk (load plan) Item List, Chalk Summary Report, Equipment Pull List.
Lead Service/Contractor	USAF/Air Force Logistics Management Center (AFMLC).
Current Fielding Status	Fully Fielded CALM version 5.6 (Distribution Center for Electronic Distribution of Systems (CEDSS)) https://cedss.ssg.gunter.af.mil/logon.asp Projected release of version 5.7 - October '01.
Known Problems	Load plan printout for C-130J model, editing aircraft specific items. Projecting a maintenance release Mar 01 to correct known problems.
DIICOE Compliance Rating	Currently, there is no DII COE rating. If the program were to be segmented, the DII COE level would be five. However, this segmentation creates difficulties in installation and run speed. No segmentation

is expected in the near future.

Point of Contact

Points of Contact: Program Office: HQ
SSG/ILTR, 200 E. Moore Drive (Bldg 888), MAFB-
Gunter Annex, AL 36114-3004,
iltr.calm@gunter.af.mil,
<https://web2.ssg.gunter.af.mil/calm/>

Program Manager: Thomas W. Jones, GS-13, DAF
DSN: 596-5260 COM: (334) 416-5260,
thomas.jones@gunter.af.mil

Project Manager: Charles E. Madigan, MSgt,
USAF DSN: 596-2155, COM: (334) 416-2155,
charles.madigan@gunter.af.mil

This program is supported by a 24 hour Field
Assistance Branch (FAB), DSN: 596-5571, COM:
(334) 416-2155, Toll Free (877) 596-5771

Updated by

Captain Howard F. Hall, USMC, CCSC-01.

Conventional Ammunition Integrated Management System (CAIMS)

Primary Purpose	Provide worldwide status and visibility of the Navy's conventional ammunition including Marine aviation ammunition.
Sub-Functions	Provide worldwide asset and expenditure tracking controlling allowances, training allocations, and storage plans, allowing stock screening. Provide due-in visibility for procurement, production and encryption.
Equipment Requirements	IBM 3090-180E 17.5 MIPS and IBM 3090-300E 44.0 MIPS triple processor. For on-line query: IBM compatible PC, modem, and encryption.
Connectivity Requirements	IBM 3270 protocol.
Crypto Requirements	KG-84, KOI-18.
Normal Locations	One central database, 115 remote sites, HQMC, MARFORLANT/PAC, and MAWs.
Information Managed	Ammunition requirements, assets, allowances, production, and procurement. Expenditures (financial, technical, and budget). Serial/lot number tracking information.
Products Created	Notices of Reclassification (NAR), activity data, technical data, automated message generation and follow-up.
Lead Service/Contractor	USN/Various other organizations.
Current Fielding Status	Fielded.
Known Problems	Not user friendly but reports are now all viewable on the Web via a secure SIPRNet Web-Site. Mainframe legacy system - migrating to Web-Based system beginning 3/01. Joint community evaluating system for their use. Web-based version deploys using Sun Systems with the Solaris 2.7 Operating system, and the Oracle 8i relational database management system. User requires SIPRNet access and a Web-Browser (Microsoft Internet Explorer or Netscape).
DIICOE Compliance Rating	Deploying to Open Systems Environment beginning 3/01 - with an approximate 90-120 day deployment plan.
Point of Contact	Dr. Lambros P. Tzerefos, Naval Ammunitions Logistics Center, Mechanicsburg, PA 17055, Comm (717) 605-6537 DSN 430-6537. TzerefosLP@nalc.navy.mil
Updated by	Capt Bob Landis, USAF, CCSC-01

Defense Casualty Information Processing System (DCIPS)

Primary Purpose	Tracks casualty data pertaining to service members and their families. DCIPS is the automated migration system for the casualty and mortuary affairs process within the Department of Defense.
Sub-Functions	Information management support to the Casualty and Memorial Affairs Operations Center. Permits automated storage and retrieval of casualty data with links to reporting agencies. On-line receipt of casualty messages, retrieval of additional personnel information from databases, interactive update, and data exchange with Casualty Area Commands and Mortuaries. Deployed organizations can produce casualty reports with a user-friendly query.
Equipment Requirements	Hardware: 486 MHz Personal Computer or larger. Operating system: Workstation: Windows 95 or NT; Database: UNIX or Windows NT.
Connectivity Requirements	Server and Ethernet.
Crypto Requirements	None.
Normal Locations	Casualty and Memorial Affairs Operations Center. Casualty Area Commands. Personal Service Battalion. Point of Embarkation and Overseas Mortuaries.
Information Managed	Casualty data.
Products Created	Casualty reports, Mortuary information, repatriation data, and next-of-kin notification.
Lead Service/Contractor	The Under Secretary of Defense charged the Deputy Chief of Staff for Personnel with overall responsibility for DCIPS. PERSIND has technical PM responsibility. The Department of Defense Casualty Advisory Board has functional oversight of the problem.
Current Fielding Status	The Office of the Deputy Chief of Staff for Personnel (ODCSPER) is managing the fielding of the system to the services. The Army system has been fielded and is operational. Air Force, Navy, and Marine have not been fielded.
Known Problems	None.
DIICOE Compliance Rating	Not rated.
Point of Contact	Task Force for DCIPS Project Manager: Bonnie

Bailey, Shared Systems Branch TAPC-PSM-M (703)
325-3600, DSN 221-3600

Updated by

Capt Earl W. Daniels, USMC, CCSC-01.

**Defense Infrastructure Information/Common Operating Environment
(DIICOE)**

Primary Purpose	To provide a software development architecture/foundation which promotes interoperability and software reuse in a secure, reliable, and global networked environment.
Sub-Functions	Serve as an implementation of the Joint Technical Architecture (JTA), an approach to building interoperable systems on a common platform, a collection of software that is reusable by the services and the agencies as well as a set of guidelines and standards for building a system.
Equipment Requirements	The DII COE software development environment currently supports HP, Sun, and PC workstations. The DII COE 3.X kernel/components, currently the foundation for numerous fielded systems, only supports the Unix platform using HP 10.20 and Solaris 2.5.1. The 4.x DII COE Kernel/components is currently supported on the following operating systems: Sun Solaris 7/8, HP HP-UX 11.0, Microsoft Windows NT 4, and Windows 2000. For a list of platforms (software running on hardware) that have been validated through the Kernel Compliance Program, see http://diicoe.disa.mil/coe/kpc/KPCP_VPL.htm .
Connectivity Requirements	No special requirements.
Crypto Requirements	None.
Normal Locations	All services.
Information Managed	DIICOE does not manage information itself but the systems utilizing DIICOE range from administration, intelligence, logistics, fire support, and various other command and control/tactical systems.
Products Created	None.
Lead Service/Contractor	DISA.
Current Fielding Status	Currently DII COE 3.X systems are fielded in all Joint Command Centers and by all services (e.g., GCCS, GCCS-M, TBMCS, MSBL, USCG VTS, GCCS-A, GCCS-AF, ABCS).
Known Problems	Distributing Operating System (OS) patches as OS vulnerabilities are identified.
DIICOE Compliance Rating	N/A.

Point of Contact

DISA DII COE Engineering Office or Wayne Duke
at: wduke@spawar.navy.mil

Updated by

Capt. Gary E. Delgado, USMC, CCSC-01

Defense Message System (DMS)

Primary Purpose	To provide secure, accountable, faster and more reliable writer-to-reader messaging capability from the office to the warfighter for both organizational and individual messaging at reduced cost.
Sub-Functions	Allows the user to draft and send secure message traffic from a local PC, either commercial or tactical. DMS software will operate using commercial groupware, providing the latest capabilities in information sharing, including multimedia (sound/graphics/video) attachment capability. Replaces the current AUTODIN-based messaging system.
Equipment Requirements	Commercial system: 486 or greater CPU, 16 MB RAM or greater, 500 MB hard disk space or greater, PCMCIA type II card, TCP/IP stack, network access.
Connectivity Requirements	Designed to operate on both commercial and tactical data networks. Supports X.400 and X.500 message and directory protocols.
Crypto Requirements	Fortezza PCMCIA card provides integrated, dual key encryption.
Normal Locations	All users with the requirement and/or authorization to send and receive official message traffic.
Information Managed	Secure messages, including attachments.
Products Created	Viewable/printable messages to the Sensitive-But-Unclassified (SBU) level.
Lead Service/Contractor	Lockheed Martin Federal Systems.
Current Fielding Status	Four major releases (2.0, 2.1, 2.2, 3.0) have been implemented or planned for FY 98,99,01, and 02. Backbone for SBU and SECRET level traffic is 95% complete and services responsible for implementing tactical DMS measures starting FY01 and completing implementation by FY03.
Known Problems	None noted.
DIICOE Compliance Rating	Not rated.
Point of Contact	Mr. Jerry Bennis, Program Manager (703) 681-0921. Direct questions to Helena Robinson, DMSWWW@ncr.disa.mil
Updated by	Captain Michael E. Schutte, USMC, CCSC-01.

Defense Red Switch Network (DRSN)

Primary Purpose	The DRSN provides secure command and control switches which offer high-quality secure voice and conferencing capabilities to the senior decision makers and staff of the National Command Authorities (NCA), the Commanders in Chief (CINCs), Major Commands (MAJCOMs), other Government departments and agencies, and Allies.
Sub-Functions	The DRSN also provides secure voice conferencing and access to secure strategic, tactical, airborne, and seaborne equipment and platforms.
Equipment Requirements	<p>The DRSN consists of four major subsystems: the Switching Subsystem, the Transmission Subsystem, the Timing and Synchronization Subsystem, and the Network Management Subsystem (NMS).</p> <p>Switching Subsystem: The DRSN Switching Subsystem provides the DRSN users secure and nonsecure call origination and call termination capabilities, secure conferencing, and direct interoperability with other secure networks. The primary switching platform of the DRSN Switching Subsystem is the Raytheon family of secure digital switches. In most DRSN switch locations, both a RED switch and a BLACK switch are installed to provide integrated RED/BLACK service (i.e., users are provided a single telephone instrument with which they can access both secure networks and nonsecure networks).</p> <p>Transmission Subsystem: The DRSN Transmission Subsystem provides connectivity between DRSN RED switches, connectivity between a DRSN RED switch and users located remotely from the switch, and interconnection with other secure networks and systems. The Transmission Subsystem includes Network Equipment Technologies, Inc. (N.E.T.) IDNX and Promina multiplexing equipment, encryption devices, channel service units (CSUs), and tail segment cabling. The Transmission Subsystem connects the DRSN RED switches to Government-owned and leased backbone transmission systems.</p> <p>Timing and Synchronization Subsystem: The T&S Subsystem provides a primary, secondary, and tertiary method of obtaining a timing source for site contingency and the network. The T&S system is comprised of</p>

reference clocks, clock distribution systems, and RED/BLACK isolation filters and buffers.

Network Management Subsystem:

The NMS provides DISA with the capabilities to provide day-to-day direction and operational oversight of the DRSN. It includes the facilities, equipment, organizational structure, and people to monitor and interface with the DRSN site O&M activity to affect problem resolution.

Connectivity Requirements	T1 or E1 transmission systems, fractional T1 (FT1) transmission links, and 56 or 64 kilobits per second (kb/s) transmission links.
Crypto Requirements	KG-94/94A, KIV-7/HS.
Normal Locations	The DRSN is located with the NCA, the National Military Command Center (NMCC), combatant commands, the Services, subordinate organizations (military and civilian), and Allies (North Atlantic Treaty Organization (NATO), Canada, etc.), both locally and worldwide.
Information Managed	N/A
Products Created	N/A
Lead Service/Contractor	DISA, as the Joint Staff designated System Manager for the DRSN, is responsible for providing operational direction and management of worldwide DRSN assets.
Current Fielding Status	Fielded throughout DOD.
Known Problems	N/A
DIICOE Compliance Rating	N/A
Point of Contact	DISA D3123 ATTN: Jim Seitz 11440 Isaac Newton Square Reston, VA 20190-5006 E-Mail Address: seitzj@ncr.disa.mil DSN:653-8033 Commercial:(703) 735-8033 FAX:(703) 735-8980
Updated by	CPT David Gursky, USA, CCSC-01

Defense Transportation Regulation, Part II (DTR)

Primary Purpose	The MILSTAMP has been changed to The Defense Transportation Regulation, Part II. It prescribes the policies, procedures and assigns responsibilities for traffic management functions for transportation and movement of DOD materiel. An electronic copy of the DTR can be found at: Http://public.transcom.mil/J4/j4lt/dtr.html
Sub-Functions	It is used by any agency that moves cargo within the Defense Transportation System and it is used to establish the policy and procedures for that movement. It applies to shippers, transshipment points (container consolidation points, aerial ports, water ports, and break bulk points for example), and receivers among others.
Equipment Requirements	None. Policies and Regulations.
Connectivity Requirements	N/A
Crypto Requirements	N/A
Normal Locations	
Information Managed	
Products Created	N/A
Lead Service/Contractor	USTRANSCOM is the overall authority for the DTR.
Current Fielding Status	DTR, Part II, published December, 2000.
Known Problems	Difficult to keep it updated with current information. Sometimes operational changes occur before the written document can be changed.
DIICOE Compliance Rating	N/A
Point of Contact	Sandra L. Baker USTRANSCOM TCJ4-LTS Phone: Commercial (618) 229-1633 DSN 779-1633 FAX: Commercial (618) 256-8574 DSN 576-8574 EMAIL: Sandra.Baker@hq.transcom.mil
Updated by	CPT Sang D. Han, USA, CCSC-01

Department of Defense Intelligence Information System (DODIIS)

Primary Purpose

DODIIS is a worldwide inter-computer network linking intelligence data handling systems (IDHS) of the DOD intelligence community. The network benefits from a jointly developed standard core of common intelligence processing systems. The computer based information systems sustained by DODIIS support the collection, production, and dissemination of various defense intelligence products down to the tactical Joint Task Force (JTF) Commander. The architecture is broken into five basic elements: Application Software Entity, Application Program Interface, Application Platform Entity, External Environment Interface, and External Environment. These elements are used to manage and access defense intelligence assets throughout the world. DODIIS defines the standards that ensure interoperability of current and future intelligence systems and applications.

Sub-Functions

DODIIS uses a variety of communications sub-networks to achieve the desired connectivity between user locations. The DODIIS concept provides, within limits, an integrated tactical and strategic user environment for performing identical intelligence support functions on compatible systems. The DODIIS community uses the Joint Worldwide Intelligence Communications System (JWICS) portion of Defense Information System Network (DISN).

Equipment Requirements

The DODIIS network uses UNIX-based equipment and associated peripherals. The network can also be supported using Commercial-off-the-shelf (COTS)/Government-off-the-shelf (GOTS) hardware and software. There have been recent upgrades to Windows NT and/or Sun Solaris.

Connectivity Requirements

DODIIS uses Stand Alone Tools: Independent support applications that are activated on the user's desktop or by system calls. Integrated Tools: Support applications that are used by other intelligence mission applications or support applications to provide specific functionality to the calling application through a standard support contract, namely the System Acquisition and Services Support (SASS) Contract.

Crypto Requirements

The DODIIS network is classified and requires proper and pre-authorized access codes. SCI levels must be properly encrypted while genser levels must have the appropriate level devices.

Normal Locations	DODIIS terminals are normally found in intelligence sections and SCIFs and classified work areas both shore-based and afloat. Unified Commands, Services, theater intelligence centers and various intelligence agencies.
Information Managed	DODIIS is a computer based intelligence data handling system, which manages defense intelligence assets throughout the world. User systems support collection, production, and dissemination of various intelligence products.
Products Created	The DODIIS network facilitates the processing of a variety of intelligence products to include information from imagery exploitation, ELINT, COMINT, and HUMINT. Other supported products include intelligence data such as indications and warning, order of battle, electronic warfare, installation data development, target material production, target data development, and scientific and technical intelligence. Products include archived digitized images, overlays, and special support products relating to all service components as well as textual information.
Lead Service/Contractor	Defense Intelligence Agency (DIA).
Current Fielding Status	Operational with ongoing improvements.
Known Problems	Due to the number of different C4I systems DODIIS supports, interoperability remains the major problem.
DIICOE Compliance Rating	Not rated.
Point of Contact	Mr. Harry P. VanEvery, Defense Intelligence Agency, Commercial: (202) 231-8394, E-Mail address: vanevery@mitre.org
Updated by	Captain Barton J. Rice, USA, CCSC-01

Digital Terrain Analysis System (DTAMS)

Primary Purpose	Mobile terrain analysis system for support of forward deployed units. Produces, in hardcopy and softcopy, special mapping products and geographic intelligence in support of MAGTF Commanders.
Sub-Functions	Geographic Information System (GIS) collection and processing. Terrain analysis support for Intelligence Preparation of the Battlespace. Component of the topographic set fielded to each Topo Platoon in 1995.
Equipment Requirements	The DTAMS is a stand-alone workstation with its own input, output, and mass storage capabilities. The DTAMS is the deployable workstation designed to support the MEU, MEFs, subordinate commands, and special-purpose MAGTFs. The DTAMS workstation will host one Winchester FlashDisk RAID with approximately 450 GB of storage. An 8-mm Mammoth tape, CD-RW, 250 MBZIP drive, and JAZ drive will provide data backup and archival storage. A 36-inch color scanner will provide scanning capability for the DTAMS. Each DTAMS will host one HP 1055CM plotter and a small format printer. An Ethernet switch will manage connectivity for the DTAMS. Each MEF Topographic Platoon will receive seven sets of this DTAMS configuration.
Connectivity Requirements	LAN Network/SIPRNet
Crypto Requirements	None.
Normal Locations	Primary location: MEF Topographic Platoon. Attached to MEF G-2, MEU S-2, or GCE/ACE/CSSE G-2/S-2 when deployed.
Information Managed	Provides geospatial intelligence for the MAGTF Commander throughout all phases of an operation. The system will supplement normal mapping, by preparing up-to-date map substitutes. It will exploit National Imagery and Mapping Agency (NIMA) geospatial data.
Products Created	Special Mapping (enlargements/paneling) and geospatial intelligence for Intelligence Preparation of the Battlespace (IPB).
Lead Service/Contractor	USMC/Litton-TASC
Current Fielding Status	Fielding of the TGIL/DGIL/DTAMS to the MEFs is scheduled to be complete in the 3d quarter of FY 02
Known Problems	File format handshake with current Intel

Systems.

DIICOE Compliance Rating Level 5

Point of Contact MSgt Robert D. Dale
MARCORSYSCOM
DSN: 278-0973

Updated by Capt V. J. Bunch Sr., USMC, CCSC-01

Electronic Key Management System (EKMS)

Primary Purpose

Just as CMS replaced the Registered Publications System (RPS) in the 1970s, EKMS will replace CMS as we move into the next century with state-of-the-art technology and key management strategies that will ensure maximum interoperability and security and will meet the challenges of the future. The primary reason for the development of EKMS centers on the security and logistics problems that have plagued the current Communications Security Material Control System (CMCS). The CMCS is a very labor-intensive operation that has been stretched to capacity. The CMCS will not be able to meet increased demands for keying material in a timely, secure manner as we enter the next century. The most serious, immediate concern to be addressed by the EKMS is the human threat associated with access to and exploitation of paper key throughout its life cycle. Although eliminating the majority of paper key will greatly reduce this human threat, the long-term goal of EKMS to minimize human access to key will not be realized until benign fill key is implemented. Benign fill will permit the encrypted distribution of electronic keying material directly to the COMSEC device without human access to the key itself.

Sub-Functions

The EKMS is a key management, COMSEC material distribution, and logistics support system consisting of interoperable Service and civil agency key management systems. NSA established the EKMS program to meet multiple objectives, which include supplying electronic key to COMSEC devices in a secure and timely manner and providing COMSEC managers with an automated system capable of ordering, generation, production, distribution, storage, security, accounting, and access control. Other features of EKMS will include automated auditing capabilities to monitor and record security-relevant events, account registration, and extensive system and operator privilege management techniques that will provide flexible access control to sensitive key, data, and functions within the system. The common EKMS components and standards will facilitate interoperability and commonality among the Services. The EKMS is a total COMSEC management system that encompasses all aspects of the Navy's COMSEC key management architecture and meets the following NSA and joint requirements: enhanced security through encrypted electronic

key distribution;
increased responsiveness to operational requirements;
joint interoperability;
automation and simplification of COMSEC material control; and
elimination of physical key distribution and management of paper products.

Equipment Requirements	UNIX-Based PC running Local COMSEC Management Software (LCMS). LCMS allows COMSEC account management functions and controls the cryptographic capabilities of the key processor (KOK-22A), which, among other things, generates electronic keys.
Connectivity Requirements	Access to commercial/DSN lines and a STU-III are required for remote electronic key distribution and access to the National Security Agency central facility.
Crypto Requirements	Self-contained.
Normal Locations	Fielded down to regimental/group locations.
Information Managed	COMSEC account and electronic key management.
Products Created	N/A
Lead Service/Contractor	SPAWARSYSCOM PMW161.
Current Fielding Status	Fielded throughout the Department of the Navy.
Known Problems	None
DIICOE Compliance Rating	N/A
Point of Contact	Mr. Calvin Curry, EKMS Logistics Manager, SPAWAR phone (843) 308-9981; Fax (843) 308-9985; Calvin.Curry@GalaxyScientific.
Updated by	Capt Steven Bowers, USMC, CCSC-01

Enhanced Position Location Reporting System (EPLRS)

Primary Purpose	The Enhanced Position Location Reporting System (EPLRS) provides Marine Forces with a critical command and control tactical data distribution network. EPLRS links the dynamic Marine Air-Ground Task Force (MAGTF) Command, Control, Communications, Computers, and Intelligence (C4I) tactical data system architecture with a robust, user-transparent, automatic relaying, and automatic rerouting communications network. The EPLRS is a digital transmission system that provides the digital RF backbone necessary for the movement of information between MAGTF C4I Tactical Data Systems (TDS), such as the Tactical Data Network (TDN), Intelligence Analysis System (IAS), Tactical Combat Operations (TCO) system, Advanced Field Artillery Tactical Data System (AFATDS), and Data Automated Communications Terminal (DACT). The end product is communications connectivity to support a flexible, seamless, and integrated MAGTF C4I tactical data architecture below the regimental level. EPLRS will be the primary entry node for sensor collected information from forward deployed units for digital transmission to higher headquarters.
Sub-Functions	Provides situational awareness as backup to GPS.
Equipment Requirements	AN/VSQ-2C(V)2, EPLRS Radio Set AN/TSQ-158(V)4, Downsized Enhanced Net Control Station (NCS-E(D)).
Connectivity Requirements	Network of EPLRS RS controlled by the Network Control Station. End User Data Terminals will connect to the EPLRS RS via standard Ethernet or X.25 protocols.
Crypto Requirements	EPLRS RS: embedded KGV-13. NCS: KOK-13A.
Normal Locations	The EPLRS RS will be fielded to infantry, artillery, Light Armored Vehicle (LAV), tank, AAV, and mobile command units. The NCS will be fielded to Division Communication Companies.
Information Managed	Primarily any digital data or information passed via TCP/IP protocol and relative location of friendly units, waypoints and pre-designated items.
Products Created	EPLRS provides data distribution vertically and horizontally between various tactical data systems. EPLRS inherent capabilities will also provide position location identification

and navigation services to users. EPLRS position location reports are provided to automated systems in Command and Control (C2) centers for maintaining near real-time situational awareness displays. EPLRS primary purpose will be that of the digital RF backbone necessary for the interconnectivity of MAGTF C4I TDN.

Lead Service/Contractor	USA/Raytheon.
Current Fielding Status	Full fielding was begun in FY00 at I MEF. Initial Operating Capability (IOC) was achieved in July 2000 with the initial fielding of I MEF. Initial Fielding of II MEF was completed in December 2000. Full fielding to III MEF will commence in March 2001. Upon completion of III MEF fielding, I MEF and II MEF will receive their complete fielding. MARFORRES fielding will commence during FY02. Final Operational Capability (FOC) is anticipated during FY03 when fielding will be complete. The PLRS system is being phased out of the Marine Corps inventory as EPLRS is fielded.
Known Problems	Fielding timeline is dictated by production rate of EPLRS radios.
DIICOE Compliance Rating	Not rated.
Point of Contact	EPLRS Project Officer: Maj James Breitingner, C4ISRComm, MARCORSSYSCOM, DSN: 278-0889, comm (703) 784-0889.
Updated by	Capt Matthew A. Woodhead, USMC, CCSC-01

Force XXI Battle Command, Brigade and Below (FBCB2) System

Primary Purpose

FBCB2 is a digitized Battle Command Information System that provides on-the-move, real time and near-real-time battle command information to tactical combat, combat support, and combat service support leaders and soldiers. FBCB2, as a key component of the Army Battle Command System (ABCS), seamlessly integrates with the other components of ABCS at the brigade and below level. FBCB2 supports situational awareness down to the soldier/platform level across all BFA's and echelons. FBCB2 also provides the means for brigade and battalion level commanders to command when away from their TOCs, interoperating with subordinate commanders and leaders also equipped with FBCB2.

The Combat Service Support Control System (CSSCS) - FBCB2 interface has been developed to support wartime automated systems as defined in the Command, Control, Communications, and Computer Requirements Definition Program (C4RDP). This interface is designed to provide an automated capability for the exchange of Joint Variable Message Format (JVMF) messages concerning logistics, personnel, and position reporting data between CSSCS and FBCB2 operational facilities (OPFAC) at Brigade (BDE), Separate Brigade (SEP BDE), Armored Cavalry Regiment (ACR) and Battalion (BN) levels.

Sub-Functions

Equipment Requirements

Software for embedded air and ground platforms.
Hardware and software for non-embedded air and ground platforms.
Platform interfaces.
Supporting communications systems (as specified by the WIN strategy).

Connectivity Requirements

Crypto Requirements

Normal Locations

Information Managed

CSS functions of FBCB2 include: logistics situation reports, personnel situation reports, situational awareness, call for support and logistics task order and task management capabilities.

The Combat Service Support Control System

(CSSCS) - FFCB2 interface continues to be developed, with required capabilities being provided in the phased development of both sets of software. The main two reports that provide information from FFCB2 to CSSCS are the Logistics Situational Report (LOGSITREP) and the Personnel Situation Report (PERSITREP). The LOGSITREP consists of platform/unit logistics status, while the PERSITREP provides personnel status reporting. Both reports are originated at the subordinate platform level. These reports are rolled-up within FFCB2, maintaining individual unit integrity; and forwarded via FFCB2 to the first echelon where CSSCS is deployed.

Enhanced visibility of CSS assets and supported units on the battlefield.
Enhanced task visibility of CSS assets.
Enhanced visibility of unit and supply point status.
Enhanced visibility of combat operations for CSS planning and execution.
Enhanced capability for the customer to request support.
Enhanced capability to synchronize support.

Products Created

Identified in the User Functional Description (UFD) for FFCB2, and slated for future development include system interface and integration, medical logistics and situation reports, mortuary affairs information, fuel status data, and weapons system crew registration information. With FFCB2 CSS functionality logisticians are able to provide responsive support and insure that sufficient resources are on hand to accomplish the commander's intent.

FFCB2 also permits information to be entered using free text, such as comments or other pertinent CSS information. In these cases, the users of the system must understand that the information is not automatically manipulated or rolled-up by higher echelons.

