

Guide to MAGTF Information Systems



MAGTF Staff Training Program (MSTP)

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U.S. Marine Corps
December 2015

MSTP Pamphlet 6-0.2

Guide to MAGTF Information Systems

This pamphlet supports the academic curricula of the Marine Air-Ground Task Force (MAGTF) Staff Training Program (MSTP).

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U.S. Marine Corps
December 2015

UNITED STATES MARINE CORPS
MSTP Center (C 467) TECOM
2042 South Street
Quantico, Virginia 22134-5001

16 December 2015

FOREWORD

1. **PURPOSE.** MSTP Pamphlet 6-0.2. *Guide to MAGTF Information Systems* will help the commander and his staff understand the use of Marine Corps information systems that support planning and operations.

2. **SCOPE.** This pamphlet covers fielded Marine Corps information systems and those commercial off-the-shelf (COTS) applications currently in use by the USMC. It provides an organized and disciplined approach for using these systems and applications to facilitate relevant, timely decision making.

3. **SUPERSESSION.** MSTP Pamphlet 6-0.2 dated 9 August 2011

4. **CHANGES.** Recommendations for improvements to this pamphlet are encouraged from commands as well as from individuals. The attached User Suggestion Form can be reproduced and forwarded to:

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5. **CERTIFICATION.** Reviewed and approved this date.

A handwritten signature in black ink, appearing to read 'P. J. Keane III', with a long horizontal line extending to the right from the top of the signature.

P. J. KEANE III
Colonel, U.S. Marine Corps
Deputy Director
MAGTF Staff Training Program Center
Marine Corps Combat Development Command
Quantico, Virginia

Throughout this pamphlet, masculine nouns and pronouns are used for the sake of simplicity. Except where otherwise noted, these nouns and pronouns apply to either sex.

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Part I

Introduction

The MAGTF employs information systems to support the collection, processing, and exchange of information. Information systems can accelerate and automate routine functions, freeing commanders and staffs to focus on those aspects of command and control that require experience, judgment, and intuition. In every phase of operations, these systems assist the commander and his staff by enabling rapid, secure information flow, shared situational awareness, informed decision-making, and swift dissemination of decisions. The success of the MAGTF in the modern battlespace depends heavily on the effective employment of information systems. (Marine Corps Warfighting Publication [MCWP] 3-40.1 ch1)

1001. MAGTF Command and Control

The command and control process enables the commander to exercise command across the breadth of his forces. It provides the means for the commander to form an understanding of the situation, decide what action is required, transmit instructions to subordinate commanders, monitor execution of instructions, and assess the results of the action.

- **People** drive the command and control system. People gather information, make decisions, take action, communicate, and cooperate with one another to accomplish a common goal. Effective command and control starts with qualified people and a common philosophy.
- **Information** refers to representations of reality used to inform to give form and character to decisions and actions. Information is the words, letters, numbers, images, and symbols that represent things, events, ideas, and values. In one way or another, command and control is about information: getting it, judging its

value, processing it into useful form, acting on it, and sharing it with others. There are two basic uses of information:

- To help create situational awareness as the basis for a decision.
 - To direct and coordinate actions in the execution of the decision.
- **Support Structure** aids the people who create, disseminate, and use information. It includes the organizations, procedures, equipment, [systems], facilities, training, education, and doctrine that support command and control. (MCWP 3-40.1)