Lead Service/Contractor

Current Fielding Status

FFCB2 CSS requirements are published in the FFCB2 User Functional Description (UFD). The CASCOM FFCB2 Team is continuing to refine and develop CSS requirements, and to participate in the FFCB2 User Jury process. CSS software functions are scheduled to be delivered IAW the following schedule:

Version 3.3 (Current) Version 4.0 and beyond:
PERSITREP Improved Reports.

LOGSITREP Digital Diagnostic Interface.
Call for Support/Task Mgmt.
Digital Fuel Status.
Supply Point Status/Field Svc.
MARC Card Interface.
MEDEVAC Request.
RF Tag Interface.
CTIL/BRIL Update Msg.
Interface with CSSCS.
Improvements on 3.2.
Medical Unit SITREP.
Mortuary Affairs SITREP.

Known Problems

DIICOE Compliance Rating

Point of Contact

POC: MAJ O'Donnell @ (804) 734-1233, or Paul
E. Campbell, CSC @ (804) 734-0080.

Updated by

CPT Scott C. Bager, USA, CCSC-01

**Forward-Area Air Defense Command, Control, Communications and
Intelligence System (FAAD C3I)
Ground-Based Sensor
(GBS)**

Primary Purpose	The Forward Area Air Defense Command, Control, Communications, and Intelligence (FAAD C3I) system is a network that connects the command posts, weapons, and sensors of the FAAD Battalion. In addition, the FAAD C3I system is one of the five components that make up the Army Tactical Command and Control System (ATCCS). The Ground-Based Sensor (GBS) provides air surveillance, target acquisition, and target tracking information to the weapons in the FAAD Battalion. The FAAD C3I and GBS systems provide information superiority to the dominant maneuver force.
Sub-Functions	FAAD C3I is an automated system for providing command, control, targeting, and other information to the air defenders on the battlefield. The FAAD C3I software performs the air track and battle management processing functions.
Equipment Requirements	The FAAD C3I system comprises computer hardware, computer software, and communications equipment. The communications equipment consists of the Single-Channel Ground and Airborne Radio System, the Joint Tactical Information Distribution System, and the Enhanced Position Location Reporting System.
Connectivity Requirements	Must be connected to a radar system. The Army chose the Hughes Aircraft Company TPQ-36A radar as the GBS. The TPQ-36A radar is a modified version of the Army's FIREFINDER counter-battery radar. The GBS is a three-dimensional radar system that uses a phased-array antenna and an Identification Friend or Foe device. The GBS system is mounted on a high-mobility multiwheeled vehicle and a towed trailer.
Crypto Requirements	
Normal Locations	Army air defense units.
Information Managed	The FAAD C3I software performs the air track and battle management processing functions.
Products Created	Air tracks.
Lead Service/Contractor	U.S. Army. Prime Contractor TRW Hughes.

Current Fielding Status

Fielded. The last major operational test of the FAAD C3I system was the Follow-on OT&E of the version 5.1 system, a major software and hardware upgrade of the FAAD C3I system. This test occurred in 2QFY99.

Known Problems

When there were no friendly aircraft in the sky, FAAD C3I and GBS clearly demonstrated an improvement over the baseline system during the IOT&E, and were operationally effective. However, when friendly aircraft were added to the operational area, the fratricide experienced by FAAD units was unacceptably high and the operational effectiveness for reduction of fratricide was minimized. Until combat identification procedures are improved, severe operating restrictions will undoubtedly be placed on the FAAD units.

The FAAD C3I and GBS systems were operationally suitable, although there were shortfalls in the generator and software reliability of the GBS system and the mobility of the FAAD C3I and GBS systems.

The FAAD C3I system could not interoperate with the other elements of the Army Tactical Command and Control Systems (ATCCS). Numerous technical and operational problems existed that preclude the ATCCS system itself from being either operationally effective or suitable.

DIICOE Compliance Rating

Not rated.

Point of Contact

Prime Contractor TRW Hughes.

Updated by

Captain Michael L. Campbell, USA, CCSC-01

Global Broadcast System/Joint Broadcast System (GBS/JBS)

Primary Purpose	Global Broadcast System will provide worldwide, high capacity, one-way transmission of a variety of high speed computer-to-computer updates, high quality imagery and other high bandwidth information products to supported forces. GBS will be a system of broadcast managers, injection points, broadcast satellites, receiver terminals, and the management process for requesting and coordinating the distribution of informational products. The Joint Broadcast System (JBS) is the GBS European counterpart.
Sub-Functions	The GBS system consists of broadcast management, space, and terminal segments. The broadcast management segment integrates, encrypts and packages multi-media information and provides a bit stream to the Primary Injection Points (PIP) for Radio Frequency (RF) transmission to the satellite. The user receive terminal, consisting of a small satellite antenna, low noise block and receiver, will receive and convert the RF downlink signal into a bit stream for receive broadcast management decryption and distribution to end users.
Equipment Requirements	Receiver terminal, desktop computer.
Connectivity Requirements	GBS is an extension of the Defense Information Systems Network (DISN) and a part of the overall DoD MILSATCOM architecture. Users will need to be able to connect to this architecture and get DISN services.
Crypto Requirements	The GBS Phase II system operates in both Ka and Ku frequency bands with data rates up to 96 Mbps per GBS Satellite.
Normal Locations	The GBS will provide broadcast services to selected echelons through a layered or scaleable architecture. This architecture will compensate for differences in security (classification) levels and classes of users, and the ways in which users receive information products.
Information Managed	Real-time information, video, data, imagery as well as theater and national level intelligence to the joint military forces.
Products Created	N/A
Lead Service/Contractor	Hughes Information System (HIS).
Current Fielding Status	Due to the decision regarding the UHF Follow-

On spacecraft GBS capability, the space segment assets have three distinct phases of fielded capability.

Phase I extends from FY96-FY98+, Phase II from FY98-FY06+ and Phase III should be operational by FY06.

GBS Phase I is currently integrating the information dissemination and broadcast management products from external programs such as the Battlefield Awareness and Data Dissemination (BADD) Advanced Concept Technology Demonstration (ACTD) and the BC2A Joint Broadcast Service (JBS).

Phase II will evolve the Phase I capabilities and establish an interim operational capability using GBS transponder packages hosted on the Navy's UHF Follow On (UFO) satellites 8, 9 and 10. Each GBS transponder package has two 30 GHz (K band) uplink antennas and three 20.2-21.2 GHz (Ka band) downlink spot beam.

Phase III will further evolve the capabilities of Phase II and will increase on-orbit capacity.

Known Problems

Since GBS enables the storage, retrieval and dissemination of huge information files that would quickly exceed the capability of most mobile users, the tailoring of the "push and pull" dissemination architecture for GBS is a significant challenge. The GBS broadcast is one-way; it will only distribute information. Requests for information will be made via other communications means.

DIICOE Compliance Rating

N/A

Point of Contact

MILSATCOM Joint Program Office
Los Angeles Air Force Base

Updated by

Captain Jahan Tolliver, USA, CCSC-01

Global Combat Support System - Air Force (GCSS-AF)

Primary Purpose	GCSS-AF is a program that focuses on meeting the system integration efforts mandated by Congress and desired by military commanders. This program is exclusively for the Air Force combat support domain. It places standards, technologies, and a common system architecture called the GCSS-AF Integration Framework. The program also guides the migration of combat support system functionality into the new architecture. GCSS-AF will provide the warfighter and supporting elements with timely, accurate, and trusted Agile Combat Support information, with the appropriate level of security, needed for the Expeditionary Aerospace Force to execute the Air Force mission throughout the full spectrum of military operations.
Sub-Functions	None.
Equipment Requirements	Hardware will be part of the architecture. A better concept of hardware requirements will become available as the concept of operations emerges and the performance engineering is accomplished.
Connectivity Requirements	DISN, intra-base connectivity.
Crypto Requirements	End to end crypto: Native Database Encryption (Oracle ANO).
Normal Locations	Normal Locations: GCSS-AF will incrementally modernize the software portion of selected standard base-level automated information systems to reside on a common operating environment. It will support users at all Air Force active duty, Reserve, and Guard sites worldwide.
Information Managed	GCSS-AF is tasked to upgrade existing software applications to provide Air Force decision makers critical, concise, timely, accurate, economical, and relevant information on a wide range of functional areas. GCSS-AF is an evolutionary, incremental development covering numerous support applications spread across 13 functional areas such as maintenance, supply, and transportation.
Products Created	There are 640 Automated information systems that have been identified for potential integration into the GCSS architecture framework.
Lead Service/Contractor	Lockheed Martin Federal Systems is the GCSS-AF prime contractor. HQ SSG/DII is the task order

manager of the Core Task Order. AF PEO /C2 and combat support has execution responsibility of the GCSS AF Program.

Current Fielding Status

GCSS-AF is fielded now. Lockheed Martin has delivered the GCSS-AF Architecture Framework and first versions of the GCSS-AF Integration Framework. Many systems are migrating to the GCSS-AF Architecture Framework, and the first integration of a Mission Application with the GCSS-AF Integration Framework is expected in FY2001. Further, the GCSS-AF Distributed Development Environment is in place now; this environment allows developers to use the GCSS-AF common services and test integration.

Known Problems

None at this time--still under development.

DIICOE Compliance Rating

Level 5 while under testing, level 8 when completed.

Point of Contact

Program Manager: LtCol Zenishek, USAF, DSN 425-5083

Updated by

Capt Bob Landis, USAF, CCSC-01

Global Command & Control System - Maritime (GCCS-M)

Primary Purpose	The Global Command and Control System - Maritime (GCCS-M) is the Navy's single command and control program-of-record that integrates and interfaces over 80 separate C4I systems providing naval commanders afloat and ashore a near-real-time Common Operating Picture (COP). GCCS-M enhances the operational commander's warfighting capability and aids in the decision-making process by receiving, retrieving, and displaying information to allow warfighters to plan, coordinate, exercise, execute and evaluate naval and joint operations. GCCS-M is an open-ended architecture system consisting of servers, workstations, routers, hubs, and encryption devices, and integrates information from multiple C4I functional areas.
Sub-Functions	GCCS-M (Afloat), GCCS-M (Ashore), GCCS-M (Tactical Mobile Variants - Mobile Ashore Support Terminal, Mobile Integrated Command Facility, Mobile Operations Command Center) and GCCS (Joint).
Equipment Requirements	Currently a UNIX and Windows NT based platform. UNIX systems and Windows NT systems are interoperable. Migrating towards a primarily Windows based platform.
Connectivity Requirements	Uses IP routing over the Secret Internet Protocol Routing Network (SIPRNET). Typically SHF SATCOM with inputs via UHF and HF.
Crypto Requirements	No external equipment required. Primarily uses SIPRNET.
Normal Locations	GCCS-M is located at both fixed and mobile locations: U.S. and NATO CINCs, U.S. Naval Installations, U.S. ships, and ashore tactical locations.
Information Managed	TCO, IAS, AFATDS, JOPES, CTAPS, JOTS, NWSS, FHLT, OSS, TSC, STT, NIPS, TFCC, ACS, EWCM, POST, ATP, FTAS, ASCOMM, ASWOC, ATOS, MAST, MOCC, RMAST, MICFAC, OSIS.
Products Created	An integrated common operating picture afloat and ashore.
Lead Service/Contractor	U.S. Navy, Naval Warfare Systems Command (SPAWARSSYSCOM) Program Directorate 15 (PD-15).
Current Fielding Status	U.S., over 300 ships and submarines; 57 ashore sites, and 30 tactical variants. Marine Expeditionary Units are also using GCCS-M.

Known Problems Currently not directly interoperable with U.S. Army's GCCS-A. GCCS-M and GCCS-A are individually interoperable with GCCS. A fix is being developed.

DIICOE Compliance Rating Level 5.

Point of Contact SPAWAR, Navy Command and Control Program Office (PMW-157), 4301 Pacific Highway, San Diego, CA 92110-3127 (858) 537-0264.
CNO POC: Butorac, Diane M
[Butorac.Diane@hq.navy.mil] (703) 601-1422

Updated by LCDR Tom Wester, USN, CCSC-01

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

Primary Purpose	Provide automated command and control tools for the Army Strategic and Theater Commanders to enhance warfighting capabilities throughout the spectrum of conflict during joint and combined operations in support of the NCA. Provides information support to all levels of military command across the Common Operating Environment (COE).
Sub-Functions	Readiness planning, mobilization throughput and deployment capability information, Common Operational Picture (COP) and enhanced situational awareness, interoperability with other GCCS systems.
Equipment Requirements	Client Server: SUN UNIX (Solaris) OS for database, GCCS-J applications, and network control. NT workstation client for Army application and COP display.
Connectivity Requirements	TCP/IP.
Crypto Requirements	Via SIPRNET.
Normal Locations	Strategic and Theater level command.
Information Managed	COPE, JOPEs, SORTS ABCS/JCDB.
Products Created	COP Display, Movement Planning and Execution Matrix, Force Analyzer.
Lead Service/Contractor	Army, Lockheed Martin Mission Systems, Springfield VA.
Current Fielding Status	Operational in USAREUR, USFK, ARCENT/3rd Army, HQDA, FORSCOM, USARPAC, USARSO, SOUTHCOM, and selected training locations. Fielding of Delivery 3.2, Upgrades of Deliver 2.
Known Problems	Still testing newly fielded version.
DIICOE Compliance Rating	Testing level is 5.
Point of Contact	Mr. William Smith, PM GCCS-A, DSN 654-2867.
Updated by	CPT Reginald E. Bryant, USA, CCSC-01

Global Command and Control System (GCCS)

Primary Purpose

GCCS is the nation's premier system for the command and control of joint and coalition forces. It is a distributed, client-server based architecture that incorporates a Common Operating Environment (COE) infrastructure with interfaces that support the hosting and execution of heterogeneous applications. GCCS incorporates the force planning and readiness assessment applications required by battlefield commanders to effectively plan and execute military operations. The Common Operational Picture (COP) application within GCCS correlates and fuses data from multiple sensors and intelligence sources to produce a graphical representation of the battlespace in order to provide commanders with the situational awareness necessary for rapid, effective decision-making. GCCS also provides an extensive suite of integrated office automation, messaging, and collaborative applications. GCCS replaced the World Wide Military Command and Control System (WWMCCS).

Sub-Functions

GCCS currently uses 209 system applications to create the COE used to facilitate interoperability between stand alone operational systems and the GCCS terminal. A list of current system applications include:

- AdHoc Query (AHQ)
- Adobe Acrobat Reader
- Airfields Database (AIRFDB)
- Air Force Option 4 (AFOPT4)
- APPLIX Office Products
- Audio TLCF Tool
- Automated Message Handling System (AMHS)
- Collaborative Planning, Modeling & Simulation (COMPASS)
- Command and Control Personal Computer (C2PC)
- Computer Misuse and Detection System (CMDS)
- COP Embedded Training
- COP Synchronization Tools
- Enhanced Linked Virtual Information System (ELVIS)
- Evacuation System (EVAC)
- Force Validation Tool (FVT)
- Global Combat Support System (GCSS) Client
- Global Positioning System (GPS) Time
- Global Reconnaissance Information System (GRIS)
- Global Status of Resources and Training Systems (GSORTS)
- GNU Zip Compression Utility (GZIP)
- GRIS Web Interface (GRISWI)
- GSORTS Readiness Assessment System (RAS) Input Tool
- GSORTS Readiness Assessment System (RAS)

Output Tool
Information Management Subsystems (IMS)
Internet Relay Chat (IRC)
Joint Deployable Intelligence Support System (JDISS)
Joint Engineer Planning and Execution System (JEPES) Client
Joint Force Requirements Generator II (JFRG II)
Joint Mapping Tool Kit (JMTK)
Joint Operations Planning and Execution System (JOPEs)
JOPEs Editing Tool (JET)
JOPEs Navigation (JNAV)
Joint Tactical Interface Module
Logistics Sustainment Analysis and Feasibility Estimator (LOGSAFE) Client
Medical Analysis Tool (MAT)
METOC Tactical Forecast System (TFS)
Microsoft FrontPage 98
Microsoft NetMeeting
Microsoft Office 97
MTF Editor
Near Real Time Intelligence GENSER (NRTIG)
Netscape News Server
Netscape Web Browser
Network Information Service Plus (NIS+) Group Alias
Newsgroups and Internet News
ORACLE Relation Database Management System (ORACLE RDBMS)
PC-Xware
Predefined Reports Database
Real Property Inventory Database
Remote Dialup (AT&T STU III)
Rapid Query Tool (RQT)
Requirements Development Analysis (RDA)
Reference File Administration (RFA)
Rendezvous Whiteboard Client
Scheduling and Movement (S&M) Client
Seagate Backup
Secret Agent (AT&T)
Security Alignment Tool (SALIGN)
System Services Client
Sun Java Runtime Environment (SUNJRE)
Tactical Information Broadcast System (TIBS)
Theater Ballistic Missile Defense (TBMD)
Theater Ballistic Missile Warning and Display
TPEDIT Database
Unified Build (UB) Core
Video TLCF Tool

Equipment Requirements

UNIX and Microsoft Windows NT.

(NT Client Guidance) To effectively run a Windows NT 4.0 environment within the Defense Information Infrastructure (DII) Common Operating Environment (COE) and GCCS, specific hardware capabilities are required. Minimum

system requirements for GCCS NT client workstations are as follows:
Pentium 233 MHz processor or equivalent;
64MB Synchronous Dynamic Random Access Memory (SDRAM) Dynamic Integrated Memory Module (DIMM);
Video Graphics Array (VGA) graphics card with 4MB of Video Random Access Memory (VRAM) on board and capable of supporting 1024 x 768 x 64 million colors video resolution;
NE2000 compatible network adapter with RJ-45 connector in Industry Standard Architecture (ISA) Slot;
2GB Enhanced Integrated Drive Electronics (EIDE) hard drive;
24x CD-ROM EIDE drive;
3.5" High Density (HD) Floppy Disk Drive;
AT Extended (ATX) form factor motherboard with four PCI slots available;
ATX CPU case;
Three button mouse;
17 inch VGA Monitor (supporting minimum resolution listed above); and
16-bit sound card with externally amplified speakers.

Recommended system requirements for GCCS NT client workstations are as follows:
Pentium 400 MHz processor or equivalent;
128MB SDRAM DIMM;
Super Video Graphics Array (SVGA) graphics card with 8MB of VRAM on board with Advanced Graphic Port (AGP) slot;
Network adapter with RJ-45 connector in PCI slot capable of 10/100 Mbps with auto-sensing feature;
4GB or larger Ultra Direct Memory Access (UDMA) EIDE hard drive;
32x Compact Disk CD-ROM EIDE drive;
3.5 inch HD Floppy Disk Drive;
ATX form factor motherboard with four PCI and one AGP slot available;
ATX CPU case;
Three-button mouse;
19 inch SVGA Monitor; and
32-bit sound card with externally amplified speakers.

Connectivity Requirements	Ethernet (TCP/IP) client-server environment. T1/T3 backbone.
Crypto Requirements	The Network Encryption System (NES) is used for garrison sites and connects to the T1 / T3 backbone. KG-194s are used in tactical environments. GCCS must be connected to the SIPRNET or a secure Local Area Network (LAN).
Normal Locations	GCCS sites are located at all levels of the military command structure to include;

National Command Authorities (NCA), the National Security Agency (NSC), the Joint Chiefs of Staff (JCS), service headquarters, Commanders in Chiefs (CINCs), subordinate commanders, major operational units, and government Agencies such as the Central Intelligence Agency (CIA), Federal Bureau of Investigation (FBI), and the Federal Emergency Management Administration (FEMA). GCCS liaison cells can be provided to coalition partners, United Nations (UN), and Non-governmental Organizations during humanitarian or peacekeeping operations.

Information Managed

GCCS manages information dealing with force deployment, unit positions, force status, intelligence, fire support, personnel, air operations, logistics, narrative information, and crisis and deliberate planning.

Products Created

Common Operating Picture (Air, Land, Maritime). Time Phase Force Deployment Data (TPFDD). Many other products created by over 200 applications.

Lead Service/Contractor

Joint Program. OASD (C3I) is the Milestone Decision Authority (MDA) for GCCS; Joint Staff (J3) is the Office of Primary Responsibility (OPR) for GCCS; DISA is the Program Manager and Lead Engineering Office for GCCS. MCTSSA (Camp Pendleton, CA) is the Marine Corps Help Desk for GCCS and MAGTF C4I systems, as well the contract manager for Post Deployment Software Support (PDSS).

Current Fielding Status

625 GCCS sites worldwide. DISA anticipates complete fielding by year 2003.

Known Problems

Need to decrease number of major database sites in order to enable better synchronization/validity of data while still supporting the user. Integration of GCCS function requirements. Software licensing agreements continue to be a problem; need to streamline acquisition so all services benefit rather than individual services performing acquisition for same software licenses. Individual services acquisitions are not currently funded equally.

DIICOE Compliance Rating

The Defense Information Infrastructure (DII) Common Operating Environment (COE) concept is best described as: an architecture that is fully compliant with the DOD Technical Architecture for Information Management (TAFIM), Volume 3, an approach for building interoperable systems, a reference implementation containing a collection of reusable software components, a software

infrastructure for supporting mission-area applications, and a set of guidelines, standards, and specifications.

Platform hardware, application software, and API software must meet various levels of DII COE compliance before being added to GCCS. Once added, hardware and software will be redefined until they reach full compliance (DII COE Level 8).

Point of Contact

LtCol Dave Bither, USA, at Comm (703) 735-8185 or DSN 635-8185, bitherd@ncr.disa.mil.

Updated by

Capt Steven Bowers, USMC, CCSC-01

Global Status of Resources and Training System (GSORTS)

Primary Purpose	Internal management tool directed by CJCS reflecting the readiness level of selected units' in terms of training, equipment, and personnel against the level required to undertake assigned missions.
Sub-Functions	Provides commanders, auditors, and congress with a semi-objective assessment of units' ability to execute full wartime missions. Not a true performance appraisal.
Equipment Requirements	Marine Corps uses front-end software called GOMERS requiring a PC with minimum 486 66MHz processor, 8MB RAM and 750 MB hard drive to create unit reports. Other services have unique requirements for the creation of unit reports.
Connectivity Requirements	Unit report submission requires access to AUTODIN message center to SIPRNET. Access to GSORTS database is achieved only through SIPRNET.
Crypto Requirements	SIPRNET.
Normal Locations	Service HQs, CINC HQs, JCS, NCA, Combat Support Agencies.
Information Managed	Information related to the status of a unit's location, personnel, training, and equipment.
Products Created	None. Provides CINCs with an orientation to the status of forces and is a key tool used in the Joint Monthly Readiness Review and by the Senior Readiness Oversight Council.
Lead Service/Contractor	Joint Sponsored.
Current Fielding Status	GSORTS version 3.2 is to be fielded during March 2001. Readiness Assessment System Output Tool is to field version 4.0 during October 2001.
Known Problems	Batch processing and service inconsistencies degrade accuracy/usefulness of information. RAS addresses these in allowing real-time updates to database and creating uniform reporting procedures throughout the DOD.
DIICOE Compliance Rating	Level 6.
Point of Contact	Mr. Bob Bovee, GSORTS Development, DISA, Pentagon (BF715) Washington D.C. 20301, Comm (703) 695-0492, DSN 225-0492, Fax 223-3580, email boveer@ncr.disa.mil

Updated by

Captain Michael E. Schutte, USMC, CCSC-01

Global Transportation Network (GTN)

Primary Purpose	U. S. Transportation Command's (USTRANSCOM) Global Transportation Network (GTN) is an automated command and control information system that supports the family of transportation users and providers, both Department of Defense (DoD) and commercial, by providing two core capabilities: command and control and an integrated in-transit visibility view of personnel and cargo moving through the defense transportation system. GTN provides a seamless, near-real time capability to access and employ transportation and deployment information for customers located anywhere in the world. GTN is also required to support USTRANSCOM and supported CINC command and control requirements and provide decision support capability for contingency operations.
Sub-Functions	GTN provides in-transit visibility to report the status and location of shipments related to a particular mission; Command and Control information regarding the transportation system, infrastructure and movements; and an online Distance Learning Training tool.
Equipment Requirements	PC based, server based at Scott AFB.
Connectivity Requirements	Accessed through both NIPRNET and SIPRNET. An account is required; may be requested through the GTN homepage. Requires web browser Netscape v4.0 or higher.
Crypto Requirements	No external crypto required.
Normal Locations	Worldwide clients.
Information Managed	Near-real time transportation and deployment information captured from various DoD, service, agency and commercial information systems.
Products Created	Multiple integrated views of transportation data for personnel and cargo moving through the Defense Transportation System. GTN now has expanded "C2 Reports" capability thanks to the addition of the Global Command and Control System (GCCS) interface. The purpose of each tracker is to provide a comprehensive, but compressed, report on transportation movements in support of contingencies or other special interest movements. Five separate trackers are now available, three individual mode trackers (Air, Ocean, and Motor-Rail) and two all mode trackers [Cargo and Unit Line Number (ULN)].

Lead Service/Contractor Air Force/USTRANSCOM.

Current Fielding Status Fully fielded. Continuous improvements and upgrades as required. GTN has installed a new exercise support database (GES), the system is on the SIPRNET only.

Known Problems

DIICOE Compliance Rating Level 3.

Point of Contact USTRANSCOM Ms. Georgia Morgan DSN: 779-1036, Commercial: (618) 229-1036. GTN Help Desk (Technical difficulties, error messages and system problems) Phone: Toll free in the US (877) 906-0246, Commercial (618) 256-6836, or DSN 576-6836. GTN Account Requests/Information Phone: Commercial (618) 229-1015, DSN 779-1015, STU III DSN 779-1605. GTN Outreach/Training Phone: Commercial (618) 229-1060, DSN 779-1060.

Internet: <http://www.gtn.transcom.mil>
<http://wwwgtnpmo.transcom.mil/information>

Updated by Capt J. R. Morgan, USMC, CCSC-01

Ground Mobile Forces Network Planning Prototype (GMF NETPLAN)

Primary Purpose	To assist the planning and implementation of tactical and strategic satellite networks.
Sub-Functions	Produces deployment packages, Satellite Access Requirements (SAR), Tactical Satellite Signal Processor (TSSP), and Low Rate Multiplexer (LRM) programming sheets.
Equipment Requirements	486 computer with 16MB RAM, 25MB hard disk space.
Connectivity Requirements	In normal office of field environments, requires a computer with printer. The system can be interfaced with the Defense Satellite Communications System (DSCS) Network Planning software used at Regional Satellite Control Centers (RSCC) and the DSCS Operating Center.
Crypto Requirements	None, unless producing networks above UNCLASSIFIED. Can be used on workstation/LANs up to SECRET.
Normal Locations	Signal Battalions and Engineer Brigades.
Information Managed	Mission requests through GMF stations. Terminal data, antenna data, locations (Lat and Long), satellite data, DSCS OC controller details, network routing, LRM and TSSP configurations, and user configurations.
Products Created	Network diagrams, map of terminal locations, SARs, TSSP, and LRM programming sheets.
Lead Service/Contractor	The system was initiated by the US Army. Contract is managed by CECOM.
Current Fielding Status	Version 2.2.3 is in current operation throughout the services.
Known Problems	Does not include data entry into Defense Communication System (DCS) entry sites for strategic-tactical interface. The system can only configure point-to-point links for AN/TSC-143 networks due to the lack of TSSP data.
DIICOE Compliance Rating	Level 5.
Point of Contact	CECOM, George Oliva, COM 703-427-2247
Updated by	CPT Scott Bager, USA, CCSC-01.

**Harbormaster Command and Control Center (HCCC) Formerly called
Port Control Command Center (PCCC)**

Primary Purpose The HCCC will be a rapidly deployable or pre-positioned system that will provide vessel tracking, cargo visibility, and port/beach control capability. The HCCC will provide 24 hour a day continuous near real-time vessel tracking, cargo visibility, and communications with and between Army, Navy, USCG, USMC, Air Force, commercial and host nation vessels and elements. To allow the continuous flow of vital concepts of operation, situational awareness, common operating picture data and threat analysis data to smaller Army watercraft assets whose C4ISR package is not designed to collect, analyze and respond to such information.

Sub-Functions The Army requires the capability to perform Logistics-Over-The-Shore /Joint Logistics-Over-The-Shore (LOTS/JLOTS) operations, intra-theater lift of forces, sustainment, and recovery and salvage of degraded ports in an austere environment. The HCCC will allow the coordination of port and cargo handling assets; and the ability to collect and disseminate meteorological and bathymetric data to shipping within the operational area, establish vessel traffic and separation schemes, safe haven plans, queing areas, beaching lanes, berthing and hazardous material/ammunition berthing and anchoring.

Equipment Requirements The HCCC shall consist of Commercial-Off-The-Shelf (COTS) and Government Furnished Equipment (GFE). Subsystems will be designed and produced for rigorous long-term employment with low maintenance. The HCCC shall be supported by both military and contract personnel. The HCCC will possess the capability to be seamlessly integrated into existing C4ISR architecture appropriate for its mission profile. In order to ensure full compliance with the continued evolution of the Joint C4ISR Operational Architecture, the HCCC will utilize military and COTS C4ISR assets which are modular in nature and fully conform to the Joint Technical Architecture (JTA). The system shall consist of a single command and control center plus two remote mobile sensor platforms capable of data sharing with the central facility or operating independently of the central facility.

Connectivity Requirements The HCCC will allow HF, UHF, VHF, Marine Band, Tactical, and Satellite voice and data

communications (secure and non-secure) with and between strategic sealift ships, Army, Navy, USCG, USMC, Air Force, civilian and host nation vessels in support of force projection and theater sustainment operations. The HCCC will connect to data communications networks. The HCCC must be compliant to data communications protocols and data standards supported by ABCS, JTA, JTA-Army, and DII-COE.

Crypto Requirements

The HCCC shall have the capability of providing secure communications for sensitive classified traffic with the highest degree of low probability of detection (LPD) and low probability of intercept (LPI).

Normal Locations

Transportation Harbormaster Operations Detachments (THOD). The HCCC will operate in austere ports and LOTS/JLOTS environments. THOD personnel must have the capability to perform PMCS, trouble shooting, and diagnosis and repair mission essential equipment.

Information Managed

The HCCC will provide C4ISR support to and between the Joint Task Force commander, the LOTS/JLOTS commander, Army, Navy, USCG, USMC, Air Force, commercial and host nation vessels as well as other DoD assets in the operational area. The HCCC will possess the capability to exercise short and long-range communications by data and voice in secure and non-secure modes, provide COP inject and access the tactical Internet. Additionally, the HCCC will provide weather and bathymetric data to supported elements. The HCCC will possess the capability to be seamlessly integrated into existing C4ISR architecture appropriate for its mission profile. The HCCC will gather, integrate, assess and react to information from a variety of sources. These sources include HF, UHF, VHF, Marine Band, Tactical, and Satellite voice and data communications (secure and non-secure); vessel tracking information from surface radar and visual/thermal imaging sources; weather information from National Oceanographic and Atmospheric Administration (NOAA); and satellite images. Once assessed, this information will be used as needed to direct assets in-bound to, or operating in, the area of operations (AO).

Products Created

The HCCC will provide command and control to all vessels in-transit to and operating in the AO. This may include military or commercial pre-positioned vessels, surge sealift vessels, sustainment vessels, Army lighters, and host nation vessels. The HCCC will coordinate with land based units for operational decisions, as

well as, gather and forward to all vessels in the area weather and bathymetric data. The HCCC must collect bathymetric data to insure that vessel approaches remain clear of obstruction or to relay vessels operating in the area the absence or destruction of vitally important navigation/channel markers. All systems, radar, electronic charting and visual/thermal imaging devices, shall be linked to provide a total common operating picture in a concise, easy to interpret format. The HCCC shelter shall house the entire C4I suite consisting of secure/non-secure HF, VHF, UHF, SATCOM, Global Positioning System (GPS), thermal and visual imaging system, Global Command and Control System Marine and marine radar.

Lead Service/Contractor	United States Army/TBD.
Current Fielding Status	Not fielded yet. Still in the development process, the Operational Requirements Document (ORD) draft is close to the final product. A prototype of the HCCC is expected to be built this year with procurement to commence NLT FY03. The product expected to be acquired will be a modified version of the system the Navy uses for their Port Security Units. The system will have two mobile stations (two HMMWVs packed with C4I) and one base station.
Known Problems	Currently there is no single system that affords the capability of near real-time vessel tracking, asset visibility, harbor/beach berthing and queuing assignments, secure and non-secure high frequency communications, maritime band communications, satellite communications, tactical communications and land link communications with and between Army, Navy, USCG, USMC, Air Force, commercial and host nation vessels in support of force projection, protection, sustainment and intratheater operations.
DIICOE Compliance Rating	Not yet rated.
Point of Contact	CWO3 Ray Aube (USA), HQ CASCOM, Comm: (804) 734-0337, DSN: 687-0337 E-mail address: auber@lee.army.mil Mr. Lynn Ridley (contractor), HQ CASCOM
Updated by	Captain M. S. Grosz, USMC, CCSC-01

Imagery Exploitation Support System (IESS)

Primary Purpose

Imagery Exploitation Support System (IESS) is the follow-on to the Computer-Aided Tactical Information System (CATIS). IESS is a Compaq Alpha and SUN Solaris hosted system that provides automated support for the imagery exploitation cycle, which includes, management of exploitation and reporting requirements, imagery selection and dissemination, production of Imagery Interpretation Reports (IIRs), packaging and distribution of IIRs within timelines consistent with mission requirements, database management, and research capabilities. IESS is single- or multi-hosted with shared database access; it monitors and validates input from external sources, such as the Requirements Management System (RMS), NIMA Library (NL), and associated NIMA Imagery Exploitation System (NEIS, formally IRP) the Dissemination Element (DE), the Imagery Product Library (IPL) the Communications Support Processor (CSP), and the Modernized Integrated Database (MIDB).

Sub-Functions

Enhanced Analyst Client (EAC) provides browser based interface into IESS functionality. The purpose of the EAC is to provide the imagery analyst a single interface to support imagery exploitation, including the ability to collect and review all exploitation support data and to provide a means to deliver imagery to the analyst when the analyst needs it. IESS also provides the Standalone Product Generator (SPG) which allows the community to process MIDB 2.x data. Previously IESS was unable to ingest the MIDB 2.x data because of some format changes. SPG converts the data from 2.x format into a more useable format for IESS. Also included in IESS a capability known as Graphical Support Data - Data Store (GSD-DS) which will allow units to ingest and store Graphical Representations or Reports (Graphreps). Graphreps are graphical representations of the IIR which will be transmitted directly to ground commanders in the field. GSD-DS provides a storage capability for retrieval of historical reports and information.

Equipment Requirements

IESS is hosted on either Sun based hardware running Solaris OS (up to 2.8 at this time) and Compaq hardware suites running Tru64 (Digital Unix).

Connectivity Requirements

IESS can connect to any variety of networks through additional routers and or switches

that can be identified for an individual site. IESS requires connectivity to its interfaces usually by 10/100 Base T Ethernet or OC3/OC12 ATM connectivity.

Crypto Requirements	None specifically. If connected to other national systems some Crypto may be required if connections leave approved SCIF facilities.
Normal Locations	IESS is present at MCISU, Naval ships, aviation squadrons, supporting shore locations and research and school facilities.
Information Managed	IESS manages all imagery intelligence data.
Products Created	IESS primary product is the Initial (IPIR) and Supplemental (SUPIR) Imagery Interpretation Reports (IIR). These are provided in accordance with the Exploitation and Reporting Structure (EARS) document. These products are distributed via CSP and other message delivery systems to recipients in the field.
Lead Service/Contractor	NIMA Program Office. IESS and EAC are developed under contract for the AFRL by General Dynamics, Thousand Oaks, CA.
Current Fielding Status	
Known Problems	None noted.
DIICOE Compliance Rating	Currently not rated, but working towards level 5.
Point of Contact	Office POC Mr. Ken Pischel, 703 755-5585, pischelk@nima.mil, the Air Force Research Laboratory (AFRL) POC is Ms. Linda Lehman, 315 330-4170, linda.lehman@rl.af.mil or Mr. John Wickman 315-330-7499 john.wickman@rl.af.mil.
Updated by	Capt M. G. McCarthy, Jr., USMC, CCSC-01

Improved Emergency Message Automatic Transmission System (IEMATS)

Primary Purpose	Provide Joint Staff and SIOP CINCs with automated Emergency Action Message (EAM) processing capabilities. Allows rapid message routes from the National Command Structure directly to CINCs. Possesses capability to preferentially route traffic at high precedence, i.e. flash.
Sub-Functions	None.
Equipment Requirements	Automatic Digital Network (AUTODIN) - Primary Route. Alternate routes include: Joint Chiefs of Staff Alerting Network (JCSAN), Air Force Satellite Communications (AFSATCOM), SCTIS, low frequency radio, and high frequency radio.
Connectivity Requirements	AUTODIN.
Crypto Requirements	KG-94/194 series encryption devices.
Normal Locations	Located in Emergency Action Centers worldwide - such as National Military Command Center and all CINC headquarters.
Information Managed	Emergency Action Messages (EAM).
Products Created	EAM's and reports.
Lead Service/Contractor	DISA.
Current Fielding Status	Deployed and operational. AUTODIN, the primary path for IEMATS, will be deactivated within the next few years and Defense Message System (DMS) will be activated. The exact configuration for how IEMATS will be used in relation to DMS has not been identified at this time.
Known Problems	None.
DIICOE Compliance Rating	Not rated.
Point of Contact	Mr. John Stoklosa, DISA, (703) 607-4020, e-mail: stoklosj@ncr.disa.mil.
Updated by	Capt Paul H. Orth, USAF, CCSC-01.

Information Dissemination Management (IDM)

Primary Purpose	Information Dissemination Management is the subset of Information Management that addresses awareness, access, and delivery of information. Involves the compilation, cataloging, caching, distribution, and retrieval of data. Getting the information to the right place at the right time.
Sub-Functions	IDM does not respond to or counter a DIA-validated threat. However, as a service or process IDM may reside on systems that are vulnerable to current and future threats and therefore, IDM will assume the same vulnerability as the system. The IDM capability must be provided in all types of environments throughout the complete spectrum of operations.
Equipment Requirements	Sun+ Solar 2.5.1, COE 3.1+ Patch 9, GCCS UBC+ Patch 7, Perl 5.x, WEBBr (NS4.04+), Atlas Server, NS Compass Server, NS SuiteSpot Server, NS SuiteSpot Administrator, BWeb, NS Proxy Server, WAATS(V)ORB, JRE, NS Directory Server, IDM Builder.
Connectivity Requirements	LAN/WAN All DOD pathways.
Crypto Requirements	Multi-level security to meet the Joint Vision expressed in the Mission Need Statement.
Normal Locations	CinCs, Services, and DOD Agencies.
Information Managed	Information awareness through search, catalog, indexing and advertising. Information access with automated repetitive information retrieval, aggregation of user profiles, information channel building for profile delivery. Information delivery through delivery planning service and Commanders' Policy service to implement policies on user profiles and infrastructure resource usage. Information dissemination support with common directories, integration with DII security management, Schema interoperability across, catalog, and user domains.
Products Created	Information Distribution Infrastructure with a common operational picture to all users in the information flow.
Lead Service/Contractor	DISA D6 IDM Chief Engineer. (703) 681-2109/ DSN 761-2109.
Current Fielding Status	
Known Problems	Java Runtime Environments, Object Relational

Databases, Network Timing, Operational
Threads, (Native vs. Green).

DIICOE Compliance Rating

Point of Contact

DISA D6 IDM Chief Engineer. (703) 681-2109/
DSN 761-2109.

Updated by

Capt Ken Hodges, USAF, CCSC-01

Integrated Computerized Deployment System (ICODES)

Primary Purpose	ICODES is the DOD cross-service migration system for ship stow planning. It provides intelligent decision-support to Army, Navy and Marine Corps users during unit deployment operations.
Sub-Functions	Streamline and standardize terminal cargo personnel training support. Enable more effective allocation of scarce personnel to accommodate fluctuations in workload. Provide comprehensive ad-hoc reporting capabilities to tailor reports for specific needs or projects. Provides an intelligent automated assistant that is effective and less costly to support. Support simultaneous stow planning for multiple vessels with multiple POE/POD's. Support unknown vessels with a generic ship-generating tool. Rapidly elevate the proficiency of inexperienced stow planners.
Equipment Requirements	The Army version 3.x executes on the HP-UX and the IBM-AIX UNIX operating systems is being replaced by the ICODES NT version 5.x. Plans are being made to extend fielding to the Navy and Marine Corps. Minimum hardware specifications include: late model Pentium II/III; 500 Mhz processor speed; 256 RAM and Open GL compatible.
Connectivity Requirements	ICODES operates in either a standalone or networked environment.
Crypto Requirements	None required.
Normal Locations	USMC MEU's, MEF's, MEB's, and MAGTF's, Navy Fleet Industrial Supply Centers (FISC), HQMTMC, MTMC water ports, Terminal Transportation Brigades (TTB), MTMC Deployment Support Command (DSC), MTMC Transportation Engineering Agency (TEA), HQMTMC and Army active/reserve Transportation Units.
Information Managed	Ability to simultaneously load up to four ships with multiple POE's and/or POD's. Additionally ICODES contains ship and cargo libraries, cargo association capability, and assisted and user stow with detailed cargo templates.
Products Created	Customized reports such as cargo manifests, hazardous cargo manifests, etc, detailed deck layouts, and cargo staging plans.
Lead Service/Contractor	Joint. Developed by California Polytechnic State University. Managed by Transportation Command (TRANSCOM) with HQ, Military Traffic

Management Command (HQMTMC) as the lead agency.

Current Fielding Status

MTMC ports, Terminal Transportation Brigades (TTB), MTMC Deployment Support Command (DSC), MTMC-TEA, MTMCHQ and Army active/reserve transportation units.

Known Problems

None.

DIICOE Compliance Rating

Version 3.x (3) Microsoft NT (5).

Point of Contact

Mr. Steve Goodman; COMM: (703) 681-3543, DSN: 761-3543. Email: Goodmans@mtmc.army.mil

Updated by

Capt Bob Landis, USAF, CCSC-01

Integrated Marine Multi Agent Command & Control System (IMMACCS)

Primary Purpose	IMMACCS is an experimental, object-oriented architecture that provides a common tactical picture and tactical decision aid for the Marine Commander in the Experimental Combat Operations Center (ECOC). It is the core of the Capable Warrior C4I decision-support system, providing 'near' real-time situation awareness (i.e., updated several times per second) at all C2 access nodes.
Sub-Functions	Unit locations, decision support functions, limited 3-D fly through, news group system (Netscape Navigator Message), data base "reach back."
Equipment Requirements	Currently the core system runs on Sun Ultra II/Windows NT Java. MCWL experimenting with other platforms.
Connectivity Requirements	Requires access to a LAN on which core system is attached. The LAN is not part of the system.
Crypto Requirements	None.
Normal Locations	Core system to be used in Capable Warrior Advanced Warfighting Experiment ECOC with access down to the squad/team level via laptops and Personal Digital Assistants (PDA).
Information Managed	Uses "Object-oriented" technology to manage all objects/entities in the battle space.
Products Created	Generates a common tactical picture (CTP). Decision support tools are embedded in CTP.
Lead Service/Contractor	USMC/California Polytechnic Institute CAD Research Center, San Luis Obispo, CA.
Current Fielding Status	Currently not fielded. Will be tested at Capable Warrior. Future fielding is in question.
Known Problems	
DIICOE Compliance Rating	Level 6 with waivers.
Point of Contact	Capt Hugh Cartright, MCWL, (703) 784-1084, DSN 278-1084, email curtrighth@mcwl.quantico.usmc.mil
Updated by	Capt J.F. Moffatt, USMC, CCSC-01

Intelligence Analysis System (IAS)

Primary Purpose	The IAS is the "hub" for all other indigenous Marine Corps intelligence systems. It provides a modular, configurable, intelligence information collection, control, processing, and dissemination system that allows using units to rapidly assess enemy situations and battlefield conditions. The IAS will use current versions of the Marine Air-Ground Task Force (MAGTF) Command, Control, Communications, Computers, and Intelligence (C4I) Software Baseline (MSBL), enhanced with Intelligence segments. The IAS may be deployed as an IAS Suite, MEF IAS, or IAS workstation. The IAS Suites consist of two variants, V1 and V2. The V1 variant has two workstations while the V2 has four. IAS suites are Hewlett-Packard UNIX hardware. MEF IAS is a Sun Sparc and the Intelligence Operations Workstation (IOW) is an IBM Laptop Computer in a Windows NT environment.
Sub-Functions	Intelligence database management, situation maps, desktop publishing, journal, workbook and message handler, electronic light table, tactical collection management.
Equipment Requirements	Marine Common Hardware Suite (MCHS) class B workstations: SunSparc for MEF IAS; HP workstations for IAS Suites; and PC Laptops for the Windows NT IAS Workstations. File/Communication Servers and Tactical Communications Interface Modules.
Connectivity Requirements	AUTODIN Mode I/II, STUIII with 9600 baud or higher, SATCOM, HF, VHF, UHF, and Ethernet bridge (TCP/IP).
Crypto Requirements	KIV-7, KIV-19, KG-194A, or KG-84C if connecting into DII.
Normal Locations	Intelligence BNs and G-2/S-2 sections of MEF/MEB/MEU, Divisions, Wings, FSSGs, REGTs, MAGs, BNs, and SQDNs.
Information Managed	Tactical intelligence.
Products Created	Intelligence databases and standard reports, digital situation maps, desktop publishing briefs, journals, target folders, and basic imagery manipulation.
Lead Service/Contractor	USMC/Multiple.
Current Fielding Status	The IAS family is fielded. Two MEF IAS systems are deployed with each of the three MEFs and one is at NMITC. 70 IAS suites are

deployed to active and reserve division/wings/regiments/groups and each of the seven MEUs. 300+ IOW workstations went to active and reserve battalions/squadrons. The IAS suite hardware is being upgraded in FY01 with improvements in overall footprint and processing power that make the systems lighter, faster, and more manageable.

Known Problems

None.

DIICOE Compliance Rating

Level 7.

Point of Contact

Capt Michael Castagna, MCTSSA, Project Officer, DSN: 365-9609; MGySgt Joseph Mobilia, MCCDC, Intel Requirements, DSN: 278-0194; Maj Scott Camden, MARCORSYSCOM, Project Officer, DSN: 278-0977/0970/0953.

Internet: <http://www.fas.org>

Updated by

CPT Eve M.Geyer, USA, CCSC-01.

**Joint Defense Information Infrastructure Control System - Deployed
(JDIICS-D)**

Primary Purpose	To provide a standardized tool for deployed JTFs to manage their networks in the Defense Information Infrastructure Common Operating Environment. JDIICS-D is an interim system until the Army's Joint Network Management System (JNMS) is fielded. JNMS is currently in the source selection phase and is scheduled for fielding in FY03.
Sub-Functions	Automated, joint network management tool. Integrates Commercial Off-The-Shelf (COTS) software tools running on NT platforms to perform fault, configuration and performance management of deployed networks.
Equipment Requirements	NT 4.0 Terminal Server Edition. Dual Processor 233 MHz Pentium. Hard Drive 9 GB with expansion capability. RAM 256 MB. 21 Inch display (recommended), 16 MB video memory (minimum). Additional Ethernet LAN Adapter, CD ROM Drive, Zip Drive or equivalent (100MB), Tape Drive. Additional Equipment: HP LaserJet Printer (locally provided). two LAN Probes and one WAN Probe. three Y Cables. Software Used: COTS Apps- HP Openview Network Node Manager, CiscoWorks for Openview, Net Metrix, Remedy ARS, SQL7 RDBMS, MS Office, Netscape. GOTS Apps- SNMP Agents for TTC-39, CDS/SMU, FCC-100 and IDNX.
Connectivity Requirements	N/A
Crypto Requirements	N/A
Normal Locations	Deployed sites.
Information Managed	Network functions and status.
Products Created	Status reports, performance trend analysis, trouble tickets.
Lead Service/Contractor	DISA.
Current Fielding Status	Forty systems currently deployed to CINCs. Version 1.1 (COTS version updates and bug fixes) due by Summer 2001. Original systems were demonstrated at ROVING SANDS 97, JWID 97,

and Joint User Switch Exercise (JUSE) 97.

Known Problems

None.

DIICOE Compliance Rating

Level 5.

Point of Contact

Mr. Jim Rose, Chief, NS512, Organization DISA
Network Services, phone (703) 735-3171,
alternate: Major Dave Gandy, USMC, (703) 735-
3124

Updated by

Capt Steven Bowers, USMC, CCSC-01

Joint Deployable Intelligence Support System (JDISS)

Primary Purpose	JDISS is responsible for providing three classes of Information Technology (IT) products: (1) accredited software baselines, (2) optional corporate services, and (3) remote and on-site support functions. The fully interoperable set of JDISS products work together to meet the mission requirements of US Intelligence Community (IC) producers and their US and allied customer organizations. Through JDISS, the supported IC producers and consumers achieve full connectivity with standards-based, community IT architectures. JDISS provides access to imagery, finished intelligence products, and assists in putting together the order of battle.
Sub-Functions	JDISS products and services, allow DoD, Joint, National and Coalition users to access databases across the Intelligence Community (IC). With this connectivity, they gain access to critical Intelligence Mission Applications (IMA's), databases, and products. JDISS products perform their critical mission support functions by providing secure and reliable access to the applications, databases, and products that facilitate intelligence planning and direction, collection management, processing and exploitation, production, and integration and dissemination.
Equipment Requirements	IBM compatible Pentium II 450 Mhz, 128 MB Ram, and 9 GB removable hard drive for desktop applications.
Connectivity Requirements	SCI systems require access to JWICS; GENSER (Secret) systems require access to SIPRNET.
Crypto Requirements	SCI systems on JWICS require no additional encryption. GENSER (Secret) systems accessing SIPRNET may use STU-III or other accredited encryption methods.
Normal Locations	All major Unified Commands, Joint Commands, DoD, Component Commands and MSCs, National intelligence community, NATO and Coalition partners.
Information Managed	Users are able to utilize JDISS to do Intelligence Collection Management, Signals Intelligence, Human Intelligence, Imagery Intelligence, Measurement and Signature Intelligence, and Electronic Intelligence.
Products Created	JDISS does not create anything. It allows access to finished intelligence products and

provides the tools to customize intelligence products "tailored" for unit specific requirements, utilization and dissemination.

Lead Service/Contractor

Joint Program Office. Staffed by all service components. Various support contractors support the program.

Current Fielding Status

JDISS is a perpetual acquisition program. The JPO is continually improving the system and services provided to customers.

Known Problems

Accessibility is restricted to the connectivity and crypto requirements. No unclassified access.

DIICOE Compliance Rating

JDISS Stand Alone Workstations Level 5.

Portions of JDISS That Are Segments of GCCS, GCCS-M, TBMCS, Etc. Level 7.

JDISS 4.4(2QFY02) Will Be Level 7 for Both NT and Solaris.

Point of Contact

LCdr Bernie Stansbury, JDISS Deputy Program Manager, COMM (301) 669-5961 DSN 659-5961, EMAIL <bstansbury@mcic.navy.mil>

Updated by

Capt William Shannon, USMC, CCSC-01

Joint Enhanced Core Communications System (JECCS)

Primary Purpose	Provides a robust command and control capability for MEU, MEB, and MEF headquarters. Designed to replace portions of the JTF Enabler package, it provides the conduit for and access to DISA STEP site services, including NIPRNET/SIPRNET, DSN, AUTODIN/DMS, and VTC. After quickly establishing this "first-in" capability, it provides the initial connectivity requirements for a smaller force in advance of larger, follow-on forces.
Sub-Functions	<ul style="list-style-type: none">* Telephone: COTS commercial switch to support DSN/commercial connectivity, as well as provide ISDN access for the Secure Terminal Equipment (STE) which replaces the STU-III. COTS/GOTS tactical switch for at least 60 subscribers, supporting analog and digital tactical telephones and requisite COMSEC for tactical users.* Data: Tactical Data Network gateway functionality for NIPRNET/SIPRNET access.* Technical control: Integrated package of test equipment, two FCC-100s, and ATM switch for circuit configuration, monitoring, fault isolation, and restoration, as well as dynamic bandwidth management.* Transmission: Two AN/PSC-5s and one INMARSAT terminal for initial and immediate communication requirements.
Equipment Requirements	All equipment is self-contained in one heavy HMMWV shelter. Requires additional support vehicles for towed generators.
Connectivity Requirements	Requires GMF SATCOM transmission system for access to DISA STEP sites, as well as other UHF/SHF terrestrial multichannel systems for connectivity to other tactical units. Contains limited integral transmission capability (e.g., AN/PSC-5 and INMARSAT terminals).
Crypto Requirements	Integrated KIV-7/KG-84 for data circuit encryption and KIV-19/KG-194 for trunk encryption.
Normal Locations	JECCS will be fielded to Communication Battalions for MEF, MEB, and MEU support requirements.
Information Managed	None. Provides conduit for various command and control as well as communications systems.
Products Created	None.
Lead Service/Contractor	MARCORSYSCOM/Lockheed Martin.

Current Fielding Status Awaiting approval of Purchase Description, although 8th and 9th Comm Bn's are planned to receive four systems each, two for 7th Comm, and one for 6th Comm.

Known Problems None.

DIICOE Compliance Rating Not rated.

Point of Contact Ms. Terry Conte, MARCORSYSCOM, DSN 278-0946, COMM (703) 784-0946.

Updated by Capt G.T. Puntney, USMC; Capt M.D. Tobin, USMC; Capt M.A. Woodhead, USMC, CCSC-01

Joint Flow and Analysis System for Transportation (JFAST)

Primary Purpose JFAST is a multi-modal transportation analysis model designed for the U.S. Transportation Command (USTRANSCOM) and the Joint Planning Community. JFAST is used to determine transportation requirements, perform course of action analysis, and project delivery profiles of troops and equipment by air, land, and sea.

Sub-Functions The Notional Requirements Generator (NRG) is a subset of JFAST providing rapid course of action development and estimation of transportation feasibility when Time-Phased Force and Deployment Data (TPFDD) does not exist or is insufficient for conducting gross transportation analysis. The NRG allows selection of major forces to be deployed, specify approximate time phasing, identify combat support/combat service support and develop a sustainment wedge for forces being deployed.