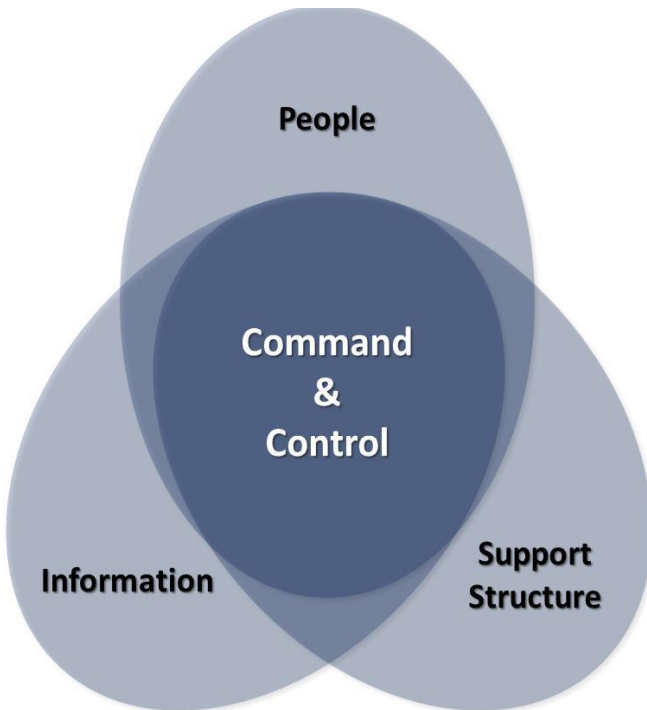


Figure 1 - Three Elements of Command & Control

1002. MAGTF Information Management

The role of information management is to provide a timely flow of relevant information that supports all aspects of the planning, decision, execution, and assessment (PDE&A) cycles of numerous and potentially widely dispersed units. Automated capabilities and commonly understood procedures display battlespace information in a dynamic environment and rapidly gain understanding to make effective decisions. Effective information management delivers critical information in a timely manner to those who need it in a form that they can quickly understand. Information management includes all activities involved in identifying, collecting, filtering, fusing, processing, focusing, disseminating, and using information. It assembles information that promotes understanding of the battlespace and enables the commander to better form and analyze courses of action (COAs), make decisions, execute those decisions, and understand results from previous decisions. Information management provides the quality information a commander needs to support the decision-making process. (MCWP 3-40.1)

a. Obtaining Situational Awareness

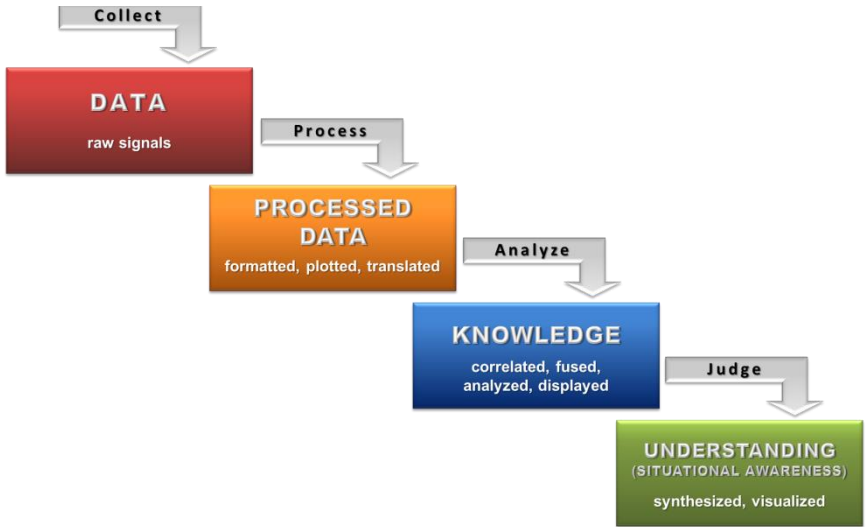


Figure 2 - Information to Situational Awareness

b. Quality Information

To be of value, information must have certain qualities. Information that lacks one or more of these qualities may be worse than having no information at all. (MCWP 3-40.1)

- Relevance
- Timeliness
- Accuracy
- Completeness
- Objectivity
- Usability

c. Commander's Critical Information Requirements

Only a fraction of the information that is theoretically available can be collected and processed rapidly enough to support decision-making. The commander, therefore, identifies commander's critical information requirements (CCIRs) to focus and direct the collection and processing of information. CCIRs is that information regarding the enemy, his own forces, and the environment that the commander deems critical to maintaining situational awareness, planning future activities, and making timely decisions. Designating CCIRs reduces the volume of information reported to the commander to a manageable level and focuses staff efforts on obtaining relevant and timely information. (MCWP 3-40.1)