Equipment Requirements JFAST version 7.1.85 operates on Windows 95, 98 or Windows NT.

Connectivity Requirements JFAST operates as a stand-alone workstation, in a client-server application, or interfaces with Global Command and Control System (GCCS).

Crypto Requirements No internal Crypto. User determines based on data.

Normal Locations AF Wargaming Center, AF/XOOC, ALCOM/J43, AMC/DOXP, AMCCOM, Armed Forces Staff College, Army/Strategic Mobility Division, Combined Arms Combined, Contingency Wartime Planning Course, Defense Fuel Supply Center, Defense Nuclear Agency, DIMA CELL, DISA, GTN, HQ 21st TAACOM, HQ USA CASCOM, HQMC/LPO, I Corps, Institute for Defense Analyses, Joint Staff/J4-LRC, JOPEs Training Organization, Logistics Evaluation Agency, Louisiana Maneuvers Task Force, MSC, MTMC, MTMCTEA, NDU War Gaming & Simulation Center, Office of Aerospace Studies, Strategic Sealift Division, Tactical Training Group Atlantic, AFSC, Navy War College, US Army War College, US Forces Korea/FKJ4 & FKJ5, USACAC, USAF AFSAA/SASM, USAOMMCS, USAREUR, USARPAC, USCENCOM, USCINACOM, USCINCPAC, USEUCOM, USFORSCOM, USSOCOM, USSOUTHCOM, and USSTRATCOM.

Information Managed Input primarily comes from Joint Operation Planning and Execution System (JOPEs) in the form of OPLAN TPFDDs and reference files. Additional data files provided by transportation operating commands of Air

Mobility Command, Military Sealift Command, and Military Traffic Management Control. JFAST functions are transportation analysis, data facilities, utilities, and NRG.

Products Created

Data models origin out loading, transit to POE, throughput constraints at POE, airlift and sealift to POD, and throughput constraints at POD. Focus on analysis and identification of transportation bottlenecks. Presents graphic and tabular output showing impact upon transportation resources, vehicles, and ports.

Lead Service/Contractor

Functional OPR is USTRANSCOM/TCJ3-OP.

Current Fielding Status

Fielded, in use within all services and several support agencies of DoD.

Known Problems

None reported.

DIICOE Compliance Rating

Level 5.

Point of Contact

Mr. Boyer USTRANSCOM
phil.boyer@hq.transcom.mil
DSN 779-1810
COMM 610-229-1810

Updated by

CPT David W. Gursky, USA, CCSC-01

Joint Network Management System (JNMS)

Primary Purpose

The JNMS is a CINC and Commander, Joint Forces (CJF), joint communications planning and management system. It provides communication planners with the capabilities to conduct high level planning (war planning); detailed planning and engineering; monitoring; control and reconfiguration; spectrum planning and management; and security of systems and networks supporting joint operations. The benefits provided by these increased capabilities include: enhanced force-level situational awareness (shared view of the network); enhanced flexibility to support the commander's intent; better utilization of scarce spectrum resources; and increased security of critical systems and networks. As an enabler for information superiority as-well-as command and control, the JNMS serves as the commanders' "brain center" for the systems and networks supporting his forces. It ensures C4I unity of effort, exploitation of Total Force capabilities, proper positioning of critical information and allows for its fusion.

Sub-Functions

High-Level Planning (CINC/JTF level):
Create/modify databases for C4I equipment (Threshold) and organizations (units).
Define the network topology based on sites (Threshold) and by organizations (units).
Create/modify subordinate unit tasks, responsibilities, schedules and track performance.

Detailed Planning and Engineering: Provide the capability to conduct detailed joint C4 network planning, engineering, activation (and modification)
Perform network planning and engineering for a notional MTW JTF network (Internet Protocol (IP) data, Super High Frequency (SHF), and terrestrial transmission).

Monitoring:
Graphically display network configurations and status changes in near real-time.
Provide the warfighter access to JNMS C4 status information to enhance.
Conduct performance analysis.

Control and Reconfiguration:
Perform network device configuration/reconfiguration.
Generate and process change orders.
Perform automated fault management.
Model, evaluate, and optimize proposed network

changes.

Spectrum Planning and Management:
Assign and deconflict frequency resources.
Generate and distribute JSOI and the JRFL.
Perform automated communications propagation analysis.

Security:
Display regional Defensive Information Operations IP device status near real-time. (Threshold). Receive, process, and display status and event information from Information Assurance (IA) Management Systems associated with designated networks.
Correlate IA events with respect to their impact on joint networks.
Support Electronic Key Management Systems.

Equipment Requirements

Because the JNMS software can be run on a variety of hardware platforms (based on JTA/DII COE compliance and minimum specified system requirements to be provided by the materiel developer), hardware support requirements are considerations to be used in selecting a platform. The PM will provide users with a set of minimum requirements for hardware to run the JNMS. Government off-the-shelf (GOTS) software packages included in the JNMS must be Y2K, DII COE compliant and supported by their respective program offices as part of the post-development software support (PDSS) process. The JNMS program office responsibility is the integration of the various GOTS and licensed commercial off-the-shelf (COTS) products, as well as the maintenance of the COTS software licenses. The PM will make every effort to secure Enterprise licensing agreements with COTS vendors/manufacturers.

Connectivity Requirements

The JNMS is supported by Service/Agency level functional area programs in spectrum management, information security (INFOSEC), information dissemination, military satellite communications (MILSATCOM), DISN common-user transport systems, switching, transport and through post deployment software support (PDSS) centers.

Crypto Requirements

No additional requirements.

Normal Locations

JNMS User Community. The CINC will utilize JNMS to support a remote (deployed) JTF Joint Communications Control Center (JCCC). Joint level managers and Service component headquarters level System Controls (SYSCONs) will use the JNMS (See Figure 1-1). Each communications unit responsible for providing

these SYSCONs must be equipped with a JNMS capability to deploy with the unit. Because the JNMS is scalable and modular, the Services may select a subset of JNMS capabilities to employ at units below the component SYSCON. Other DOD agencies may also use the JNMS to manage their systems that are supporting the joint backbone.

Information Managed

The JNMS will provide CINC and deployed JTF level communication planners with the capability to perform tasks associated with the following functions:

High Level Planning:

Creation/Editing and/or loading of data base.
Definition of network sites and units.
Assignment of responsibilities and schedules.
Generation and distribution of planning data (Annex K, Joint CEOI, Communications Service Requests (CSRs), Other data).

Detailed Planning, Engineering, Activation and Modification:

Circuit switch planning and engineering.
ATM planning and engineering.
DMS planning and engineering.
Commercial and military satellite communications systems planning and engineering for designated ranges, including UHF, UHF DAMA, SHF, C, X, Ku, Ka and EHF.
Data network planning and engineering.
Single channel networks planning and engineering.
Message switch planning and engineering.
Transmission systems planning and engineering.
Generation and distribution of planning and engineering data.
Link and network activation.
Gateways between networks.

Monitoring:

Collection of data from equipment and network.
Data analysis.
Data base updates.
Generation and distribution of data and reports.

Control and Reconfiguration:

Network device configuration.
Processing of incoming data.
Generation and evaluation of alternative responses.
Implementation of appropriate responses.

Spectrum Planning and Management:

Information management.
Spectrum engineering.

Allotment/assignment of frequencies.
Deconfliction.
EMC analysis.
EMI analysis.

Security:
Formulate network security requirements.
Physical security.
User security.
Information Assurance (IA).
COMSEC/Electronic Protection (EP).

The last two functional areas (spectrum planning and management, and security) intersect the four other functional areas.

Products Created

Refer to Information Managed.

Lead Service/Contractor

The JNMS supports the following TRADOC Future Operational Capabilities (FOCs) defined in TRADOC PAM 525-66: TR 97-013. Network Management; TR 97-015. Common Terrain Portrayal; TR 97-019. Command and Control Warfare (C2W) (a) Information Protection; TR 97-048. Performance Support Systems; TR 97-049. Battle Staff Training and Support; TR 97-050. Joint, Combined and Interagency Training; TR 97-053. Embedded Training (ET) and Soldier-Machine Interface; TR 97-057. Modeling and Simulation.

Current Fielding Status

An interim solution, DISA's Joint Defense Information Infrastructure Control System - Deployed (JDIICS-D), is now being fielded as the JNMS (v1) and is to be replaced with the JNMS, (v2), using an industry driven phased, modular approach. The Initial Operating Capability (IOC) will be considered complete when the JNMS is fielded to a geographical CINC, its respective CINC Components, a JTF Headquarters and JTF Component HQs; the personnel are fully trained in its operations and maintenance, and logistics support is in place. For IOC, the total number of the JNMSs is 36 for a geographical CINC, i.e., 18 per CINC and CINC components; and an additional 18 for a CJTF and JTF components. The 36 JNMS suites support network management for the three classification levels and networks: UNCLASSIFIED (NIPRNET), SECRET (SIPRNET) and TOP SECRET-SCI (JWICS). For IOC, each JNMS suite must meet all stated threshold requirements. The target date for the IOC is 4QFY03. If the IOC is not met, the interim system may become non-supportable and cause a capabilities shortfall for all CINCs. Full Operational Capability is considered to be a JNMS capability to all CINCs, CINC Components,

CJTF and JTF Components to include: fielding, personnel training in operations and maintenance, and logistics support. Joint Network Management will continue to evolve with network technologies and standards, which will require software and hardware, upgrades with evolved personnel training requirements and maintenance support.

Known Problems

Manpower/Personnel.
Training.
Human Engineering.

DIICOE Compliance Rating

The JNMS must be Joint Technical Architecture (JTA) and DII COE compliant.

- DII COE Level 6 (Threshold)
- DII COE Level 8 (Objective)

The JNMS will incorporate joint communications network management and planning functions across the DII, down to and including JTF component headquarters. Joint communications network management and planning functions by component headquarters will be interoperable through or integrated into the JNMS. Services are responsible to ensure that their internal network management systems are interoperable with the JNMS through the use of standard protocols and open systems architecture. Service configurations of the JNMS must be interoperable and perform prescribed functions. The JNMS must be capable of interfacing with allied and coalition networks. The JNMS must comply with the applicable provisions of the JTA, to include DII COE compliance, so as to run on multiple types of hardware (consistent with the minimum specified system requirements to be provided by the materiel developer) and be readily adaptable to change. The JNMS product will be constantly improved in an evolutionary manner so that new technologies and emerging capabilities in joint network management are incorporated. JNMS software modules and functionality will be built in using the DII COE as a guide and will be reusable and integratable with joint C2 systems. These conditions will allow the system to adapt to improvements in the joint communications infrastructure and advances in technology.

Point of Contact

Dwight D. Reed
LTC, USA
Joint Staff
J6T - Networks Division
(703) 614-2778 (DSN 224-)

Updated by

Captain Michael L. Campbell, USAF, CCSC-01

Joint Operations Planning and Execution System (JOPES)

Primary Purpose	The Joint Operation Planning and Execution System (JOPES) is the principal system within the Department of Defense for translating policy decisions into operations plans. JOPES is a process, not a hardware system.
Sub-Functions	Threat Identification and Assessment, Strategy Determination, Course of Action Development, Detailed Planning, and implementation of plans and operation orders.
Equipment Requirements	N/A
Connectivity Requirements	Must have access to the Global Command and Control System (GCCS).
Crypto Requirements	SIPRNET.
Normal Locations	JOPES is used by the NCA, CJCS, JCS, CINCS, and supporting commands.
Information Managed	Deliberate Planning Process and Crisis Action Planning and the steps involved with each process.
Products Created	OPLANS, CONPLANS with and without a Timed Phased Force Deployment Data (TPFDD), functional plans and operations orders.
Lead Service/Contractor	Department of Defense.
Current Fielding Status	JOPES 2000 oracle 8i is the current process and associated applications.
Known Problems	None.
DIICOE Compliance Rating	3.1-4.2 by late 2001.
Point of Contact	Joint Staff J-5.
Updated by	Capt Justin Wilson, USMC, CCSC-01.

Joint Service Imagery Processing System (JSIPS)

Primary Purpose

The term JSIPS is utilized for programmatic purposes only and the actual system has been replaced by the national system known as the National-Deployable Transit-cased System (N-DTS) and the tactical system known as the Tactical Exploitation Group. The purpose of these systems/equipment is to receive, process or decompress raw image data, provide a means for exploitation and finally allow connection to communication source for transmission of the finished imagery product to the end user.

Sub-Functions

These systems/equipment provide a user environment to accomplish all phases of imagery exploitation and creation of reports and associated imagery products. There are three types of report associated with both the N-DTS and TEG. Although each system can utilize all and/or any imagery report format, the primary formats for the N-DTS is the Immediate Photo Interpretation Report (IPIR) and the Supplemental Photo Interpretation Report (SUPIR). The Reconnaissance Exploitation Report (RECCEXREP) is the primary report format utilized in TEG operations and provides a quick format, which is better suited to report time sensitivities and/or perishable targets.

Equipment Requirements

In garrison, the N-DTS at MCISU possesses its own organic communication equipment and is connected to a national facility via a dedicated terrestrial commercial, simplex, data line operating at 1.544 mega bytes per-second (T-1). There is also a dedicated 9.6 bytes per-second, full duplex data line used to transmit text data used to order imagery and receive conformation data from the distant end. The MCISU possesses no organic, deployable communications transmission capability or electrical support equipment. Therefore, the unit would require the communication requirements listed above and adequate power to support operations. The TEG in garrison can operate in the same manner as the N-DTS, connecting to and receiving/disseminating raw or secondary imagery as necessary, utilizing bandwidth authorized by the local commander. The present design of the TEG facilitates the processing of only the Advance Tactical Airborne Reconnaissance System (ATARS) raw image data. This data can be transmitted directly to the TEG from the aircraft via the Tactical Interoperable Ground Data Link

(TIGDL) antenna or extracted from the mission tape after the aircraft lands. The TEG does not have organic communication transmission equipment, which must be provided by the supporting command. It does have an auxiliary power source to support initial set-up and emergency operations but long-term operations will require connection to an external primary power source.

Connectivity Requirements

Crypto Requirements

The MCISU/N-DTS utilized two KIV-7HS's for low and medium rate data, and two KIV-19's for high rate image data transfer. The TEG has five KIV-7HS's organic to the system/suite of equipment.

Normal Locations

Information Managed

Imagery (raw and processed).

Products Created

The products created within the MCISU or TEG is limited only by the imagination the personnel assigned. Each system has the capability to create all phases and types of reports, and a multitude of imagery products. At the MCISU, these products are disseminated via magnetic tape (numerous sizes), compact disk, hardcopy and are hosted on either an SCI or GENSER, Image Product Library (IPL) or the Demand-Driven Direct Digital Dissemination (5D) servers. All of these servers are accessible via the MCISU home page on both the JWICS or SIPRNET circuits. The TEG possesses only the IPL and at present hosts no imagery archive. However, this will change with the solidifying of both garrison and deployment concept of operations and the system reaching full operation capability (FOC).

Lead Service/Contractor

Previously the lead service on the JSIPS/TEG/N-DTS was the Air Force with Marine Corps representation from MARCORSYSCOM. With the final delivery of the N-DTS and conditional delivery of the TEG, MARCORSYSCOM decided to accept all aspects associated with the operations and maintenance of each system. The primary contractor for these systems is Raytheon (formerly E-Systems) and Lockheed Martin.

Current Fielding Status

There is only one N-DTS in the Marine Corps and it is located with the Marine Corps Imagery Support Unit (MCISU) at Camp Pendleton, California. There are three TEGs presently in the USMC inventory, one with 1st Intelligence Battalion at Camp Pendleton, one

assigned to 2nd Intelligence Battalion but located at Cherry Point, and the final delivery during January 2001, to 3rd Intelligence Battalion, Okinawa, Japan. There are no additional systems scheduled for delivery. However, there is an effort underway to develop a TEG-Expeditionary to provide a smaller, lightweight exploitation capability to the MEUs, MAWs and/or other isolated imagery analysts as necessary.

Known Problems

The primary problems of these systems and imagery support in the Marine Corps as a whole are, 1) communication bandwidth robust enough for transmission of products to the lowest user, and 2) the user having the ability to clearly articulate the required/desired outcome of their imagery or intelligence requirements. All organic system issues can be resolved primarily with personnel and system management techniques.

DIICOE Compliance Rating

The N-DTS and it's components have been certified as compliant with Joint/DOD standards by the Joint Interoperability Test Command, Fort Huachuca, AZ, and certain components certified for use by a national agency. The TEG has not received the official authorization from MARCORSYSCOM for fielding and is undergoing evaluation and will be scheduled for final compliance and acceptance testing this year.

Point of Contact

N-DTS: Marine Corps Imagery Support Unit,
Camp Pendleton
Comm: 760-725-6023 or DSN: 365-6023
FAX: 760-725-6137 or DSN: 365-6137

TEG: 1st Intelligence Battalion
At the direction of the Bn Co, the CO MCISU manages TEG operations. Numbers listed above are valid.

TEG: 2nd Intelligence Battalion
This TEG is located with the 2nd Force Imagery Interpretation Unit (AKA Imagery Interpretation Platoon) at Cherry Point.
DSN: 582-2516

TEG: 3rd Intelligence Battalion
This TEG is operated by the Imagery Interpretation Platoon co-located with the battalion at Camp Hanson, Okinawa, Japan.
DSN: 315-623-4059

Updated by

Captain Thomas Jarman, USMC, CCSC-01

Joint Tactical Distribution System (JTIDS)

Primary Purpose	Secure anti-jam digital data and voice communications system for theater, air, ground, and naval forces.
Sub-Functions	Communication, navigation, and identification (CNI) systems.
Equipment Requirements	JTIDS terminals plus modification systems to onboard data processing systems to generate and display JTIDS message formats.
Connectivity Requirements	JTIDS terminal and self-contained L-band radios.
Crypto Requirements	KGV-8 or CMSEC/TRANSEC DS-101 Hybrid (CDH).
Normal Locations	USN: F-14D and E2C aircraft, aircraft carriers, Aegis class cruiser, destroyers, and LHD/LHA's. USMC: Tactical Air Operations Module (TAOM). USA: Forward Area Air Defense (FAAD) C2I sites. USAF: Airborne Warning and Control System (AWACS), Rivet Joint aircraft, Joint Surveillance Targeting and Reconnaissance (JSTARS) aircraft, Airborne Command, Control, and Communications (ABCCC) aircraft, Air Operations Center (AOC), Modular Control Equipment (MCE), and limited F-15's. Allies: UK AWACS and Tornado Aircraft, France AWACS aircraft, NATO control and Reporting Centers (CRC).
Information Managed	Surveillance data including air, ground, and naval track file information; intelligence information; friendly positions and status; and digital voice communications.
Products Created	Real-time situational awareness of integrated air/ground picture from all platforms in theater.
Lead Service/Contractor	USAF/GEC Marconi and Rockwell Collins.
Current Fielding Status	Older class terminals in operation in US, NATO AWACS, and CRCs. New Class II terminals being fielded currently by all services.
Known Problems	Size requirements may delay integration into tactical aircraft and TAOM/MCE.
DIICOE Compliance Rating	Not Rated.

Point of Contact

Maj Pat Cox, TBMCS/JTIDS, Hansom AFB (781)377-3100.

Internet: <http://www.link16.nosc.mil>

Updated by

Capt Joseph P. Lentivech III, USMC, CCSC-01

Joint Tactical Terminal (JTT)

Primary Purpose

JTT is a special application UHF (225-400 MHz) tactical intelligence terminal which provides the capability to disseminate time sensitive Command, Control, Communications, Computer, and Intelligence (C4I), and battlefield targeting information to tactical commanders and intelligence nodes. The JTT receives signals from the Integrated Broadcast System which integrates multiple intelligence broadcasts into a system of systems, and migrates tactical receive terminals into a single, related Joint Tactical Terminal (JTT) family. The goal of the Integrated Broadcast Service (IBS) is to resolve the uncoordinated proliferation of "stovepipe" intelligence/information broadcasts by providing the tactical commander with integrated time-sensitive tactical information.

Sub-Functions

The terminals allow Army, Air Force, Navy and Marine Corps users to exploit Integrated Broadcast Service (IBS) networks: Tactical Reconnaissance Intelligence eXchange Service (TRIXS), Tactical Information Broadcast Service (TIBS), Tactical Related Applications (TRAP), and Tactical Data Information eXchange System-B (TADIXS-B). In addition to receiving intelligence data, JTT and CTT transmit TRIXS or TIBS data. The CTT and other IBS terminals are migrating to a single JTT family.

Equipment Requirements

The baseline JTT is not a stand-alone system, but consists of two line replaceable units (LRU) (the Receiver Exciter (RE) and the Power Amplifier (PA)) provided by the Program Manager as Government furnished equipment (GFE) and which must be integrated into a C3I host provided by the user. The user is required to provide all antennas, pre-amplifiers, cables, TDP/workstation and other associated equipment. The JTT baseline (JTT T/R) consists of both an RE and PA, and provides the ability to receive on up to eight channels and transmit on one channel simultaneously. Additional PAs could be added (max of 4) to provide additional channels up to the maximum of 12 receive and 4 transmit. The JTT Receive Only Terminal (JTT R) is capable of receiving eight channels simultaneously and contains the RE only. Additional configurations and being considered to include a stand-alone suitcase-size terminal for Army Special Forces (JTT B) and a reduced size JTT for use on airborne platforms (JTT A). These and other configurations would

be part of the JTT family of terminals, but they are not currently in production.

Connectivity Requirements	LAN: 10/100 MHz Ethernet, RS-232/422, MIL-STD-188-114, MIL-STD-1553. Also uses GBS, EHF SATCOM, SIPRNET, JWICS, etc and other netted services.
Crypto Requirements	Uses whatever cryptographic means the radio transmission system or network is running up to SCI.
Normal Locations	The JTT is integrated into other weapon systems and are transported with the host system. The equipment can be mounted in fixed and rotary wing aircraft, surface, and fixed or mobile ground platforms and vehicles.
Information Managed	Targeting, tracking, global detection and cueing depending on what system it is receiving information from over the IBS.
Products Created	Depends on what information is being received over the IBS. Graphics to intelligence contact reports.
Lead Service/Contractor	United States Air Force. SOFTWARE DEVELOPMENT CONTRACTOR: Raytheon
Current Fielding Status	2nd Quarter FY 2001 Begin JTT-B deliveries and conduct multi-service operational test and evaluation scheduled. 3rd Quarter FY2001- Milestone III production decision.
Known Problems	None.
DIICOE Compliance Rating	Unknown.
Point of Contact	
Updated by	Capt George W. Dickey, Jr, USMC, CCSC-01

Joint Total Asset Visibility (JTAV)

Primary Purpose	Provide Web based access to integrated, Joint logistics and personnel asset visibility.
Sub-Functions	Provides users with timely and accurate information on the location, movement, status and identity of units, personnel, equipment, and supplies.
Equipment Requirements	JTAV/CINC sites utilize Sun Server 5000's, Sun SPARC Server 20's, & Data Sync Guard. User minimum PC standards are: 486 processor, 16 MB RAM, and sufficient HD space.
Connectivity Requirements	Netscape 3.5 or higher, or Internet Explorer 4.0 or higher with 128 bit encryption.
Crypto Requirements	The Data Sync Guard is used for NIPRNET/SIPRNET access.
Normal Locations	JFCOM, CENTCOM, EUCOM, and PACOM (including USFK). SOUTHCOM and SOCOM are supported by CENTCOM Server Suite. The National Level Ammunition Capability Server Suite resides inside the Pentagon.
Information Managed	JTAV currently receives data feeds from the four Services, Defense Logistics Agency (DLA), USCG, GTN and JMAR. JTAV provides data to DoD Applications, (i.e. GCSS, COP-CSE, JL-ACTD, ALP, etc.).
Products Created	Query based, integrated, joint logistic and personnel printouts.
Lead Service/Contractor	Defense Logistics Agency/Computer Sciences Corporation.
Current Fielding Status	JTAV Version 1.0.0.8, release date 14 July 2000.
Known Problems	Accuracy of data entered into the system. Server timeout. Latency of data.
DIICOE Compliance Rating	Five.
Point of Contact	JTAV Homepage: http://www.acq.osd.mil/log/jtav/ LTC Anthony Conroe, USAF, (703) 428-1081 x102, DSN 328-1081 x102; and Mr. Norm Myers, CSC, Springfield, VA, (703) 914-8619.
Updated by	Captain Barton J. Rice, USA, CCSC-01

Joint Universal Lessons Learned (JULLS)

Primary Purpose An after action report (AAR) software package allowing users to generate joint lessons learned for JULLS data base. This data base is distributed semiannually to the Commanders in Chiefs (CINC) of all unified commands, the services and the combat support agencies. Improves CINC's warfighting capabilities by taking advantage of LL's from real world operations and exercises.

Sub-Functions 1. Joint After-Action Reporting System (JARS). A set of procedures and formats for AAR's. 2. Remedial Actions Projects Program (RAPS). Identifies significant shortfalls and problems from AAR's. Tracks the identified shortfalls or problems and corrective action to completion or validation.

Equipment Requirements The software is a MS-DOS IBM-compatible computer program.

Connectivity Requirements Stand-alone computer software. AAR's are submitted through the CINC's to the Evaluation and Analysis Division (EAD). Operational Plans and Interoperability Directorate (J-7). AAR's must be submitted on electronic media (I.E. disk, e-mail) via mail, courier, or Global Command Control Systems (GCCS).

Crypto Requirements None. JULLS data base is classified SECRET and below. If the AAR is classified SECRET appropriate security procedures for handling SECRET material must be maintained.

Normal Locations 12,000 JULLS exist and support all echelons of any Unified Command or any major command of a service component. In the Marine Corps, the software and access to the JULLS data base can be found at MCCDC, the Warfighting Development Integration Division (WDID), the archive's division of the Marine Corps Research Center, Quantico, at Headquarters Marine Corps, Deputy Chief of Staff Plans, Policy and Operations (DC/S PP&O), and at the Marine Expeditionary Force (MEF) G-3's.

Information Managed Inputted Lessons Learned.

Products Created Formats between the inputted and outputted JULLS/ARR's are identical.

Lead Service/Contractor Joint Staff (EAD J-7)/ Institute for Simulation and Training (affiliated with the University of Central Florida).

Current Fielding Status Program is being updated for windows

environment. Current version is 6.22.

Known Problems

Access or input to the JULLS software and database at the battalion or squadron level (or below) is difficult.

DIICOE Compliance Rating

Not rated.

Point of Contact

Mr. Mark Cooney, Joint Staff, J-7 Operational Plans and Interoperability Directorate
Evolution and Analysis Division
Comm: (703) 693-2880

Updated by

Capt William F. Stegemerten IV, USAF, CCSC-01

Joint Warning and Reporting Network (JWARN)

Primary Purpose	The Joint Warning and Reporting Network (JWARN) will provide the military services near real-time operational capabilities to collect, analyze and report NBC agent detections, identification, location and warning information. JWARN will be interoperable and integrated with Joint/Service C4I2 systems and networks, supporting automated data exchange between the actual detector/sensor and the C4I2 system providing NBC analyzed data. By using data provided, decisions for disseminating warnings down to the lowest level of the battlefield can be made. JWARN will provide additional data processing, reports and access to specific NBC information, which will improve the efficiency of limited NBC personnel assets. JWARN will enable commanders to understand both the tactical and strategic implications of an NBC attack or hazard.
Sub-Functions	Multiple functions will be available through JWARN. The primary means of communication will be through formatted messages. Maps/imagery can be imbedded in those messages. Reports will be collected and disseminated through JWARN to provide near real-time NBC hazards on the battlefield. Auditory alarm warnings will emit from handheld NBC detectors.
Equipment Requirements	JWARN is a combination of systems linking NBC detectors to tactical communications, to be integrated with C4I2 systems and to terminate on PCs and other detectors/sensors.
Connectivity Requirements	At this time, JWARN is a stand-alone software based system. PCs with applicable software can transfer data via automated messaging system. The current software is Unclassified and not authorized for use on the SIPRNET.
Crypto Requirements	No external crypto required.
Normal Locations	NBC teams.
Information Managed	NBC hazard data.
Products Created	Maps of NBC hazard areas, formatted messages and multiple reports. Auditory alarm warnings will emit from handheld NBC detectors. Using modeling, simulation and GPS software, JWARN will also map how the agent will react to current and future weather conditions.
Lead Service/Contractor	Marine Corps/MCTSSA.

Current Fielding Status Phase I, the initial software release, has been fielded as a pilot project for compiling lessons learned and debugging source code. Phase II, GCCS integration, is not expected to reach full operational capability and C4I2 integration until 2002.

Known Problems

DIICOE Compliance Rating None established.

Point of Contact MCTSSA, Shawn Stone, JWARN Project Officer, DSN 365-2723, commercial (760) 725-2723. MCTSSA help desk DSN 365-0533, commercial (760) 725-0533.

Updated by Capt J. R. Morgan, USMC, CCSC-01

Joint Worldwide Intelligence Communications System (JWICS)

Primary Purpose Provide a transmission path capable of secure video/data within defense intelligence community. At T1 speed allows: (1) transmission of imagery files and intelligence documents rapidly between sites; (2) real time two-way video teleconferencing between sites; (3) receipt of the intelligence community's TV broadcast of the Defense Intelligence Network (DIN); (4) connectivity to the Joint Intelligence Virtual Architecture (JIVA). Designed to provide 24-hour TS-SCI multimedia communications to include secure video teleconferencing (VTC). Replaces DISNET 3.

Sub-Functions JWICS Mobile Integrated Communications System (JMICS) is a deployable JWICS. Equipment is self-contained on a HMMWV. Containerized JWICS is a deployable JWICS system that is packaged into ten transit cases.

Equipment Requirements JWICS hardware is self-contained. Requires 120/60 power.

Connectivity Requirements T1 (1.544 mbps) pathway, usually satellite. Often used in conjunction with TROJAN SPIRIT. (1.024 mbps for VTC (2 X 512kbps), .384 mbps designated for data, .136 mbps for serial data channels and system control).

Crypto Requirements KY96/KG-194/KIV-7.

Normal Locations Over 150 fixed sites to include all major commands. Ten JMICS available for contingency/crisis response (maintained at DIA). Approximately 20 containerized JWICS available for contingency/crisis response.

Information Managed Point to point and multi-point secure VTC service. Broadcast and video programming of Defense Intelligence Network. Bulk data transfer of a variety of network services.

Products Created This is a communications path. Products are produced by systems on this path.

Lead Service/Contractor Defense Intelligence Agency.

Current Fielding Status Operational; planning in progress to increase mobile JWICS assets. Asynchronous Transfer Mode (ATM) multicast is under development to allow an unlimited number of receivers and a limited number of transmitters to participate in a JWICS command brief outside of a JWICS conference room.

Known Problems Slow data rates can result in poor VTC.

DIICOE Compliance Rating N/A

Point of Contact Mr. Tom Moslener, Deputy Directorate- Crisis Operations (J203), Joint Staff, DSN: 223-7640; JWICS Help Desk: Comm: (202) 231-4000, DSN 428-4000; JWICS Systems Requirements Management Division, Comm: (703) 695-1999, DSN: 225-1999. MCIA Det, Comm: (703) 784-6111 DSN: 278-6111.

Updated by Capt J. F. Moffatt, USMC, CCSC-01

Local Asset Management System (LAMS)

Primary Purpose	<p>The LAMS program is a standardized system for the management of Support Equipment (SE) at all three levels of Naval Aviation Maintenance. LAMS enhances the control of inventory through up-line reporting of SE assets to the Support Equipment Resources Management Information System commonly referred to as SERMIS. SERMIS contains the master database of equipment for the Aviation Maintenance Material Readiness List (AMMRL) Program. LAMS provides automated methods of tracking SE assets at the local level. LAMS uses the SE Transaction Report (TR) as the source document. TRs are processed in LAMS and the data is submitted to the Support Equipment Controlling Authorities (SECAs) for upload into SERMIS. LAMS references the Individual Material Readiness List (IMRL) data which is downloaded from SERMIS. At the local level, activities are allowed to compute their excesses and deficits according to the authorized allowances in their IMRL. The Activity Inventory Report (AIR) data from SERMIS is used by the LAMS to generate the AIRCOMP Report, which compares the inventory reported in SERMIS with the inventory reported in LAMS. LAMS provides real-time automated methods of aviation SE management.</p>
Sub-Functions	<p>Standardizes inventory control procedures for Naval Aviation IMRL assets. Allows real time tracking of an activities IMRL assets (issue, return, etc.). Improves inventory accuracy and reduces man-hours by using barcodes. Provides printed reports for all levels of management. Provides interface with SERMIS.</p>
Equipment Requirements	<p>200 MHZ Pentium Pro CPU 64MB EDO RAM 3.0 GB Hard Drive 3.5 inch floppy disk drive 8X IDE CD-ROM Dual PCMCIA/PC CardReader PCI Video w/2MB RAM 17 inch monitor mouse or trackball Soundblaster (compatible) audio card with speakers keyboard CPU Compatible 100 MBPS Fast Ethernet NIC</p>
Connectivity Requirements	<p>No special requirements.</p>
Crypto Requirements	<p>None</p>

Normal Locations	Aviation squadron maintenance departments (afloat and ashore).
Information Managed	Aircraft Support Equipment (SE) allowances, asset location, availability, inventory, and SE current asset.
Products Created	Printed reports.
Lead Service/Contractor	USN (NAVAIR 3.6.4).
Current Fielding Status	Version 3.0.5 in use in USN and USMC.
Known Problems	None
DIICOE Compliance Rating	Not rated.
Point of Contact	Ms. Brenda Tominack, DSN 757-1100, COMM (301)757-1100
Updated by	Capt J.A. Keisler, USMC, CCSC-01

Logistics Automated Information System (LOGAIS)

Primary Purpose	A family of software programs used to track people, supplies, and equipment during deployment and redeployment operations. The coordinated, mutually supporting, personal computer based programs support peacetime operations and immediate, on-hand crisis action/time sensitive operational and logistics planning and execution of deployment and redeployment of MAGTF and NSE in independent, joint, and combined operations.
Sub-Functions	Contains Marine Air Ground Task Force War Planning System (MAGTF II), MAGTF Deployment Support System II (MDSS II), Transportation Coordinators' Automated Information Management System (TCAIMS), Asset Tracking for Logistics and Supply System (ATLASS), Computer Aided Embarkation Management System (CAEMS), Automated Identification Technology (AIT), and the MAGTF Data Library (MDL).
Equipment Requirements	PC with 32MB RAM, 250MB hard drive space, Windows 95/NT Operating System.
Connectivity Requirements	Stand-alone system. Users pass data between personal computers by exporting a database file that can be transferred via NIPRNET, SIPRNET, or diskette. MAGTF II interfaces with JOPES in the same way.
Crypto Requirements	None.
Normal Locations	MEF and MSC planners use MAGTF II. Regiment and battalion planners use MDSS II and ATLASS. CAEMS, CALMS, TCAIMS, and AIT are utilized by embarkation planners at all levels.
Information Managed	Equipment, personnel, and supply data for required planning and execution of deployment and redeployment of forces.
Products Created	TPFDD in JOPES format via GCCS, unit deployment listings, lift and sustainment estimates, embarkation plans, air load plans, real-time tracking of assets, and movement plans.
Lead Service/Contractor	USMC/Stanley Associates.
Current Fielding Status	Version 6.0 released 28 SEP 00.
Known Problems	Integration of system, timeliness of data.
DIICOE Compliance Rating	Not Rated.
Point of Contact	MAJ Kemp @ MCLB Albany (DSN 567-6625/26). Web

info at:
<http://mcsd.ala.usmc.mil/magtf/magtfii.htm>

Updated by

CAPT Daniels, USMC; CPT North, USA; CAPT
Trepka, USMC

Logistics Sustainment Analysis and Feasibility Estimator (LOGSAFE)

Primary Purpose	Part of Joint Operation Planning and Execution System (JOPES) executing in the Global Command and Control System (GCCS) common operating environment. Assist logistic planners in determining sustainment requirements of an Operation Plan (OPLAN) for deliberate planning or crisis action planning.
Sub-Functions	Performs supply functions of Plan Development Phase model (as described in the Joint Staff Officer's Guide). LOGSAFE provides the capability to obtain a list of deploying forces, type unit data, geo-locations, and consumption factors from the JOPES Core database. LOGSAFE then uses this data to calculate time-phased requirements for non-unit related supplies. LOGSAFE factors in requirements for supply build-up and off-sets to overall requirements that are provided by Pre-positioned War Reserve Stocks (PWRS). The user can also tailor supply consumption factors to meet precise scenario requirements.
Equipment Requirements	GCCS SUN/Solaris 2.5.1 workstation. Also to be Windows NT operable.
Connectivity Requirements	GCCS JOPES database and SIPRNET.
Crypto Requirements	None.
Normal Locations	Version 3.0.0.2 installed at 16 sites, available to Unified Command Headquarters and their service component headquarters.
Information Managed	Non-Unit Related Cargo (NURC) records entered into Time-Phased Force and Deployment Data (TPFDD) as Cargo Increment Numbers (CINs).
Products Created	NURC records for JOPES databases. Places records for NURC cargo into the JOPES transition format NRNUBT for non-unit related cargo data to be processed by the JOPES database Transaction Processor.
Lead Service/Contractor	Joint Staff J4/ Determined by current contract.
Current Fielding Status	In use with GCCS Version 3.0 and with continuous upgrades.
Known Problems	Uses old (WWMCCS 1996) format of LFF tables.
DIICOE Compliance Rating	Not rated.
Point of Contact	Joint Staff / J-4 / Logistics Information Systems Division, Comm:(703) 695-5189, DSN: 225-5189. Col (USA) Welsh.

Updated by

Captain Sean C. Gallagher, USMC, CCSC-01

MAGTF Deployment Support System II (MDSS II)

Primary Purpose	Commander's unit deployment data base capable of planning and supporting rapid deployment anywhere in the world. It allows for the management, tracking, and deployment of a unit's assets and personnel. The hub of MAGTF II/LOGAIS.
Sub-Functions	Enables MAGTF Commanders to build and maintain unit personnel and equipment databases. Allows for quick selection of assets to carry out a specific plan and quick tailoring of force structure to determine life requirements.
Equipment Requirements	MAGTF LOGAIS has specific minimum hardware and software requirements that are explained below: DELL LOGAIS Suite, or any Pentium microprocessor, 150 MHz or higher CPU speed. 32 MB RAM. 550+ MB Hard Disk Space ;this is considered the MINIMUM operating platform. Windows 95, 98 or NT (please see paragraph pertaining Windows NT Setup). CD-ROM single drive unit (For installation and MDL) Access to a Laser Printer.
Connectivity Requirements	Standalone system. Interfaces with other MAGTF II/LOGAIS systems (GCCS, JOPES, WRS, WPS, GTN, UDMIPS).
Crypto Requirements	None.
Normal Locations	USMC battalion level and above.
Information Managed	(1) Unit Equipment and Supplies List (UESL) information down to the TAMCN, NSN, and individual serial number level. (2) Alpha roster table information down to the SSN level.
Products Created	Creates unit deployment list (UDL) for specific exercise or operation.
Lead Service/Contractor	USMC/Stanley associates.
Current Fielding Status	Version 6.1 is currently being used.
Known Problems	N/A
DIICOE Compliance Rating	N/A
Point of Contact	Capt Michael Gavre or Capt Troy Adams, LOG AIS Help Desk, MCLB, Albany, GA DSN: 567-6625/26 Comm: (912) 439-6625/26 or (229) 639-6625/26

Updated by

Captain Richard E. Petersen, USMC, CCSC-01

Maneuver Control System (MCS)

Primary Purpose	Horizontal and vertical force integrator for all Battlefield Operating Systems (BOS) running in the Army Battlefield Command System (ABCS), maintains and disseminates Common Tactical Picture, supports collaborative planning and execution for Army units Echelon Corps and Below.
Sub-Functions	Maneuver, Fires, Intel, Logistics, Command and Control, Air Defense planning, and Mobility/Counter-mobility/Survivability. Provides simultaneous planning across echelon lines.
Equipment Requirements	Database Servers: 600 MHz Ultra 3 (UCU-3) Workstations: 333MHz CCU-2/Versatile Computer Unit (VCU) 586/133MHz- Handheld Terminal Unit 30" or larger Large Screen Tiled Display
Connectivity Requirements	Exists on current Tactical Packet Network: 16 kbps through 1024 kbps, SECRET/TCP/IP based network, TRI-TAC and MSE for brigade and separate battalion through corps, SINCGARS, EPLRS.
Crypto Requirements	No external requirements.
Normal Locations	All commands, battalion through corps level.
Information Managed	Current situation, map manipulation, control measures, 3-D Terrain.
Products Created	OPORD/OPLAN development, situational overlays, Common Tactical Picture, resource management, collaborative training.
Lead Service/Contractor	U.S. Army/PEO Command, Control, and Communications Systems/GTE Government Systems.
Current Fielding Status	Currently undergoing testing and evaluation at the 4th Infantry Division, Fort Hood, Texas. IOT&E begins FY 02.
Known Problems	Integration of BOS legacy databases vice the migration of BOS systems to the Joint Common Database and lack of organic U.S. Army maintenance support beyond the operator level. Currently not compatible with USMC's TCO.
DIICOE Compliance Rating	Level 5.
Point of Contact	LTC Curtis R. Williams, Product Manager, PEO Command, Control, Communications Systems/MCS,

Fort Monmouth, NJ 07703-5405, DSN 450-7039.
cwilliams@c3smail.monmouth.army.mil
<mailto:cwilliams@c3smail.monmouth.army.mil>

Updated by

Capt Farrell J. Sullivan, USMC, CCSC-01.

Marine Corps Fire Support System (MCFSS)

Primary Purpose Architectural system comprised of all USMC fire support systems which automate fire support coordination and/or execution through automated devices and data communications.

Sub-Functions Automated fire support coordination of artillery, close air support (CAS), naval surface fire support (NSFS), and mortars; tactical and technical fire direction; fire support planning; targeting functions; artillery, counter-fire, and mortar fire planning; artillery calls for fire; air support requests; meteorological and survey data collection and distribution.

Equipment Requirements Varies with individual systems.

Connectivity Requirements VHF/HF single channel radio, two and four wire, and LAN (AFATDS/IFSAS).

Crypto Requirements Vinson family.

Normal Locations Systems are located in the following nodes:

AFATDS/IFSAS: Artillery Bn and Regt FDCs, Infantry Bn.

Battery Computer System (BCS): Artillery Battery FDC.

AN/TPQ-46A: Firefinder Radar.
AN/TMQ-41: Meteorological Measuring Set.

Information Managed Conventional fire plans, all supporting arms fire missions, target information, fire support coordinating measures, maneuver geometry, individual firing unit information, JTARS and immediate air requests, met messages, and survey information.

Products Created Fire support plans, fire plans, target lists and other target information, firing data, calls for fire, ASRs, mission fired reports.

Lead Service/Contractor USMC - IFSAS, MBC, DMS/THS, AN/TMQ-31.
USA- AFATDS, BCS, AN/TPQ-46A.

Current Fielding Status AFATDS replaces IFSAS and has been fielded to I MEF and III MEF, and will be fielded to II MEF in June 2001. THS is scheduled to be fielded beginning in FY02. All other systems fielded. Version 11 software package will bring older systems into VMFBOM message formatting. AFATDS will replace BCS at the Btry in FY02. At that time, if not before, IFSAS will no longer be used. AFATDS will be

fielded to the infantry Bns in FY03.

Known Problems

Minor interoperability problems with systems from different contractors.

DIICOE Compliance Rating

AFATDS '98 level 6.

Point of Contact

Capt Kubicki, MARCORSYSCOM, DSN 278-0860.

Maj Kevin McConnell Requirements Division,
MCCDC, DSN 278-3192.

Updated by

Capt Charles D. Walker, USMC, CCSC-01

Marine Corps Integrated Maintenance Management System (MIMMS)

Primary Purpose	Increases equipment readiness with minimum expenditure by using uniform maintenance management system.
Sub-Functions	Management tool for conduct of ground equipment maintenance. Establishes effective maintenance management programs for maximum readiness. Efficiency and economy of maintenance operations.
Equipment Requirements	286 PC with monitor (minimum).
Connectivity Requirements	Stand alone. Data must be passed via courier diskette, LAN, or other means to Maintenance Information System Coordination Office (MISCO).
Crypto Requirements	None.
Normal Locations	USMC Organizational Level with authorized 2nd echelon maintenance or higher.
Information Managed	Equipment repair status. Timely information on equipment undergoing repair.
Products Created	Maintenance reports: Daily Transaction Listing (DTL), Daily Process Report (DPR), Daily SASSY Transaction Listing, Daily Field Maintenance TAM Report, Semiweekly Milstrip Status report, Weekly Owning Unit Maintenance TAM Report, Weekly Major Command TAM Report, Weekly Maintenance Exception report, Weekly Material Report, Field Maintenance Production Report, Weekly Maintenance Shop Summary, History Process Report, and MIMMS Secondary Repairable Expense Summary.
Lead Service/Contractor	USMC.
Current Fielding Status	Fielded.
Known Problems	Labor intensive.
DIICOE Compliance Rating	N/A
Point of Contact	MSGT White, Marine Corps Systems Division, MCLB Albany, DSN 567-5489
Updated by	Capt Benjamin T Bierly, USMC, CCSC-01

Marine Corps Total Force System (MCTFS)

Primary Purpose	Continuously records, processes, and maintains personnel and pay data for all active, reserve, and retired personnel.
Sub-Functions	MCTFS is an integrated personnel and pay system, utilizing Unit Diary/Marine Integrated Personnel System (UP/MIPS), On-Line Diary System (OLDS) and Automated Recruit Management System (ARMS) as the major input tools to update information contained within the database. With over 34 systems that interface the database, MCTFS is the only totally integrated personnel and pay system within the Department of Defense. MCTFS replaced the Joint Uniform Military Pay System/Manpower Management System (JUMPS/MMS) in September of 1996.
Equipment Requirements	Industry Standard Personal Computer and the Lightweight Computer Unit (LCU), LAN/WAN capability and 3270 emulation.
Connectivity Requirements	MCDC, LAN/WAN, SALTS, NIPERNET, 3270.
Crypto Requirements	None, however, a user ID issued by the local TASO, is required.
Normal Locations	Battalion/Squadron or independent unit requiring personnel management capabilities.
Information Managed	Pay and personnel management functions.
Products Created	Rosters (alpha, meal card, rifle/pistol, pay), Leave and Earnings Statement (LES).
Lead Service/Contractor	The Marine Corps and Defense Finance and Accounting Service (DFAS) jointly own MCTFS. The Financial System Activity implements system modifications and conducts maintenance.
Current Fielding Status	Currently in use.
Known Problems	None.
DIICOE Compliance Rating	Not rated.
Point of Contact	Major Kay Young, HQMC Manpower, DSN 224-4115.
Updated by	Captain Joseph P. Lentivech III, USMC, CCSC-01

Medical Augmentation Plan (MAP)

Primary Purpose	Provides a reserve pool of active duty Naval Medical personnel not currently assigned to an operational billet (Claimancy 18 personnel) to augment operational and medical support units deploying to situations ranging from limited contingencies to global warfare.
Sub-Functions	Augmentation Personnel Readiness Checklist.
Equipment Requirements	386 personal computer with modem.
Connectivity Requirements	Data transferred electronically via email to local/regional medical facility. Will forward consolidated information to Bureau of Medicine and Surgery (BUMED).
Crypto Requirements	None.
Normal Locations	NAVMED major command elements, stand-alone medical facilities, and hospitals.
Information Managed	Operational platform medical billets. Deployable medical personnel rosters.
Products Created	Command data base of deployable personnel. MAP Readiness Training Requirements Report. MAP Monthly Augmentation Readiness Report. MAP Augmentation Personnel Sourcing Changes Since Last Report. Readiness Improvements Report. Training Status Report.
Lead Service/Contractor	USN/Naval Medical Information Management Center (NAVMEDINFOMGMTCEN).
Current Fielding Status	Continuously upgraded. Change requests from NAVMED units and BUMED sent to NAVMEDINFOMGMTCEN.
Known Problems	Version 5.1 undergoing import improvements.
DIICOE Compliance Rating	Not rated.
Point of Contact	Daidrian Davis DSN 762-3427 COM: (202) 762-3427, LCDR Richard Guzman DSN 762-3437 COM: (202) 762-3437, Deputy, Readiness Operations Branch (MED-272) Bureau of Medicine and Surgery.
Updated by	CPT Eve M. Geyer, USA, CCSC-01

Migration Defense Intelligence Threat Data System (MDITDS)

Primary Purpose	MDITDS is the intelligence community system for automated threat data and warning analysis. The system provides a suite of automated tools supporting indications and warning, counterintelligence, counterterrorism, and arms control.
Sub-Functions	MDITDS is designed to support and automate the processes used by threat intelligence database users to complete operational tasking and intelligence production. It uses advanced technology to organize free text information and provide tools for the user to find and associate related information including data visualization, distributed data maintenance, and fuzzy search techniques.
Equipment Requirements	Sun Sparc Center 2000E with web browser.
Connectivity Requirements	JWICS, SIPRNET.
Crypto Requirements	JWICS, SIPRNET.
Normal Locations	Unified commands, JIC, JAC, intelligence agencies, law enforcement agencies.
Information Managed	Terrorist threat analysis information.
Products Created	Single-query access to unified databases pertaining to terrorist profiles and facilities, facility vulnerability assessments, threat assessments, and country profiles/assessments.
Lead Service/Contractor	DoD/Litton PRC.
Current Fielding Status	17 systems fielded to date.
Known Problems	None.
DIICOE Compliance Rating	Not rated.
Point of Contact	Dr. Judith Daly, (703) 614-8436.
Updated by	Capt G.T. Puntney, USMC, CCSC-01

Multiple Source Correlation System (MSCS)

Primary Purpose	The Multiple Source Correlation System (MSCS) provides automatically correlated air tracks from multiple sources. In January 2001, MSCS will display ground situation awareness information in tandem with the aviation track. MSCS allows for real time command decisions to be facilitated to support tactical operations and intelligence centers. It receives messages from a variety of sources, in a variety of formats, correlates information from these sources and distributes the correlated information to selected consumers.
Sub-Functions	Joint interoperability is achieved through certification of the MSCS TADIL A/B/J interfaces by the Joint Interoperability Test Command (JITC) to operate within the Joint Tactical Air Operations network. The TIBS interface has been certified by the Air Intelligence Agency (AIA) to operate as a Master/Manager/Provider within the TIBS network.
Equipment Requirements	Local/Wide Area Network interfaces are available that allow connection to a Logicon LMS-16, the Solipsys Multiple Source Correlator/Tracker, the Ground Control Processor (GCP), and the Deployable Ground Intercept Facility (DGIF). Work is under way to incorporate a Theater Battle Management Core System (TBMCS) interface that will allow MSCS to pass air track data for display. MSCS will also provide correlated TADIL data to the Common Operational Picture (COP) database within GCCS and receive the ground COP information to establish an integrated ground/air picture. This work focuses on the Global Command and Control System. A Multiple Tactical Data System (MTDS) LAN/serial interface is also available. Because of the modular architecture of the MSCS, other LAN/WAN applications can be added.
Connectivity Requirements	TADIL A,B,J, TIBS, TRAP, NATO LINK-1, LAN.
Crypto Requirements	KG-40, KG-84, KGV-8.
Normal Locations	Worldwide NSA, USMC TACC, CAOC, U2 Deployable Ground Station, Army Aviation Missile Command.
Information Managed	The MSCS can maintain over 1000 real-time tracks/special points (perishable data) and over 6000 emitters (retained from mission to mission). Information is displayed against a map background in the graphics display. This

gives the operator a view of the selected air and ground situation. Current full duplex interfaces include Tactical Digital Information Link (TADIL) A, TADIL B, TADIL J (serial, LAN, and Class II terminal - future), the Tactical Information Broadcast Service (TIBS) (TIMF, TDIMF (Rev E), and 70 bit (Rev E)), and NSA's Near Real Time Dissemination (NRTD). Receive-only interfaces include NATO Link 1, PARSEC, Tactical Receive Equipment (TRE) and Related Applications (TRAP), and text-oriented messages (IPIR, TACELINT, TACREP, Opscom, RECCEXREP, RADARXREP, SENSOREP, SENSORREP, and others as required).

Products Created

MSCS primary function is to correlate information from various and diverse sources to form a single integrated operational picture of the battlespace. MSCS provides Real-Time to Real-Time, Real-Time to Non-Real-Time, Non-Real-Time to Non-Real-Time, and LOBs to Air Track correlation across all sources of information. MSCS also correlates emitters, convolving the error ellipse to obtain a more precise location.

Lead Service/Contractor

USMC/Lockheed Martin.

Current Fielding Status

JITC Certified TADIL-A,B,J.

Known Problems

None noted.

DIICOE Compliance Rating

Level 4.

Point of Contact

Major Gallagher, MARCORSYSCOM, TACC Project Officer, (703) 784-0781

Updated by

Captain Chris Richie, USMC, CCSC-01

Multi-Spectral Imagery Materials Exploitation System (MIMES)

Primary Purpose	Provide spectral imagery and geospatial product support to the nation's nuclear deterrence and strategic warfighting missions, as well as regional CINC strategic and tactical operations worldwide. First prototype of a military multi-spectral imagery production system. It's a state of the art digital image processing system. Conceived and developed by the USAF Strategic Air Command with assistance from the Defense Support Program Office (DSPO). Provides the capability to process and exploit multi-spectral and panchromatic imagery to support mission needs.
Sub-Functions	Support to mission planning and execution in the form of image maps, terrain categorized (TERCAT) products, and perspective view products. Support to Unified Commands, DoD, and national assessments of designated missile forces in support of strategic and tactical warning, planning, targeting, and execution. Mapping, charting, and geodesy support to the Single Integrated Operational Plan.
Equipment Requirements	(Hardware) Four Sun/ULTRA 60 workstations, four Sun/ULTRA 2 workstations, , four Windows NT Dual Chip Pentiums, two Apple Power PCs; (Software) ERDAS Imagine, ERIPS, and ENVI.
Connectivity Requirements	N/A
Crypto Requirements	N/A
Normal Locations	A DoD asset utilized by all Unified Commands.
Information Managed	LANDSAT, SPOT, IRS, and IKONOS imagery.
Products Created	Image-based products to support headquarters planning activities, custom products, contingency planning, and training programs. Analysis Image, Image Graphic, Custom Format Graphic, Change Image/Reference Image, Perspective View, Mosaic Image, and Terrain Categorized Graphic are standard products supported by MIMES. Products may be provided in hardcopy, or on 8mm tapes and CD-ROMs. Production times vary depending on factors such as area size, scene availability, process required, and priority of request.
Lead Service/Contractor	USAF (US Strategic Command).
Current Fielding Status	Operational since 1988.

Known Problems	None.
DIICOE Compliance Rating	Not rated.
Point of Contact	USSTRATCOM J2613, Offutt AFB, DSN 271-7784, comm (402) 294-7784/8950, FAX comm (402) 232- 5126
Updated by	Capt J. F. Moffatt, USMC, CCSC-01

**National Military Command Center Command and Control System
(NMCCC2S)**

Primary Purpose	The National Military Command Center Command and Control System (NCCS) serves as an information-sharing tool for the NMCC and the J3 and supports operations within the NMCC.
Sub-Functions	N/A
Equipment Requirements	NCCS consists of three different hardware platforms, SUN, NT and Auspex, running Solaris and Window NT operating systems. NCCS software is a combination of commercial off-the-shelf (COTS) and government off-the-shelf (GOTS) products. NCCS is a LAN internal to the NMCC, with connectivity to the Joint Worldwide Intelligence Communications System.
Connectivity Requirements	Internal LAN with connectivity to JWICS.
Crypto Requirements	N/A
Normal Locations	NCCS supports the Joint Staff.
Information Managed	Message Traffic, crisis situation logs, maps, GSORTS, Common Operating Picture data.
Products Created	Electronic briefings, crisis situation logs, maps, message traffic.
Lead Service/Contractor	DISA
Current Fielding Status	Operational.
Known Problems	None.
DIICOE Compliance Rating	Level 5.
Point of Contact	LtCol D.E. Bryan, USMC J6T 703-614-6713
Updated by	Capt. J. C. Trepka, USMC, CCSC-01

**Naval Modular Automated Communications System II - Single
Messaging Solution (NAVMACS II - SMS)**

Primary Purpose	Provide improved message handling for ship-to-shore and ship-to-ship operational communications.
Sub-Functions	Message screening, processing and distribution.
Equipment Requirements	CPUs running HP-UNIX (HP 755, AN/SYQ-7A, (HP-715, AN/SYQ-7B) or SCO (Compaq Proliant 1850R, AN/SYQ-7B PC Variant and AN/SYQ-26) operating systems. NAVMACS COMMUNICATIONS CONTROLLER (NCC) VME CPU running VXWorks. System capable of sixteen (16) serial channels to connect with AUTODIN and other serial protocols. Backend LAN delivery using AMP software for interface with JOTS and SMTP (Simple Mail Transfer Protocol) for MS Exchange/Outlook users message delivery. Computer Monitors for the Displays unit system management/operator interface Requires NAVMACS II - SMS Administrator/Database Manager and Operators (or equivalent). Two (2) HP 4000 or equivalent laser jet printers connected to the NAVMACS II - SMS LAN). DDS tape drives with 4GB tapes for system software loading and database management/message storage, backup message input/output if NAVCOMPARS is not functioning. Patch panels provide the interface between computer and RF equipment. An inter-connect box is required to interface computer and satellite RF equipment (if patch panels are unavailable).
Connectivity Requirements	UHF satellite 25 Hz wide channels allocated for CUDIXS through DAMA only. No Non-DAMA CUDIXS circuits are available. Each channel is half-duplexed UHF link at 2400 bps, SHF uses RIXT or MODE I circuits with KG-84A and MARCEMP circuit with KG-84C. NAVMACS II - SMS deletes the requirement for Gate Guard. NAVMACS II - SMS circuits support RIXT, MODE I and MMS protocols. It also interfaces by telephone line using STU III telephone. High Speed Fleet Broadcast is not used. All (4) broadcast circuits are utilizing 75 bits per second. Full Period Terminations circuits are used with NAVMACS II - SMS as well.
Crypto Requirements	None, provided by the communications paths/systems. Crypto equipment used with NAVMACS II - SMS: KG-84A, KG-84C, KWR-46, STU-III.
Normal Locations	Distribution Centers: NCTAMS EASTPAC (Honolulu, HI), NCTAMS WESTPAC (Guam), NCTAMS MED (Naples, Italy), NCTAMS LANT (Norfolk,

VA), NCTAMS EASTPAC (Stockton, CA), Receive Sites: All Navy ships.

Information Managed Autodin message traffic including USMTF based message traffic, Class D and E messages.

Products Created N/A.

Lead Service/Contractor U. S. Navy SPAWARSYSCEN.

Current Fielding Status CUDIX and NAVMACS II has been incorporated into NAVMACS II - SMS.

Known Problems None.

DIICOE Compliance Rating Not rated.

Point of Contact NAVMACS II - SMS In-Service Engineering Activity (ISEA) David Fuller, code 523df SPAWARSYSCEN Charleston SC (843) 218-4563, fullerdd@spawar.navy.mil

Updated by Capt Christopher P. Dever, USMC, CCSC-01

Navy Integrated Environmental Support Subsystem (NITES 2000)

Primary Purpose	The Navy is currently the nation's only military service that operates a distributed model in support of tactical weather prediction. Each NITES is a set of meteorology and oceanography forecast, database, and decision aid tools tailored for specific platforms and uses, Five variants exist to support a variety of operators and platforms. NITES I, NITES II, NITES III, NITES IV, NITES V, and TESS. Tactical Environmental Support System A DoD Acquisition System Category IV-T program Refers collectively to all five variants of Naval integrated Tactical Environment Subsystems (NITES). The Distributed Atmospheric Modeling Prediction System (DAMPS) allows users to ingest high-resolution data and on-scene observations into regional and global model information received from the Fleet Numerical Meteorology and Oceanography Center in Monterey, Calif. The result is an on-scene weather model that provides accurate weather predictions for an operating area within a 24-hour timeframe.
Sub-Functions	Use the ship's weather real-time data from around the battle group, such as wind, temperature, cloud, visibility and radar data and incorporate this data into its analysis.
Equipment Requirements	Meteorological and Oceanographic data gathering equipment.
Connectivity Requirements	National Weather Service's (NWS)/Navy's Fleet Numerical Meteorology and Oceanography Center and the NWS' National Centers for Environmental Prediction (NCEP).
Crypto Requirements	None.
Normal Locations	US Navy Ships.
Information Managed	Meteorology and oceanography forecast, database, and decision aid tools.
Products Created	Weather Reports.
Lead Service/Contractor	US Navy/SPAWAR.
Current Fielding Status	Fielded: NITES System Engineering IPT, January 01.
Known Problems	None.
DIICOE Compliance Rating	Not rated.
Point of Contact	Commander Space and Warfare Systems

4301 Pacific Highway, San Diego, CA 921110-3127
PLAD: COMMSPAWARSSYSCOM SAN DIEGO CA/PMW-115//

Updated by

Captain Michael L. Campbell, USA, CCSC-01

Navy Tactical Command Support System II (NTCSS II)

Primary Purpose	First step in making non-tactical data processing systems compliant to a Common Operating Environment (COE). Uses the same COE as GCCS-M. Also provides a consistent method of accessing tactical support applications. These applications provide a full range of responsive mission support ADP hardware and software to facilitate management of information, personnel, material, and funds required to maintain and operate surface ships, submarines, and aircraft.
Sub-Functions	Maintenance Resources Management System (MRMS), NALCOMIS, Administrative Data Management (ADM), Organizational Maintenance Management Subsystem (OMMS), Supply Financial Management (SFM), Integrated logistics Management (ILM), Mobile Logistics Support Force Subsystem (MLFS), and Food Service Management (FSM).
Equipment Requirements	Commercial off the shelf (COTS) equipment that is comparable with Information Technology for the 21st century (IT21) Standards.
Connectivity Requirements	IT21 network afloat/Standard Navy/USMC LAN ashore.
Crypto Requirements	None.
Normal Locations	Naval ships, aviation squadrons, and supporting shore locations.
Information Managed	Supply, maintenance, administration, medical and aviation maintenance information for afloat units.
Products Created	Primarily administrative reports logistics and maintenance procurement and tracking, as well as financial management as required to support operational needs.
Lead Service/Contractor	USN.
Current Fielding Status	
Known Problems	Ongoing system development and evolutionary changes as required to meet user requirements.
DIICOE Compliance Rating	Currently not rated, but working towards level 5.
Point of Contact	CNO N62, Pentagon, (703)601-1433), POC LT Bill Murray (murray.bill@hq.navy.mil).
Updated by	Capt M. G. McCarthy, Jr., USMC, CCSC-01

Officer-in Tactical-Command Information Exchange System (OTCIXS)

Primary Purpose	Supports ship-to-ship high speed and tactical record RAINFORM GOLD exchanges, including event-by-event track updates and OPSNOTE narrative traffic. Long range targeting, filtered world information, multi-targeting of sub, surface, and aerial targets. Provides two-way UHF SATCOM intra- and inter-battle group communications link for teletype and computer-to-computer targeting data.
Sub-Functions	Tomahawk missile mission planning.
Equipment Requirements	ON-143 (V)6 or (V)14, KG 84 (crypto).
Connectivity Requirements	Operations support system; UHF Satellite capable WSC-3 transceiver at 2.4 kbs, NTCSA (surface) and Mk 813 (submarine).
Crypto Requirements	KG 84C, Tac Series (surface, Mk 813 (submarines)).
Normal Locations	All submarines, ships and command centers.
Information Managed	Contact, targeting data, sensor data, OTH-T Gold message format.
Products Created	Position reports, mission data updates (Tomahawk), OPSNOTE.
Lead Service/Contractor	USN, Inri (software vendor).
Current Fielding Status	Fielded.
Known Problems	UHF satellite constellation is aging. Constant key problems on UHF channels. ON-143 (V)6 aging, currently being replaced with (V) 14.
DIICOE Compliance Rating	N/A.
Point of Contact	Greg Silva, Space and Naval Warfare Systems Command, 619-524-3939 silvagm@spawar.navy.mil
Updated by	LCDR Tom Wester, USN, CCSC-01

Psychological Operations Automated System (POAS)

Primary Purpose	Produces the Joint Capabilities Plan (JCSP) mandated by the Psychological Operations Studies (PSYOPS). This includes Basic PSYOP study (BPS), Special PSYOP assessment (SPA), Special PSYOP study (SPS), and the military Capabilities study (MCS).
Sub-Functions	Planned Civil Affairs database. Installed 12/98 (Note: separate accounts are required to access this database).
Equipment Requirements	Secure modem, STU-III, or ATT 1910.
Connectivity Requirements	SIPRNET.
Crypto Requirements	KIV-7, STU-III, or ATT 1910.
Normal Locations	4th PSYOP GP (Airborne), Fort Bragg, NC; any DOD locations who ask for connectivity (CIA, FBI, and Department of State). These all require SIPRNET/SECRET connectivity.
Information Managed	POAS is an automated data base system used to assist operations analysts to research and plan missions. POAS provides an all source document index, intelligence report summaries, PSYOP finished intel products, bio information, and PSYOP assessments/studies.
Products Created	PSYOP studies, available military capabilities studies.
Lead Service/Contractor	Sverdrup.
Current Fielding Status	Fielded.
Known Problems	None.
DIICOE Compliance Rating	Not Rated.
Point of Contact	Mrs. Hilmo, DSN: 239-6812/1861.
Updated by	CPT John W. Meek, USA, CCSC-01

**Retail Ordnance Logistics Management System
(ROLMS)**

Primary Purpose	Ordnance logistics management and reporting.
Sub-Functions	Inventory, notice of ammunition reclassification (NAR), receipt, issue, and other reporting to ammunition inventory control points (ICP). Transaction reporting to wholesale level systems (currently Conventional Ammunition Integrated Management System, CAIMS) and Marine Corps Automated Ammunition Requisition System (MAARS). Requisitioning and other related technical data processing.
Equipment Requirements	Minimum: IBM-compatible 486/33 MHz PC with at least 12 MB RAM; 200+MB hard disk, MS-DOS 6.0, Windows 3.1, CD ROM, QIC-80 compatible tape back-up, 3.5-inch diskette drive, and laser printer.
Connectivity Requirements	14.4 kbps FAX/Modem (minimum) and Ethernet connection (intermediate and full).
Crypto Requirements	None.
Normal Locations	Weapons stations, ammunition supply points, and stand-alone modules in the field.
Information Managed	Ordnance logistics management and reporting.
Products Created	DD 1348-1, Receipt/Issue Document, transaction item reports (TIRs), ammunition transaction reports (ATRs), requisition for material, shipment status, expenditures, receipts asset maintenance, notice of ammunition reclassification processing, reports for ordnance management and posture reports. MEF wide snapshot of ammo status. Reference tables providing storage compatibility and transportation load plan data.
Lead Service/Contractor	USN (CDA, NAVSURFWARCENDIV, Crane, IN)/CACI, Inc.
Current Fielding Status	The three-tiered integrated system of applications has been fielded with full level (weapons stations), client-server-based (intermediate level such as an ammunition supply point) and stand-alone (core level) modules. The system is Y2K-compliant. Release 5.0 was distributed 27 OCT 00.
Known Problems	Release 4.0, printing under Windows NT, doesn't allow a non-administrator login to print the reporting output. Release 4.1, address database (new install), the address

database contains the old message PLAD for UIC N49935 when reporting ATRs. Release 5.0, generating TIR/SLIT retransmittals (N10), when both TIR and SLIT transactions are selected for retransmittal in the same reporting run, the first retransmittal is overwritten. Release 5.0, fiscal year allowances/allocations, all allowances/allocations not for the current fiscal year will be deleted the first time the database file maintenance application is run after day 300 of the calendar year.

DIICOE Compliance Rating

Not rated.

Point of Contact

Mr. Jim Werne, NAVSURFWARCENDIV Crane, IN, DSN 482-5015, COMM (812) 654-1358.

ROLMS Customer Support Desk, DSN 482-3957, COMM (812) 854-3957, FAX (812) 854-7404, E-MAIL help_rolms@crane.navy.mil

Updated by

Capt. David C. Morris, USMC, CCSC-01.

Secondary Imagery Dissemination System (SIDS)

Primary Purpose To collect, transmit, receive, and exploit current and achieved imagery products electronically throughout the MAGTF using available communications paths. Support intelligence, weaponing, and targeting for air and ground forces. SIDS provides means to transmit and receive exploited secondary imagery.

Sub-Functions The Man-pack Secondary Imagery Dissemination System (Man-pack SIDS) consists of one (1) base-station and three (3) Marine portable outstations. The system is designed to collect, process, manipulate and transmit digital imagery derived from reconnaissance missions. The outstation's primary components are a digital camera with three lenses and a hand held computer. In addition, there is one night vision device per system, to be used with the camera in low light situations. The outstation also comes with cables that attach the camera to the hand held computer, and the hand held computer to the encryption device and radio. These cables are required to transmit and receive the imagery through the system. The base-station consist of a lap top computer, removable PCMCIA hard drive and a thermal printer. It also comes with the cables required to connect with the encryption device and radio.

Equipment Requirements SIDS consists of three separate but interoperable systems: SIDS-E (External Connectivity), SIDS-I (Internal Connectivity), and SIDS MANPACK. SIDS-E will provide connectivity between the MAGTF Command Element (CE) and external imagery sources. This element will receive images from external sources, annotate them as appropriate, and input digitized images into the MAGTF's internal dissemination system (SIDS-I) for further use by MAGTF personnel. SIDS-I provides the principal means by which the MAGTF commander disseminates both time-sensitive, routine imagery to subordinate commanders and their staffs. It will allow G/S-2 personnel to receive, annotate, store, print, and retransmit imagery to tactical users. SIDS MANPACK provides small elements performing intelligence collection missions with the capability to transmit and receive imagery.

There are two versions of SIDS: Intelligence Analysis System (IAS) and a man-pack variant.

IAS variant consists of the input/output peripherals and software to process imagery from various sources and disseminate imagery to MAGTF elements or national assets. IAS hosts the system and will interface with other C4I systems through resident IAS communication links. Man-pack SIDS variant is self-contained, comprised of a base station and three out stations.

Connectivity Requirements	High-speed Ethernet connections, SIPRNET, JWICS, single channel radio and STU-III.
Crypto Requirements	Security required in conjunction with the transmission medium used and classification desired.
Normal Locations	SIDS systems can be found at regimental/group intelligence activities and above.
Information Managed	SIDS facilitates digitized graphical information, pictures and scanned/archived images.
Products Created	Manipulated (black to white polarization, zoom-in/zoom-out, rotation) and analyzed secondary imagery and appended analyst comments. Graphic reporting applications. A change to the NITF standard is the JPEG2000 compression algorithm for use in downsizing an image within the NITF file. JPEG2000 is wavelet based and greatly enhances compression of images.
Lead Service/Contractor	MARCORSYSCOM is the program manager. The Marine Corps Tactical Systems Support Activity (MCTSSA) is responsible for software management. Versions of SIDS exist as all service components.
Current Fielding Status	IAS suites reside at or above the regiment and wing level. SIDS is post milestone III and has been fielded to AAO units.
Known Problems	Interoperability between various SIDS terminals is problematic. SIDS is constrained to NITF 2.0 or compatible software, by bandwidth and data compression.
DIICOE Compliance Rating	Not yet rated.
Point of Contact	MGySgt Joseph Mobilia, MARCORSYSCOM, Requirements Division, Commercial: (703) 784-6194, DSN: 278-6194. E-Mail address: mobiliaja@mccdc.usmc.mil Capt Thomas Gainor, MARCORSYSCOM, Requirements Division, MAGTF SIGINT Requirements Officer,

Commercial: (703) 784-6196, DSN: 278-6196.
E-mail address: gainortm@mccdc.usmc.mil

Updated by

Captain M. S. Grosz, USMC, CCSC-01

Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T)

Primary Purpose	The mission of the SMART-T is to provide Marine Expeditionary Force (MEF) and Major Subordinate Commands level commanders with the capability of Extremely High Frequency (EHF) protected (High Altitude Electromagnetic Pulse (HEMP) and anti-scintillation) satellite communications. The SMART-T will satisfy the requirements for an EHF tactical satellite terminal as identified in the Marine Corps Operational and Organizational (O&O) Concept.
Sub-Functions	Operates with Milstar compatible payloads in both medium data rate (MDR) and low data rate (LDR) modes. Provides a satellite interface to permit uninterrupted voice/data communication as advancing forces move beyond LOS communications. Utilizes the Milstar waveform and provides protection against jamming and the effects of scintillation.
Equipment Requirements	N/A
Connectivity Requirements	Milstar I and II. Selected UHF Follow-On Enhanced/Enhanced EHF. Fleet Satellite EHF Package (FEP). The Milstar system is the primary EHF space segment.
Crypto Requirements	N/A
Normal Locations	MEF, Marine Communications School, Army Division and Brigade.
Information Managed	N/A
Products Created	Provides MUX, data, voice, and VTC.
Lead Service/Contractor	Raytheon.
Current Fielding Status	US Army: Buying an estimated 209 units (161 from FY02-04). SMART-T replaces TSC-85 and TSC-93. Operational now in LDR only. USMC: Buying 25. SMART-T augments and extends line of sight network. None delivered yet.
Known Problems	Operational effectiveness not demonstrated. No reach-back capability. Desktop units under development.
DIICOE Compliance Rating	N/A

Point of Contact

Fort Gordon, Georgia

Updated by

Captain Tolliver, USA, CCSC-01; Captain Mays,
USMC, CCSC-01; Captain Allen, USMC, CCSC-01

**SHF Tri-Band Advanced Range Extension Terminal AN/TSC-156 (V) 3
(STAR-T)**

Primary Purpose	The Marine Corps will use satellite communications to provide the MAGTF the ability to move large amounts of information BLOS and OTH. These links will be intra-MAGTF, inter-MAGTF, between MAGTF HQ and a JTF HQ and to provide DISN connectivity via a DoD Teleport. Essentially replaces the AN/TSC-85 and AN/TSC-93A (JTF enabler) as the primary SATCOM pipeline for the MEF/MEF MSCs/MEUs.
Sub-Functions	None.
Equipment Requirements	LHGXA or QRSA antenna. 2 MEP-3 Tactical Generators 1 to operate, 1 backup. 2 M998 HMMWV (1 Heavy HMMM WV to mount the system and pull the generator, 1 HMMWV to pull the backup generator). Laptop Computer for remote operation.
Connectivity Requirements	STAR-T requires either a Discus satellite (military X band) or a commercial C or Ka band connection through either the PanAm or IntelSat constellations to provide a connection back to a DOD Teleport/DISN Step Site.
Crypto Requirements	KY-57/58 or KY-99/99A. KG-84 A/C.
Normal Locations	USMC. Expected to be fielded at MEF level HQ and to MEF Major Subordinate Commands (Division, Wing, FSSG and MARFORRES at the same levels where applicable. STAR-T will also replace the JTF enabler as the primary satellite link for the MEU Headquarters. Note that this system is also being fielded by the US Army as well.
Information Managed	None.
Products Created	Provides the primary connection to A DISN stepsite for SIPRNET, NIPRNET, Classified and Unclassified voice, and all other programs normally provided through the DISN Step Sites.
Lead Service/Contractor	Army/Raytheon Corporation.
Current Fielding Status	STAR-T: Fielding is expected to begin June 2001 with Initial Operational Capability in March 2002 and Final Operational Capability in January 2004. LHGXA: Fielding began in June of 2000 and Final Operational Capability in January of 2000.

Known Problems

Use of the standard eight foot diameter QRSA antenna requires an extensive increase in satellite power output in order to gain or maintain the link. This condition is what is called by DISA a 'disadvantaged terminal'. Trailer for LHGXA not designed for system, raises considerable difficulties for LCAC loading.

DIICOE Compliance Rating

Not Applicable.

Point of Contact

MARCORSSYSCOM: GySgt Holland @ DSN 278-0893/Hollandrl@mcsc.usmc.mil, or Mr. Hines @ 278-0902/ Hinesrt@mcsc.usmc.mil

Raytheon: Nick Miles@508-490-2759/nicholas_m_miles@res.raytheon.com

Updated by

Captain Michael G. McCarthy, Jr., USMC, CCSC-01
Captain Gary Delgado, USMC, CCSC-01

Shore Targeting Operational Support System (STOSS)

Primary Purpose	Provides Submarine Operating Authorities (SUBOPAUTHs) essential contact location data and precise, real-time OTH-T data to submarines for targeting in cruise missile employment. Output is used by submarines to compute Tomahawk Anti-Ship Cruise Missiles (TASM) targeting solutions. Additionally, this system provides over water flight paths for Tomahawk Land Attack (TLAM) missions. This system is also used to provide submarines with contact data during ASW operations.
Sub-Functions	Integration of shore targeting and requirements for use by Submarine Forces into the Global Command and Control System, Maritime Ashore (GCCS-M) as part of the Operational Support System (OSS) Software segment.
Equipment Requirements	Same as GCCS-M Ashore.
Connectivity Requirements	Same as GCCS-M Ashore.
Crypto Requirements	Same as GCCS-M Ashore.
Normal Locations	SUBOPAUTH, Submarine Operational Control Centers.
Information Managed	Surface and subsurface contact information from multiple sources. Collects, correlates, stores, and disseminates hostile, friendly, and neutral contact data. OTH data to submarines for employment and control of TASMs and TLAMs.
Products Created	Textual and graphical representation of surface and subsurface contacts. Message output interface.
Lead Service/Contractor	US Navy (Space and Naval Warfare Systems Command).
Current Fielding Status	This program achieved Full Operational Capability (FOC) in 1993.
Known Problems	None.
DIICOE Compliance Rating	Level 5.
Point of Contact	Space and Naval Warfare Systems Command (PMW-157), Comm (619)537-0258, Fax Comm: (619)553-6519.
Updated by	Capt Farrell J. Sullivan, USMC, CCSC-01.

**Special Operations Command, Research, Analysis, and Threat
Evaluation System (SOCRATES)**

Primary Purpose Umbrella concept of systems, provides automated intelligence connectivity and functional intelligence support to the SOF community.

Sub-Functions LAN provides personnel with access to the Defense Intelligence Threat Data System (DITDS), Intelligence Data Handling System (IDHS), Modular Architecture for Exchange of Intelligence (MAXI), Defense Data Network (DDN), and administrative message handling, transferring and formatting functions.

DITDS: combines databases allowing users to filter through massive amounts of current and historical information/intelligence legend data and select, save, modify and/or transmit as required. Provides access to specialized collection of information on terrorism, counter-narcotics (Emerald) database, and special operations (SOLOG) database. Provides tools necessary to generate timely and accurate assessments, warning and threat analysis, and on-line access to record traffic communications system (GENSER/DSSCS and AFAMPE).

IDHS: primary repository of all data required to analyze and maintain information necessary to support normal operations and to adequately respond to a crisis situation. Provides access to the CENTCOM/SOCOM Integrated Data System (CSIDS/IDB), Defense Intelligence Agency's (DIA) and Military Intelligence Information Data System Integrated Data System (MIIDS/ITB).

MAXI/MIDAS: Automated intelligence message handling system; organizes the flow of operational traffic, facilitates review of incoming information, provides access to internal message and work files, intra-communication, report generation capabilities.

DDN/SCAMPI: remote host access connects approximately 50 commands and agencies comprising the Department of Defense Intelligence Information System (DODIIS).

Equipment Requirements ADP System is three mainframe computer systems with internet/NIPR/SIPR capability and SCI LAN. Standard stand-alone configuration is a 486 PC with modem and video card, though a Pentium processor is desired.

Connectivity Requirements	USSOCOM SCI LAN, SOCSOUTH LAN, VARIOUS COMPONENT SCI LAN, SOCEUR LAN, SOCPAT LAN. Remote LANs connected through SCAMPI communications. Deployed terminal connected through tactical communication at 256 Kbps - 1.544 MBPS data rate from CINCSOC to JSOTF.
Crypto Requirements	The same as the SCI LAN or SCAMPI.
Normal Locations	USSOCOM, COMPONENT HEADQUARTERS, USCENTCOM, SOCSOUTH, SOCEUR, and SOCPAC, JSOC, Special Forces Group Military Intelligence Companies, and Ranger Battalions.
Information Managed	Record traffic communications, and a variety of databases to include: CSIDS/IDB, MIIDS/IDB, SOLOG, and EMERALD.
Products Created	Data, imagery, message traffic, mapping. See sub-functions.
Lead Service/Contractor	USSOCOM.
Current Fielding Status	Fielded.
Known Problems	The system is slow to respond during the peak hours of use.
DIICOE Compliance Rating	Not rated.
Point of Contact	None.
Updated by	Capt Paul H. Orth, USAF, CCSC-01

Special Operations Forces Planning and Rehearsal System (SOFPARS)

Primary Purpose	Provides the mission planner, at all levels, with a family of integrated mission planning products and tools for pre-mission planning and post-mission debriefing, designed specifically to meet Special Operations Forces requirements.
Sub-Functions	The PC-based system consists of Commercial-Off-The-Shelf (COTS) notebook computers, portable printers and data loaders use Portable Flight Planning Software (PFPS). The UNIX-based systems includes the following hardware configurations: Base Station, Deployable Mission Planning System (MPS) and Portable Mission Planning System (PMPS). The SOFPARS program also includes worldwide, on-site logistic support.
Equipment Requirements	NT Workstation.
Connectivity Requirements	NT Workstation.
Crypto Requirements	N/A.
Normal Locations	SOC level, JSOTF, down to the component and unit level.
Information Managed	N/A.
Products Created	Provides a ground-based, integrated, multi-user, deployable mission planning system supporting SOF mission planners in real-world contingency and training missions.
Lead Service/Contractor	Army Special Operations Command. Mission Planning Office.
Current Fielding Status	Fielded.
Known Problems	N/A
DIICOE Compliance Rating	N/A
Point of Contact	Mission Planning Office Mr. Boykin or Mr. Wilcox (757) 878-1050 extension 281 or 272 Nyle.Wilcocks@sofmpo.eustis.army.mil
Updated by	Captain Tolliver, USA, CCSC-01

Spectrum XXI (SXXI)

Primary Purpose	SXXI is The Spectrum Management (SM) Tool designated by the MCEB as The Joint DOD SM standard. It is used to create, modify, renew, and delete permanent/temporary frequency assignments/proposals worldwide.
Sub-Functions	SXXI has the following modules: Data Exchange (provides real time access to all DOD frequency assignments worldwide); Interference Analysis module to determine who could be causing interference; EW Deconfliction module used to perform EW missions and determine what friendly forces would be interfered with if the Jamming mission was initiated; Engineering Tools module has the capability to generate using NIMA topographic data terrain coverage plots, signal strength coverage plots, and line-of-sight coverage plots, its also has an HF propagation model, a Satellite look angle, a Spectrum Occupancy Chart, a Cosite Analysis tool, and a coordinate conversion routine (lat/long to mil grid and vice versa); it has a JRFL module Joint Restricted Frequency List which is used in conjunction with the EW module to determine the interference to CEOIs, JRFLs, and Host Nation frequency assignments; it has an Interference report module used with the JSIRs program (Joint Spectrum Interference Resolution) which replaced the old MIJI reporting system; it has an Allotment Plan Generator used to pool frequencies to an organization, which can be placed in a holding area in the software so the best frequencies can be used based on the user background environment.
Equipment Requirements	SXXI is PC based and will operate on Windows 95/98/NT 4.0 w/service pack 5 or better/2000. Recommend a 550 MHz Pentium III processor, with 128 MB RAM, and 9 GB HDD (depends on how large a database is to be loaded).
Connectivity Requirements	SXXI can be used in a Standalone mode or connected to the SIPRNET. To connect to the SIPRNET user's must be using NT 4.0 w/SP5+ or a user can connect via STU-III models 1100, 1900, 1910, or via STEs. Users who will connect to regional servers to download real time frequency management data must attend the SXXI training course and fill out two separate access forms.
Crypto Requirements	
Normal Locations	As the Joint DOD standard, it is used by the Service's frequency management agencies (at

the National level), all CINC's, all the component forces, and at the post/camp/station/base frequency manager levels.

Information Managed

Products Created

Lead Service/Contractor The lead organization is the Joint Spectrum Center (JSC), Annapolis MD and their prime contractor is IIT Research Institute (IITRI).

Current Fielding Status Fielded V2.0.2.

Known Problems

DIICOE Compliance Rating In process to be Level 6 compliant.

Point of Contact JSC MR William (Skip) Shealy DSN:281-4956;
Contractor: Brooks Remencus
(410) 573-7451 DSN: 281-2511 x 7451.

Updated by Captain Eric S. Johnson, USMC, CCSC-01.

Submarine Satellite Information Exchange Sub-System (SSIXS)

Primary Purpose	Designed to complement terrestrial Very Low Frequency/Low Frequency (VLF/LF), and Medium Frequency/High Frequency (MF/HF) communication links between shore-based submarine Broadcast Control Authorities (BCAs) and submarines. Both General Service (GENSER) and Special Intelligence (SI) SSIXS are available.
Sub-Functions	Sub-system of the Navy Ultra High Frequency Satellite Communications System (UHF SATCOM).
Equipment Requirements	Shore based transmission via AN/WSC-5(V) or AN/WSC-3(v) UHF Transceiver, OM-43A/USC PSK Modem, AN/FYK-33/FSQ SMART, AN/FYK-29 SSIXS Processor, SB-4325/FSQ Patch Panel, RD-379B (V)3/U Recorder-Reproducer, RO-600/U Teleprinter and KG-84A COMSEC equipment.
Connectivity Requirements	One 25kHz wideband channel in each ocean area is allocated on FLTSATCOM (FSC) or UHF Follow-on (UFO) satellites for SSIXS. A single SSIXS network may have up to 120 submarine subscribers. A single network may be established on more than one satellite or two BCAs may share a single satellite channel by offsetting the time of their respective Group Broadcast transmissions.
Crypto Requirements	KG-84A.
Normal Locations	All SSN and SSBN submarines. All four BCA sites and 2 ALT BCA sites: COMSUBLANT Norfolk, Virginia. COMSUBPAC Pearl Harbor, Hawaii. COMSUBGRU SEVEN Yokosuka, Japan. COMSUBGRU EIGHT Naples, Italy. COMSUBGRU NINE Bangor, Washington (COMSUBPAC ALT BCA). COMSUBGRU TEN Kings Bay, Georgia (COMSUBLANT ALT BCA).
Information Managed	4800 Baud Ship-to-Shore and Shore-to-Ship communications.
Products Created	Emergency Action Messages, Operational tasking, Command and Control orders, Intelligence reports, and all critical record message traffic.
Lead Service/Contractor	United States Navy.
Current Fielding Status	
Known Problems	Low data rate (4800 BPS) severely limits bandwidth to and from submarine. On broadcasts simultaneously supported by VLF/LF

assets, SSIXS broadcast must mirror the VLF/LF broadcast. Since the VLF/LF broadcast data rate is 50 Baud and traffic lists (ZBOs) and new traffic are loaded every 2 hours, the SSIXS broadcast is limited to the traffic that can run at 50 Baud on its VLF/LF counterpart. Additionally, each Subscriber ID (SID) cannot exceed 30K of data. Any data loaded in excess of 30K in any SID will be truncated. These two limitations drive the requirement for the BCA to carefully screen all traffic placed on the submarine broadcast to ensure that the most important traffic is received onboard the submarine. The less important traffic is screened off the broadcast and is downloaded by the submarine after returning to port. System only effective if ships are within satellite footprint. Currently no support exists above 65 deg latitude. All satellites are in Geo-synchronous orbit above a specific ocean area.

DIICOE Compliance Rating	N/A.
Point of Contact	ENS Hainline. R.L., COMSUBLANT N65, Commercial (757) 836-1081.
Updated by	Capt Christopher P. Dever, USMC, CCSC-01.

Support Equipment Resources Management Information System (SERMIS)

Primary Purpose SERMIS is the primary automated management information system supporting the Aviation maintenance material readiness List (AMMRL) program, as well as Navy and Marine Supporting equipment Logistics managers. It provides employment allowancing through an interface with Automated Support Equipment Readiness Data (AUTOSERD) and real time inventory data which is transferred utilizing the Local Asset Management System (LAMS). SERMIS provides standard inventory control procedures, assists in the redistribution of in-use assets, provides rework scheduling and tracking and is the primary tool for configuration management and control of air capable ships. SERMIS is designed to support aviation weapons systems as defined in the OPNAV Instructions Naval Aviation maintenance program 4790.2 series and the Naval Airborne Weapons maintenance Program 8600 series.

Sub-Functions Eight subsystems: Inventory, Source Data, Allowance, SE Asset Readiness Reporting, Rework, Support Equipment Controlling Authority (SECA) Technical Data, SE Requirements Tracking and Source Data Revision Recommendation.

Equipment Requirements SOLARIS 8 Machine at ITC, SPAWAR, New Orleans, LA. Workstation: Pentium 400+ MHZ, 2 GB Hard Drive, 128 MB RAM, Windows NT.

Connectivity Requirements Connectivity to the server in New Orleans, LA requires NIPRNET or INTERNET.

Crypto Requirements None.

Normal Locations Support Equipment Controlling Authorities (SECAs) are primary users. There are approximately 650 on-line SERMIS users supporting over 900 activities. COMNAVAIRLANT, COMNAVAIRPAC, COMNAVAIRESFOR, COMNAVAIRSYSCOM, CNATRA, NAMTRAGRU.

Information Managed SERMIS provides a centralized and integrated database containing SE data for inventory, allowance rework capability and production status in a form suitable for on-line interactive access. The system recognizes approximately 1,000,000 items of SE, supporting approximately 1,000 aircraft maintenance activities, 70 power plant configurations and 1,600 avionics, missile and armament systems.

Products Created There are approximately 225 activities

receiving scheduled hard copy reports such as IMRLs and IMRL supplements.

Lead Service/Contractor	COMNAVAIRSYSCOM PMA 260EA.
Current Fielding Status	SERMIS v2.0, January 2001.
Known Problems	None.
DIICOE Compliance Rating	Not rated.
Point of Contact	Ms. Brenda Tominack, DSN 757-1100, COMM (301)757-1100, E-Mail TominackBH@navair.navy.mil
Updated by	Capt J. A. Keisler, USMC, CCSC-01

System Planning Engineering and Evaluation Device (SPEED)

Primary Purpose	Support USMC tactical communications systems planning, engineering and evaluation processes.
Sub-Functions	Point-to Point planning (PTP), Graphical User Interface (GUI), Radio Coverage Analysis (RCA), Position Locating Reporting System (PLRS), Enhanced Satellite Planner capability (SATPLAN), SINGARS co-site planner.
Equipment Requirements	486 or greater PC, 16 MB RAM, CD-ROM, Windows 95, and Math Co-Processor.
Connectivity Requirements	None.
Crypto Requirements	None.
Normal Locations	Squadron/Battalion level units, S-6 within a Marine Expeditionary Unit (MEU), Headquarters Ground Combat Element (GCE) of a MEU.
Information Managed	Path Profiler, High Frequency Planner (HF), Switched Network Automated Planner, Worldwide Topographic Loader, Tactical Network Automated Planner, Battlefield Electronic, Communications-Electronics Operations (CEOI) Systems, and Equipment Database.
Products Created	Reports, maps and planning matrices.
Lead Service/Contractor	USMC, Joint Spectrum Center (JSC)/IIT Research Institute in conjunction with Marine Corps Tactical Systems Support Activity (MCTSSA).
Current Fielding Status	Fielded.
Known Problems	Topographical information needs to be loaded before each operation. Terrain data not detailed; does not take vegetation or man-made objects into account.
DIICOE Compliance Rating	N/A
Point of Contact	Mr. Mike Makowski 410-573-7198 (Designer)
Updated by	Capt J. L. Nethercot, USMC, CCSC-01

Tactical Airborne Reconnaissance Pod System (TARPS) Digital Imaging

Primary Purpose	TARPS provides tactical wet film photographs and TARPS Completely Digital Imagery (CD) to area commanders.
Sub-Functions	TARPS imagery has proven useful in supporting crisis relief operations by enabling rescue and relief personnel to quickly determine the hardest-hit areas and areas that require immediate assistance. Integration of new sensors and control systems by various contract vendors and other Government agencies continue to improve TARPS capabilities and expanded functionality can be expected.
Equipment Requirements	TARPS is housed in a LA-610 pod mounted on weapons station #5 of the F-14. Equipment mounted in the TARPS pod consists of the KS-87D Serial Framing camera, the KS-153/KS-153B Long-range Standoff framing camera, the KA-99 Low Altitude Panoramic camera, or the AAD-5 Infrared Line Scanner system. The complete Digital pod incorporates the CA-261 Electro-optical camera, the U2 Interoperable Ground data link, the CA-2000 Image display system, and the Ampex DCR 240 digital recorder, allowing for real-time imagery dissemination. The imagery can be viewed in the aircraft for frame selection and transmission.
Connectivity Requirements	Film from the TARPS pod is hand carried to the EH-38 film processor located in CVIC or the photo lab on ship. TARPS CD requires a CDL (Common Data Link) using the CHBDL system. (Common High Band Data Link) or by using the DCRS transmit/receive link from/to an FTI equipped aircraft or it maybe transmitted/received aircraft to aircraft. The Digital Camera Receiving Station (DCRS) is located in CVIC, SWATSLANT, or a Portable Digital Camera Receiving Station (PDCRS) which is manned by the INTEL personnel.
Crypto Requirements	Film and CD imagery are classified by their content. The TARPS DI imagery is encrypted through the KY-58 encryption device.
Normal Locations	There are normally 4 TARPS pods in a squadron. This will now vary with the incorporation of CD pods in the inventory. There are 42 TARPS pods, plus 6 CD equipped pods and one designated for use with the SHARPS program as a "Risk Mitigation" flight test item.
Information Managed	Hard copy imagery and near real time digital imagery.

Products Created	Film and digital photo imagery.
Lead Service/Contractor	The TARPS system was entirely designed and manufactured by the U. S. Government. Naval Air Development Center (NADC Warminster, PA) built six engineering test models and Naval Aviation Center Indianapolis built the production units. Depot level maintenance was transferred from Hill AFB to Raytheon Inc. Indianapolis and Tricor inc. Elgin IL.
Current Fielding Status	TARPS is scheduled to remain in service until it is replaced by the F-18 E/F SHARPS system or yet unannounced system.
Known Problems	The majority of the problems associated with TARPS stem from the failure of older sensors, equipment and the impact of climate extremes on wet film. Aircrew training/operation is also of significant impact.
DIICOE Compliance Rating	Not rated.
Point of Contact	Mr. Neil Bellamy, TARPS representative, Naval Air Station, Oceana, email TARPSREP@AOL.COM
Updated by	Capt Douglas J. Scott, CCSC-01

Tactical Aircraft Mission Planning System (TAMPS)

Primary Purpose To assist naval aviators with flight mission planning giving consideration to enemy air defenses and terrain. Primarily used for planning precision-guided munitions (PGMs) such as the Joint Standoff Weapon (JSOW), the Joint Direct Attack Munition (JDAM), or the Stand-off Land Attack Missile (SLAM). The PC-Based Navy Portable Flight Planning Software (N-PFPS) normally performs the required flight planning functions. TAMPS and N-PFPS will transition to the new Joint Mission Planning Software (JMPS) commencing FY-03.

Sub-Functions Can assist in all aviation related MOS's with flight support mission planning (giving consideration to enemy air defense capabilities and terrain) and when planning communications and other terrain affected weaponry.

Equipment Requirements Networked or Stand-alone computer system, which works on a UNIX-based Sun SPARC system.

Connectivity Requirements Approved for use on IT-21 LAN.

Crypto Requirements None. Uses a locally controlled password protected system and is classified SECRET/NOFORN.

Normal Locations Marine Aircraft Group level or higher and MAWTS-1, and VMFA squadrons. Other squadrons use N-PFPS. All squadrons will have JMPS in the future.

Information Managed Can be programmed to manage all classified and unclassified enemy and friendly air defense information to be used for future mission planning.

Products Created Information can be printed as charts (either two or three dimensional) or database reports. Information is only as good as what is in the system (either through software or operator entry).

Lead Service/Contractor United States Navy. Naval Air Warfare Center Weapons Division is the system integrator. Software now developed by BAE Systems, test and evaluation is headed by Brandes Associates.

Current Fielding Status TAMPS version 6.2K is presently in the field with version 6.2.1 anticipated for release in July, 2001. System uses Sun Ultrasparc 1300/2300 with some PC "X-window" workstation computers. Previously used DTC/2, DTC/3, and ACE/VME computers have been retired.

Known Problems Flight performance data is not certified. N-PFPS is used for certified flight planning. User acceptance problems with TAMPS will be resolved by release of Windows 2000-based JMPS.

DIICOE Compliance Rating Not rated. JMPS will IOC at DII COE Level 6.

Point of Contact LCDR Richard Powers, CNO N62H, Mission Planning Requirements Officer, 703-601-1441, DSN 329-1441, powers.Richard@hq.navy.mil

Updated by Capt Doug Mays, USMC, CCSC-01

Tactical Combat Operations (TCO)

Primary Purpose To establish and maintain situational awareness through the distribution of the Common Tactical Picture (COP). Provide point of entry for the Common Operation Picture (COP).

Sub-Functions Integrated intelligence, maneuver control information, some logistical planning and fire support planning.

Equipment Requirements TAC-4 Desktop Computer (HP9000-712), 15-inch Monitor, UPS, DATA SILO (OS & Maps/CDROM/DAT), UNIX Based System, 192 MB RAM, 4.8 GB HD, 1000W Inverter for Vehicle Power, 10/100BaseT, Hub.

Connectivity Requirements Linked to Track Database Manager (TDBM) by: LAN, WAN STUIII, SIPRNET, Tactical Communications Interface Module (TCIM). Can only interface with Intelligence Analysis System (IAS) if connected to common TDBM. Client interface via C2PC.

Crypto Requirements No external crypto required. Host CU must be tempest certified.

Normal Locations Available at Battalion/Squadron level. Most effective at Regiment/Wing and higher.

Information Managed Digital Mapping, Display friendly/enemy situations, display fire support & maneuver control measures, common symbol track database exercise real-world database.

Products Created Automated Message Management, Message Dissemination Subsystem, Defense Messaging System (DMS), Develop and Disseminate OPORDS and Overlays, overlay merging capability, support development of COA, G-3 Electronic Tactical Map with CTP.

Lead Service/Contractor USN, NCCOSC Inservice Engineering (NISE) - East USMC, Marine Corps System Command (MARCORSYSCOM).

Current Fielding Status 784 fielded USMC wide during FY99-00. Will be augmented by the Intelligence Operational Server (IOS) in FY 01-02.

Known Problems Communications path is too small for dynamic CTP utility below MSC-level, DIICOE is 5 vs. 8. Has connection problems outside of GCCS-M. Not fully compatible with TBMCS/CTAPS, AFATDS, or LOG-AIS.

DIICOE Compliance Rating Level 5.

Point of Contact

Major Robert E. Ogle (MARCORSYSCOM), DSN 278-0842.

Updated by

CPT Reginald E. Bryant, USA, CCSC-01

Tactical Component Network (TCN)

Primary Purpose	TCN will network vast numbers of diverse sensor systems, and maximize their ability to contribute to a Single Integrated Air Picture over existing communication systems.
Sub-Functions	ID Doctrine.
Equipment Requirements	Rave computer system (Sun system, dual processor).
Connectivity Requirements	Tactical Communications.
Crypto Requirements	N/A.
Normal Locations	Not fielded but will be located at different sensor locations.
Information Managed	Distributes only the radar data needed by each cooperating unit, thereby reducing the amount of bandwidth used and allowing the use of alternative communication systems.
Products Created	Capability to transfer targeting data from different sensors.
Lead Service/Contractor	Solipsys.
Current Fielding Status	In development.
Known Problems	Capability demonstrated no known problems based on demonstration.
DIICOE Compliance Rating	Not rated.
Point of Contact	Capt. D. A. Gordon, USMC, CEC Project Officer, Marine Corps Systems Command. GordonDA@mcsc.usmc.mil. Comm: (703) 784-0923.
Updated by	Capt. J. C. Trepka, USMC, CCSC-01

Tactical Control System (TCS)

Primary Purpose	TCS is a Command and Control (C2) system for the family of the Air Force's Medium Altitude Unmanned Aerial Vehicles (UAV) to include Predator UAVs, the Army Tactical Unmanned Aerial Vehicles (TUAV) and the Navy and Marine Corps Vertical Take- Off and Landing TUAV (VTUAV).
Sub-Functions	TCS Provides the tactical commander with information superiority, contributing to the overall protection of forces and precision engagement of the enemy.
Equipment Requirements	TCS operates on current service hardware i.e., Sun Sparc Servers (Air Force)/common hardware and software-II, Sun Sparc 20s (Army and Marine Corps) and the Tactical Control Navy (TAC-N). The system relies on five sub systems: A Line Of Sight (LOS) antenna assembly, an integrated data terminal, a data link module, a Personal Computer (PC) and a synthetic aperture radar sub system workstation.
Connectivity Requirements	UAV TCS software via current Sun/SPARC (Air Force), CHS-II/SPARC-20 (Army/Marine Corps) and TAC-N (Navy) service hardware.
Crypto Requirements	Closed Circuit Television (CCTV), secure Ultra High Frequency (UHF), Very High Frequency (VHF) and High Frequency (HF) radios for digital message transmission.
Normal Locations	The Air Force will incorporate selected components of the TCS software suite into the existing Predator UAV ground stations. The Army and Marine Corps will use TCS as an integral part of the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) based ground station. The Navy will use TCS for UAV operations from ships and temporary shore sites.
Information Managed	TCS provides the war fighter with a scalable, interoperable and modular C2 capability to operate existing UAVs on existing computer systems and future Command Control Computers Communications and Information (C4I) processing systems.
Products Created	TCS Scalability permits the system to manage the five discrete levels of TCS to UAV interaction ranging from receipt and transmission of secondary imagery and data, to full control and operation of a UAV including takeoff and landing.

Lead Service/Contractor Naval Surface Warfare Center (NSWC) and Raytheon Corporation.

Current Fielding Status Full rate production second quarter of fiscal year 2000 (2Q FY 00).

Known Problems UAV systems operate using proprietary aerial vehicle C3I interface software and some unique hardware. Current UAV systems require separate unique interfaces for interoperability with existing C3I systems.

DIICOE Compliance Rating Four.

Point of Contact <http://www.nswc.navy.mil/tcs/>

Updated by Captain Barton J. Rice, USA, CCSC-01

Tactical EA-6B Mission Planning System (TEAMS)

Primary Purpose	Compiles radar system libraries, navigation data, and high-speed anti-radiation missile (HARM) targeting libraries for download to the EA-6B ALQ-99 on board system (OBS) used during electronic warfare missions.
Sub-Functions	Intelligence, post-mission analysis, route and fuel planning, and GPS Loader support for EA-6B GPS.
Equipment Requirements	AN/TSQ-142 v(5) or 142v(6) (portable or rack-mounted) system, four TAC-3 (HP-735) processors, Raymond Recorder Reproducer Set (RRS) and various input/output hardware including CD-ROM, 8MM digital tape, and Media Assembly consisting of two (2) PCMCIA Slots and a 3 ½" Floppy Drive. Color Laser Jet printer.
Connectivity Requirements	Provides mission libraries to EA-6B via RRS tape. TEAMS is capable of running as a stand-alone system. There is a Data Fusion Processor that is capable of receiving data from Tactical Electronic Reconnaissance and Evaluation System (TERPES) and from Military Intelligence. Modernized Intelligence Data Base (MIDB 1.4) via 8MM tape. TEAMS will transition to MIDB 2.X in order to complete migration to GCCS-M. Currently fielded to all EA-6B squadrons, both Navy and Marine. Receive intelligence from modernized IDB via 8MM tape, from GCCS-M central database, from Air Force Combat Intelligence System (CIS) via Ethernet and from TRAP and TADIXS-B via serial line (4096 baud) to tactical receive equipment (TRE). Possibly receive intelligence from tactical intelligence broadcast system (TIBS), commander's tactical terminal (CTT), and multi-mission advanced tactical terminal (MATT), This requirement currently awaiting fleet validation. Possibly receive ATO from CTAPS and Air Force wing C-2 system via Ethernet. Provides post-mission intelligence to GCCS-M correlator and Air Force CIS via Ethernet.
Crypto Requirements	No crypto used. Removable hard drives and RRS classified SECRET.
Normal Locations	One TEAMS system at each VMAQ and VAQ squadron.
Information Managed	Emitter electronic parameters and location data, ALQ-99 jammer targeting libraries, USQ-113 (V3) emitter parameters and jammer targeting libraries, Enemy Command and Control Networks planning data, HARM targeting libraries, DAFIF airfield and navigation aid

data, terrain data, digitized graphics map images, specific emitter identification data from TRAP broadcast, Global Positioning System (GPS) almanac and waypoint information.

Products Created

EA-6B mission libraries, navigation and fuel logs, charts, transparencies, weapon system keyboard cards, and USQ-113(V3) mission libraries.

Lead Service/Contractor

USN/Comptek PRB Associates Inc.

Current Fielding Status

TEAMS version 205.04 fielded in 1999, which incorporated support for Y2K issues and EA-6B Block 89A support, as well as SIPRNET connectivity. GCCS-M/DII migration is on going. TEAMS build 206.01 will be a GCCS-M module with an anticipated release of December of 2000. As EA-6B is undergoing ICAP III migration, TEAMS is conducting a parallel build to support the Operational Assessment testing. Future improvements will include transition to new hardware, support for the Low Band Transmitter, HARM improvements, C2W analysis, improved USQ-113V(3) support, and eventually the transition to the Joint Mission Planning System (JMPS) environment.

Known Problems

TAMPS migration was scrapped due to the immaturity of the TAMPS hardware compared to TEAMS (1 vs. 4 processors, four gigabytes of hard drive storage vs. 16 gigabytes of hard drive storage). As GCCS-M moves toward DIICOE compliance, TEAMS will become modules of GCCS-M.

DIICOE Compliance Rating

TEAMS 206.01 will be level 5 Compliant.

Point of Contact

Phil Dupree or Dave Perrin, (301) 373-2360 or (301) 373-2388 X2144, fax (301) 373-3421 with Comptek PRB Associates, Hollywood, MD.

Updated by

Capt Richard E. Petersen, USMC, CCSC-01

**Tactical Electronic Reconnaissance Processing and Evaluation
System (TERPES)**

Primary Purpose The TERPES is a tactical Marine Corps asset designed to process, sort, analyze, display, and correlate digital Electronic Warfare Support (ES) and Electronic Attack (EA) data recorded by EA-6B aircraft. The processed data results in Electronic Intelligence (ELINT) that is used by both the Air Combat Element (ACE) and Ground Combat Element (GCE) of a Marine Air Ground Task Force (MAGTF) to determine the extent of the enemy electronic threat and to plan combined arms operations.

Sub-Functions Intelligence support, mission planning support, pre/post mission analysis, communications.

Equipment Requirements Sun Ultra Workstation (2) - 9.1 GB removable hard drive, 512 MB Random Access Memory (RAM), 12X CD-ROM, 20" flat panel display. Sun Ultra File Server (1) - 512 MB RAM, 4mm tape drive, 8mm tape drive, 12X CD-ROM, 20" flat panel display. Removable hard drives (7) - 9.1 GB (63.7 GB total) Peripherals - Raymond Recorder Reproducible Set (RRS) (2), Uninterruptible Power Supply (UPS), Red/black Virtual Memory Extension (VME) chassis, MST-ICOM transceiver (2), RF-590A High Frequency (HF) Receiver, HP 750CM plotter, HP 1600CM printer, MX-512P(V) data terminal set with Panasonic CF-25 laptop computer.

Connectivity Requirements Integrated Contingency Communications System (ICCS)-CGS-100 Lite Communications Gateway, Local Area Network (LAN) transceiver, Cisco 2514 router.

Crypto Requirements KG-40, KGX-40, KIV -7 (4), Commanders' Tactical Terminal (3) Channel (CTT-3), STU-III Secure Telephone Unit, 1910 Dataphone.

Normal Locations Each Marine Tactical Electronic Warfare Squadron (VMAQ) detachment deploys and is based with its parent squadron, including operations at expeditionary airfields with the senior MAGTF ACE command. The system does not routinely deploy to forward operating bases, unless accompanying a senior MAGTF ACE command. The system shall deploy for use in field environments for the period of time necessary to accomplish the mission. The system may be used to support the Joint Force Commander (JFC) or Marine Component Commander, if the Marine Expeditionary Force (MEF) Commanding General is assigned these roles. In garrison (MCAS Cherry Point, NC), the

system will support mission planning, contingency operations, exercise support, and training.

Information Managed

Each Marine Tactical Electronic Warfare Squadron (VMAQ) detachment deploys and is based with its parent squadron, including operations at expeditionary airfields with the senior MAGTF ACE command. The system does not routinely deploy to forward operating bases, unless accompanying a senior MAGTF ACE command. The system shall deploy for use in field environments for the period of time necessary to accomplish the mission. The system may be used to support the Joint Force Commander (JFC) or Marine Component Commander, if the Marine Expeditionary Force (MEF) Commanding General is assigned these roles. In garrison (MCAS Cherry Point, NC), the system will support mission planning, contingency operations, exercise support, and training.

Products Created

The TERPES supports the planning for air missions, provides briefs to aircrews, provides technical information for the EA-6B Electronic Warfare Mission, processes the EA-6B mission information, and issues ELINT reports to the MAGTF.

Lead Service/Contractor

USMC.

Current Fielding Status

FOC.

Known Problems

None

DIICOE Compliance Rating

Planned DIICOE 4.X Baseline in late FY02.

Point of Contact

Project's APM Office: MAGTF C4I Intelligence
Project Officer: CWO2 Tim Weese, Commercial
(703) 784-0958, DSN 278-0958, Email:
weesetw@mcsc.usmc.mil

Updated by

Captain Daryl Grissom, USMC, CCSC-01

**Tactical Flag Command Center (TFCC)/Joint Operations Center
(JOC)/Flagplot**

Primary Purpose	Support OTC/CWC planning and resource management. Also supports battle management in the execution phase.
Sub-Functions	Officer in Tactical Command (OTC)/ Composite Warfare Commander (CWC) battle action. One of nearly 10 C2I components/configurations to operate under GCCS-M.
Equipment Requirements	CV's and CVN's (TFCC) and LHD's (Flagplot): five Tactical Advanced Computer (TAC) III's or IV's used with two projection screens or 37"-42" monitors. The video configuration is being updated on the carriers. Recent installations have replaced the projection screens/monitors with 2 X 8 color large screen display video walls. LCC's (JOC): seven each 37" monitors, Dimension 2000 briefing system, 10 NT clients.
Connectivity Requirements	Operates within GCCS-M Ethernet/ATM LAN.
Crypto Requirements	Employs variety of crypto devices (KG-84A/C, KGR-96, KG-81, and KG-194) prior to multiplex transmission.
Normal Locations	All major fleet command ships (CV's, CVN's, LHD's and LCC's).
Information Managed	Ship movements/positions. SIGINT Displays, OTH radar displays tracked via the GCCS-M, weather, etc.
Products Created	No unique products created. Acts as the work center registering information for the OTC/CWC through TBMCS, JOTS, GCCS-M and GCCS-M NT PC network.
Lead Service/Contractor	Lead Service/Contractor: The principle contractor VARIES according to platform. Lead Service/Contractor: SPAWAR Systems Center Charleston, SC (Detachment, Norfolk, VA). DSN 961-6781; FAX DSN 396-0603.
Current Fielding Status	TFCC/JOC/Flagplot components virtually unlinked to other C4I systems prior to 1993. TFCC began operation in the LAN environment Naval Tactical Control Systems-Afloat (NTCS-A) in 1993 and evolved to current GCCS-M UNIX and NT Networks.
Known Problems	Unaware of any significant problems with TFCC technical operations.
DIICOE Compliance Rating	Not rated as a separate system (Tied to GCCS-

M, which is level 5 compliant).

Point of Contact

Point of Contact: Mr. Steven F. Kelly, SPAWAR
Systems Center. Comm. (757) 559-6781; fax
(757) 396-0603. DSN 961-6781; fax 396-0603.

Updated by

Captain Howard F. Hall, USMC, CCSC-01

Tactical Information Broadcast System (TIBS)

Primary Purpose	The primary function of TIBS is to provide near-realtime tactical information to the battle commanders for targeting, battle management, and situational awareness. After the intelligence information is collected and processed, TIBS supports the rapid, global dissemination of the battle situation to the warfighter at all levels of command in a common, readily understood format, and in sufficient time to react to the data. The TIBS network of continuous, secure broadcast of data among producers and subscribers provides a near-realtime, multi-sensor, multi-source situational awareness and threat warning information broadcast to the warfighter.
Sub-Functions	The Tactical Information Broadcast Service (TIBS) network disseminates theater area information with tracking accuracy. TIBS is being integrated into the Integrated Broadcast Service.
Equipment Requirements	TIBS is a theater UHF LOS or satellite-interactive network. The TIBS can support up to 10 producers, 50 query nodes, and an unlimited number of receive-only users. The TIBS operates at the SECRET collateral level.
Connectivity Requirements	The TIBS network is connected through a common UHF channel selected from a range of 225-400 MHz using SATCOM or LOS communication system. It can support a variable number of active data producers and subscribers, as well as an unlimited number of receive-only terminals. A TIBS node can either be a Network Master, Alternate Master, Network Manager, Remote User, or Receive-only User. In order to receive TIBS information, a TIBS node requires a satellite communications receiver and/or transmitter, a message processor, and a graphics display. The network uses dynamic time division multiple access (DTDMA) protocol in near-realtime updates.
Crypto Requirements	
Normal Locations	Air Force TIBS terminals are typically deployed as part of a C2 unit or at the Air Operations Center (AOC) level, and is a theater asset used by the Rivet Joint sensor.
Information Managed	
Products Created	

Lead Service/Contractor USAF.

Current Fielding Status

Known Problems

DIICOE Compliance Rating

Point of Contact Mike LaPointe, (703) 325-6422

Updated by Capt Mark Tobin, USMC, CCSC-01

Tactical Internet (TI)

Primary Purpose	The Tactical Internet (TI) is the integration of tactical radios and routers forming a voice and data network to transport Command and Control (C2) and Situational Awareness (SA) data for tactical users. Current primary systems using TI are Force XXI Battle Command Brigade and Below (FBCB2) and Forward Area Air Defense Command and Control and Intelligence (FAADC2I). The TI extends existing digital communications from brigade headquarters to the foxhole. The TI is an integrated part of the Warfighter Information Network (WIN) providing digital communication to all echelons (Foxhole to Power Projection Sustaining Base). As the TI matures, plans are to provide digital transport services to all Battlefield Functional Areas (BFA). Uses JTA-A compliant protocols.
Sub-Functions	There are no sub-functions [(It is an integral part of the WIN-T (Warfighter Integrated Network-Tactical))].
Equipment Requirements	SINGARS and/or, EPLRS, provides the primary data transport path for elements operating at Brigade and below. The Force XXI Battle Command, Brigade and Below (FBCB2) is the computer system normally used by elements at this level.
Connectivity Requirements	Connectivity is normally provided by EPLRS and/or SINGARS. (The INC is an integral part of the SINGARS mount and is being imbedded into the SINGARS manpack radio to provide network access. The EPLRS requires connectivity to a SINGARS INC for routing purposes).
Crypto Requirements	Data encryption is provided by the host communication device (i.e. SINGARS or EPLRS).
Normal Locations	At brigade and below.
Information Managed	Transported over the TI, Command and Control (C2) and Situational Awareness (SA).
Products Created	None. The tactical internet provides a means for delivery of data.
Lead Service/Contractor	U.S. Army. Various contractors are providing the communications systems employed in the tactical internet.
Current Fielding Status	Tactical Internet is not being fielded. But, the radios and host computer systems that comprise the TI are in fact being fielded.

Known Problems None.

DIICOE Compliance Rating N/A

Point of Contact Jack Hook DSN: 780 Comm: (706) 791-2981 email:
schroedj@emh.gordon.army.mil
hookj@gordon.army.mil
MAJ Charles Schrader DSN:780 Comm: (706) 791-
7952, email: schardec@emh.gordon.army.mil
Mr. Frank Durshimer DSN: 780 Comm: (706) 791-
3834 email: durshimf@emh.gordon.army.mil
SIG DCD- CPT Robert Smith DSN: 780 Comm: (706)
791-1878.

Updated by Capt James (Jamie) V. Knapp II, USMC, CCSC-01

Tactical Network Analysis and Planning System Plus (TNAPS+)

Primary Purpose	Computer based desktop System Planning and System Control (SPSC) tool comprised of integrated software modules designed to automate the planning, engineering, database development, network analysis, and management for tactical communication networks. TNAPS+ is a joint communications standard.
Sub-Functions	Standard requirements development, Operational requirements development, circuit switch planning, message switch planning, data network planning (state-of-the-art COTS equipment), transmission network planning (sites, TRI-TAC links, FCC-100 links, IDNX links, and circuits), COMSEC, system control and management (master station log, statistics, message passing), reports development and printing, site mux planning (FCC-100, Promina, etc.), and system administration (TNAPS file management).
Equipment Requirements	PC Pentium or above, color SVGA monitor, Windows 95 or NT, DOS 6.0 or higher, 32 MB RAM, and 50 MB hard disk space. Program modules are 95% Windows, 5% DOS.
Connectivity Requirements	
Crypto Requirements	None.
Normal Locations	Network planning commands and user level units across the Joint community.
Information Managed	Network and equipment databases for each exercise/operation.
Products Created	Numerous network level and nodal/equipment level output reports describing resulting networks and equipment configurations/status.
Lead Service/Contractor	USAF Electronic Systems Command, Hanscom AFB, MA, Logicon 950 N. Orlando Ave, Winter Park, FL.
Current Fielding Status	TNAPS+ version 3.4 (Dec 2000), distributed to Air Force and the Joint Community. Two additional releases are planned for 2001.
Known Problems	None noted.
DIICOE Compliance Rating	
Point of Contact	Lt Matthew Sicola, Project Officer HQ ESC/DIGD, Hanscom Air Force Base DSN: 478-5560, https://esc-digd.hanscom.af.mil/Tnaps/tnaps.htm

Updated by

Captain Daryl E. Grissom, USMC, CCSC-01

Tactical Reconnaissance Intelligence Exchange System (TRIXS)

Primary Purpose	Corps-level, interactive broadcast network that disseminates tactical intelligence with targeting accuracy. TRIXS is being integrated into the Integrated Broadcast Service (IBS). IBS will transfer intelligence data across a common joint network. Initial IBS deployment will retain RRIXS and other legacy networks.
Sub-Functions	Disseminates SIGINT data in near real time.
Equipment Requirements	IBS requires a tactical terminal to receive, transmit, and display information. Presently, one of two "migration" terminals must be used: the Multi-mission Advanced Tactical Terminal (MATT) in use by USAF, SOCOM and US Navy; or the Commander's Tactical Terminal (CTT) used by US Army, USMC, US Navy and USAF. Joint Tactical Terminal (JTT) will replace CTT and MATT to provide intelligence data links to users in all services. JTT receives and transmits over all IBS to include: TRIXS, Tactical Information Broadcast Service (TIBS), Tactical Related Applications [TRAP Data Dissemination Service (TDDS)] and Near-Real-Time Disseminations (NRTD).
Connectivity Requirements	JTT or CIBS to connect to the network and host processor to display digital maps and information. Terminals are a software-programmable radio which support IBS. JTT can receive eight channels and transmits two channels. Product improvement programs will expand this to 12 and 12 channels respectively.
Crypto Requirements	JTT uses embedded crypto for up to SCI traffic.
Normal Locations	JTT will be integrated into other weapons systems and are transported with the host system/platform. The terminals will be mounted in aircraft (fixed or rotary wing), ships, fixed platforms or vehicles. Some key systems include JSTARS and JSTARS CGS, Guardrail common sensor, P-3, MLRS, THAAD, Patriot, ASAS, AFATDS, and others. It may also be located in Force, MEF or MSC G-2 sections.
Information Managed	Near-real time signals intelligence (SIGINT) data from sensors/other intelligence sources to tactical units and platforms.
Products Created	Targetable near real time intelligence.
Lead Service/Contractor	USAF for broadcast service architecture; US Army for Joint Tactical Terminals for IBS; Raytheon for JTTs and CIBS.

Current Fielding Status JTT and IBS behind schedule. JTT user demonstration scheduled for spring 2000. JTT planned deliveries beginning spring 2000. JTT currently in use.

Known Problems None.

DIICOE Compliance Rating The CIBS-M modules are required to make CTTs fully compliant with DoD's Defense Information Infrastructure Common Operating Environment (DIICOE).

Point of Contact Army Broadcast Intelligence Office, Ft. Huachuca, Comm 520-533-8941/6824.

Internet:
www.fas.org/irp/program/disseminate/trixs.htm

Updated by Capt J. L. Nethercot, USMC, CCSC-01

Tactical Remote Sensor System (TRSS)

Primary Purpose	Tactical Remote Sensor Systems (TRSS) provides continuous all weather location determination and monitoring of activity within a given area of operation.
Sub-Functions	Graphic depiction of objects through thermal graphic optics, classification through rotary wing air-delivered sensors (i.e. tracked vehicle, rotary winged aircraft, battle field sounds, etc.) and hand employed ground sensors.
Equipment Requirements	Each Sensor Mobile Monitor System (SMMS) has two monitoring stations located within that are comprised of one IBM Thinkpad 770X using monitoring software developed for the Windows environment.
Connectivity Requirements	Line-of-sight for transmit/receive (VHF/UHF) back to the SMMS. Operates in the VHF (138-153 MHz) and UHF (313.5-315.5 MHz) (new software) range. The SMMS includes a HF radio (AN/GRC-231) and two VHF radios (AN/VRC-91A), LAN connection to the IAS family suite-providing sensor reporting connectivity.
Crypto Requirements	Crypto Regs: None: KY-99, KY-57 required for secure voice communications.
Normal Locations	Sensor Control and Management Platoon (SCAMP) or Ground Sensor Platoon (GSP). SCAMP will be located with the Intel Bn.
Information Managed	MASINT (Measurement and Signals Intelligence) reports, data derived by analysis of targets total seismic/magnetic/infrared/thermal graphic image to provide direction, location, relative speed, quantity, length of column and classification type.
Products Created	Positive identification and classification of detected activity. Strip charts and image displays. Sensor reports (SENREP).
Lead Service/Contractor	USMC/Northrop Grumman Corp (NGC) & NOVA engineering.
Current Fielding Status	TRSS is 85% fielded. Items funded during FY00 with fielding in FY01 include Repeater/Relays (NOVA item 292 ea.) that replaces the current Repeaters and Relays, Intermediate Air Delivered Sensor (IADS) (NGC item 78 ea.), and Test Sets (17 ea.), enhanced life battery boxes (516 ea.). TRSS has additional funding from POM02 to procure an advanced Unattended Ground Microsensor System to replace the current Unattended Ground Sensor System as

well as procuring the fixed wing deployed sensor, Advanced Air Delivered Sensors (AADS) (552 ea.), and the Thermal Imager buyout of (520 ea). Funding was not secured to procure the Airborne Relays (AR) (48 ea.).

Known Problems

Thermal Imager currently at MSII is funded from POM02 for reevaluation prior to a re-operational test and evaluation (OT&E).

DIICOE Compliance Rating

Not rated.

Point of Contact

GySgt Ted Salas, Project Officer for TRSS. Marine Corps Systems Command DSN 278-0952, commercial 703-784-0952. Email salast@mcsc.usmc.mil

Updated by

Capt Justin Wilson, USMC, CCSC-01

Theater Battle Management Core System (TBMCS)

Primary Purpose	TBMCS is the Combat Air Force information and decision support system supporting combined and joint air operations for the Joint Forces Air Component Commander (JFACC). TBMCS provides the JFACC with the ability to plan and control air operations, including air and space control and air and missile defense.
Sub-Functions	TBMCS integrates CTAPS, WCCS and CIS under a common core of services.
Equipment Requirements	TBMCS is a suite of USAF software applications that support air and space operations. TBMCS contains 14 joint applications that have been designated as joint standard software applications.
Connectivity Requirements	SIPRNET via TRC-170, MRC-142, SATCOM connectivity.
Crypto Requirements	None.
Normal Locations	At the force level, TBMCS supports the JFC through the Joint Air Operations Center (JAOC), Navy Tactical Air Control System (NTACS), Marine Air Command and Control System (MACCS), Air Support Operations Center (ASOC), Control and Reporting Center (CRC), and Marine Corps Tactical Air Command Center (TACC). At the unit level, TBMCS supports the USAF Wing Commander through the Wing Operations Center (WOC), Maintenance Operations Center (MOC), and Squadron Operations Center (SOC).
Information Managed	All air operations planners will use TBMCS to produce, generate, disseminate, and monitor the execution of the Air Tasking Order (ATO), air defense plan, master air attack plan, target nomination list, joint integrated prioritized target list, and the air space control order (ACO).
Products Created	Air Tasking Order (ATO), Airspace Control Order (ACO).
Lead Service/Contractor	USAF/Lockheed-Martin Corporation in Colorado Springs, CO.
Current Fielding Status	Currently being fielded from the fall of 2000.
Known Problems	Due to CTAPS and FY97 funding problems, TBMCS integration with the GCCS Common Operating Picture, MIDB, and Imagery in GCCS, the delivery schedule was changed to a single release.

**Tomahawk Weapons Control System (TWCS)/Advanced Tomahawk Weapons
Control System (ATWCS)**

Primary Purpose	Provides a capability to control surface launches of the TOMAHAWK Land Attack Missile (TLAM). Encompasses communication support, engagement planning, missile initialization, and launch control functions.
Sub-Functions	Provides the capability for the Battle Group Commander to maintain common control system of the TOMAHAWK weapon platform. The Commander can arrange his TOMAHAWK platforms to fit the organization, designating which ship will be an active shooter or a non-participant. TWCS and ATWCS also displays and tracks air, surface, and subsurface contact reports from the weapon platform's Force Over-the-Horizon Track Coordinator (FOTC) node. The Battle Group's FOTC will disseminate force-level track database information and then, based on the threat, the Launch Area Coordinator (LAC) will issue engagement orders to those TOMAHAWK weapon systems identified as participants or shooters.
Equipment Requirements	<p>TWCS: AN/SWG-3B Tomahawk Weapon Control System, MK-41 VLS Launcher, AN/WSN-5 or AN/WSN-7 Inertial Navigation System, Officer-in-Tactical-Command Information Exchange System (OTCIXS), Tactical Data Information Exchange System A (TADIXS A), Global Command and Control System - Maritime (GCCS-M), Electronic TOMAHAWK Employment Planning Package (ETEPP).</p> <p>ATWCS: AN/SWG-4(V) Advanced Tomahawk Weapon Control System, MK-41 VLS Launcher, AN/WSN-5 or AN/WSN-7 Inertial Navigation System, Officer-in-Tactical-Command Information Exchange System (OTCIXS), Tactical Data Information Exchange System A (TADIXS A), Global Command and Control System - Maritime (GCCS-M), Generic Front-end Communications Processor (GFCEP).</p>
Connectivity Requirements	TLAMs must be aligned with the WSN-5 or WSN-7 Inertial Navigation System for all missions.

Officer-in-Tactical-Command Information Exchange System (OTCIXS), Tactical Data Information Exchange System A (TADIXS A) and Extremely High Frequency (EHF) communications circuits are required for transmitting/receiving off-board engagement orders.

Crypto Requirements

Manually entered current week and following week crypto required for GPS missions.

Normal Locations

CG 47 (TICONDEROGA) Class Cruisers (CG 52 and higher hull number), DD 963 (SPRUANCE) Class Destroyers, DDG 51 (ARLEIGH BURKE) Class Destroyers, SSN 637 (STURGEON) and 688 (LOS ANGELES) Class Attack Submarines.

Information Managed

Maintains a theater ocean surveillance picture which provides track avoidance information for TOMAHAWK weapons employment. Also maintains engagement planning information and world-wide master mission library data.

Products Created

Copies of engagement displays, and geographic depiction of attack plan. OPNOTES & SITREPS. INDIGO report to TOMAHAWK Strike Coordinator (TSC). Consolidated launch report from Launch Area Coordinator (LAC). Also provides mission and missile inventory reports.

Lead Service/Contractor

USN/Boeing and Raytheon (missile). NSWC DD, PHD NSWC, NUWC KP, Litton, Telos and Lockheed Martin (weapon control system).

Current Fielding Status

Deployed and operational. Fleet installation of the Advanced TWCS (ATWCS) started in FY 98 and will continue thru FY 07. Software for surface ship and submarine ATWCS is built around the JMCISA Unified Build (UB) that executes on a UNIX operating system and X-windows and MOTIF utilities. The JMCIS UB provides processing for communications, track management and correlation, and mapping and charting. ATWCS provides surface ships and submarines with new or improved weapons control system capabilities, to include: track processing common with the JMCIS-based utilities; automated over water route planning via track avoidance and land fly-around; ability to put multiple primary and ready-spares missiles on a single engagement; ability to send preplanned missions (MDU Forward Pass) and missile inventory Tomahawk Asset Management (TAM) reports; improved automation of Strike Coordination Overlays; expansion to 131 engagements (through TRIAL status), including a maximum of 32 active engagements; automated Mission Data Update (MDU) accountability; and an embedded training

(Scenario Generation and Reconstruction)
capability.

Known Problems

TLAMs require precise position updates from the WSN-5/WSN-7 gyro. If the shooting platform has a bad gyro, then the TLAM shot opportunity is degraded or lost. All TLAM platforms are equipped with two gyros and TWCS/ATWCS can interface with either one. High latency on communications circuits can cause delays in the coordination of a Theater-wide TOMAHAWK Strike package which involves numerous shooters. With the introduction of EHF communication circuits into the fleet, this is becoming less of a problem.

DIICOE Compliance Rating

Not rated.

Point of Contact

Mr. Bill Flinner, (301) 757-6199; office code PMA 282W9; Email: flinnerww@navair.navy.mil.

Updated by

Capt Michael A. Brooks, USMC, CCSC-01

**Transportation Coordinator's Automated Information for Movement
System II (TC-AIMS II)**

Primary Purpose	TC-AIMS II is a Department of Defense (DOD) directed program that addresses critical shortfalls in moving cargo and people in support of the DOD mission. TC-AIMS II will provide the Marine Corps with a modernized, integrated, and deployable Automated Information System (AIS) that supports unit, personnel, vehicle, and cargo movement worldwide.
Sub-Functions	Provide the capability to automate Unit Movement and ITO/TMO planning and execution whether from in-garrison or a deployed field operational environment. It will operate within the Global Combat Support System (GCSS) environment and will provide critical data to the Global Transportation Network (GTN) and command and control systems at various command levels.
Equipment Requirements	Client-server based system. Intel based computer. Windows NT (soon Windows 2000) operating system. Client: 166 MHz, 64 MB RAM, 10 GB HD. Server: HP LXe PRO 6/200 with Disk Array 5 SGL Processor (512 KB cache), 320 MB RAM, six 9.1 GB Hot Swap Drives.
Connectivity Requirements	Requires ability to send email attachments and access to the TCAIMS II server from behind or outside the MCEN (NMCI) firewall.
Crypto Requirements	None.
Normal Locations	TCAIMS II will support the embarkation, traffic management, and motor transportation operations sections. Located in the G-4/S-4 and supporting establishments.
Information Managed	Unit move planning (JOPES and MILSTAMP) and unit move execution (ULN/TCN/TCMD) data will be provided to other Joint and service unique systems. The applications interface with the Global Transportation Network will help provide in transit visibility (ITV).
Products Created	All Joint transportation documentation.
Lead Service/Contractor	United States Army/DynCorp.
Current Fielding Status	Expect initial fielding during FY 03.
Known Problems	Currently less capable than legacy applications.
DIICOE Compliance Rating	DIICOE rating Level 5.

Point of Contact

Maj Wilson, MARCORSSYSCOM C4IIS, DSN 278-0877.

Updated by

Capt G. T. Puntney, USMC, CCSC-01

Unit Diary/Marine Integrated Personnel System (UD/MIPS)

Primary Purpose Reporting pay and personnel administrative data into the Marine Corps Total Forces System (MCTFS) mainframe. UD/MIPS maintains a current Commanders Unit Diary Database of all Marines assigned to their respective unit.

Sub-Functions None.

Equipment Requirements Micro-computer using at least Windows 95, 32MB RAM, 1.6G Hard Drive, 8x CD ROM.

Connectivity Requirements

Crypto Requirements None.

Normal Locations All MEF units.

Information Managed Pay and personnel data on all Marines assigned to a specific unit. Specific queries provide reports utilized in a consolidated administrative environment. Routine reports are created with the use of the "Impromptu" query tool, which is embedded in the UD/MIPS software. Specific documents to assist in managing the administrative and training environments, and other miscellaneous reports.

Products Created Administrative or personnel data rosters created from queries providing information to command personnel.

Lead Service/Contractor Marine Corps Systems Command.

Current Fielding Status Fielded.

Known Problems The stand-alone version requires a bulky database. When conducting the transaction reconciliation, all data elements on each record are transferred. This will be corrected effective April 2001 with the touched record reconciliation procedures. Server-based UD/MIPS requires additional processing power and storage capacity, this requirement must be met with the inception of consolidated administration.

DIICOE Compliance Rating Not rated.

Point of Contact Captain Parker, Michael,
MARCORSYSCOM, Quantico, VA,
DSN 278-9051

Updated by Capt J. A. Keisler, USMC, CCSC-01

War Reserve System (WRS)

Primary Purpose	An automated tool used by the USMC to support war reserve requirements determination.
Sub-Functions	Pushes sustainment issues to field operators. Supports the following Department of Defense ground supply classes: Class 1 - Subsistence Class 2 - Clothing, individual equipment, organizational equipment, tents, tool kits, admin and housekeeping supplies. Class 3 - Petroleum, oil, and lubricant. Class 4 - Construction materials Class 7 - Major end items Class 9 - Non-medical repair parts.
Equipment Requirements	Any Marine Corps or compatible mainframe computer with a 3270 terminal or a PC with 3270 emulation.
Connectivity Requirements	Interface with 3270 via telephone lines.
Crypto Requirements	None.
Normal Locations	Both MCLBs, MEFs, MARFORs, FSSGs, HQMC, St. Louis Mega Center, Florida MPS. Access granted via MCLB Albany.
Information Managed	Sustaining requirements and withdrawal plans.
Products Created	War Reserve Withdrawal Plans, management plans, and sourcing requirements.
Lead Service/Contractor	USMC MCLB Albany.
Current Fielding Status	On-line and fielded.
Known Problems	None.
DIICOE Compliance Rating	Not rated.
Point of Contact	GM-13 Pamela Character-Bryant, Branch Head, Contingency Planning Branch, Code 862, MCLB Albany, DSN 567-6602
Updated by	Capt William Shannon, USMC, CCSC-01