1003. Shared Situational Awareness

The capability to share a common picture of the battlespace has been assigned the highest priority in current efforts to improve command and control capabilities. At the combatant commander level, this battlespace picture is the common operational picture (COP), which is a composite of the battlespace pictures of subordinate commanders' common tactical picture (CTPs). The COP/CTP enables commanders in different geographical locations and Services to collaboratively communicate and assess the military situation, make decisions for future operations, and transmit those decisions to the proper forces. (MCWP 3-40.1)

a. Common Operational Picture (COP) / Common Tactical Picture (CTP)

The COP/CTP provides commanders and staffs with a shared, graphic depiction of the battlespace, including the following:

- Current locations and all available status information for friendly, neutral, and enemy ground, maritime, and air units.
- All available planned movement information for friendly, neutral, and enemy ground, maritime, and air units.
- All available environmental information that could affect the disposition of friendly, neutral, and enemy ground, maritime, and air units; e.g., weather, terrain data, intelligence.
- Generated control measures, features, and projections; e.g., operating area and fire support coordinating measures. (MCWP 3-40.1)
- Security of a given populace or region, and the level of competency of the local security forces.
- Elements of influence on a given populace, such as internal or external cultural, political, and religious factors.
- Governance and legal system.
- Social and economic development.

The COP/CTP is developed through the concept of tracks and/or other in a kinetic or traditional combat environment. A track represents an object, usually an active unit, in graphic or text format. The position and characteristics of that object—which may be a friendly or enemy ship, aircraft or ground unit—are collated from sensors and other data sources including manual input. Tracks are plotted on a map background to provide a tactical display as described below. (The data describing these tracks is stored in a database used to generate the COP/CTP.)

Each command level that generates input for a COP/CTP has the responsibility for track management: entering, correlating, updating,

fusing, deconflicting, and otherwise maintaining assigned tracks. This is done with the employment of information systems.

b. User-Defined Operational Picture (UDOP)

Whereas the COP/CTP, based on track database management, is the primary means of maintaining situational awareness of friendly and enemy forces in a conventional or kinetic operation, UDOP is the primary means of maintaining situational awareness across the range of operations where the focus of effort is the local population, such as in a counterinsurgency (COIN) environment. Information systems that employ relational data models which strive to share the same ontology across and the spectrum of operations, contribute to the UDOP. The goal of these types of databases is to bridge the information from disparate communities who might not otherwise share data by providing a standardized reporting framework across multiple disciplines.

User-defined database management fuses information from both concrete and intangible elements, such as significant events, counter-improvised explosive devices (IEDs) mapping, human terrain, human intelligence (HUMINT), civil affairs, and targeting. This is a relatively new approach to understanding situational awareness across the range of operations and across the threat spectrum.

Part II

MAGTF Information Systems

MAGTF information systems are a component of the MAGTF command and control (C2) Support Structure. The information systems configuration is a component of the Information Management Plan (Annex U) and describes the configuration of the various systems that support the information exchange requirements across the warfighting functions. The MAGTF Communication and Information Systems Plan (Annex K) supports communication requirements, which include the networks required for information system connectivity.

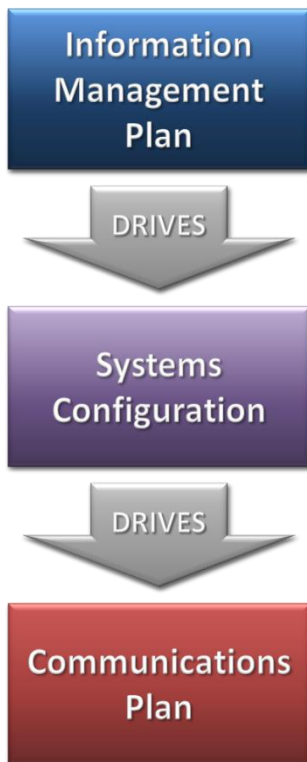


Figure 3 – Relationship of IMP, Systems, & Communications Plan

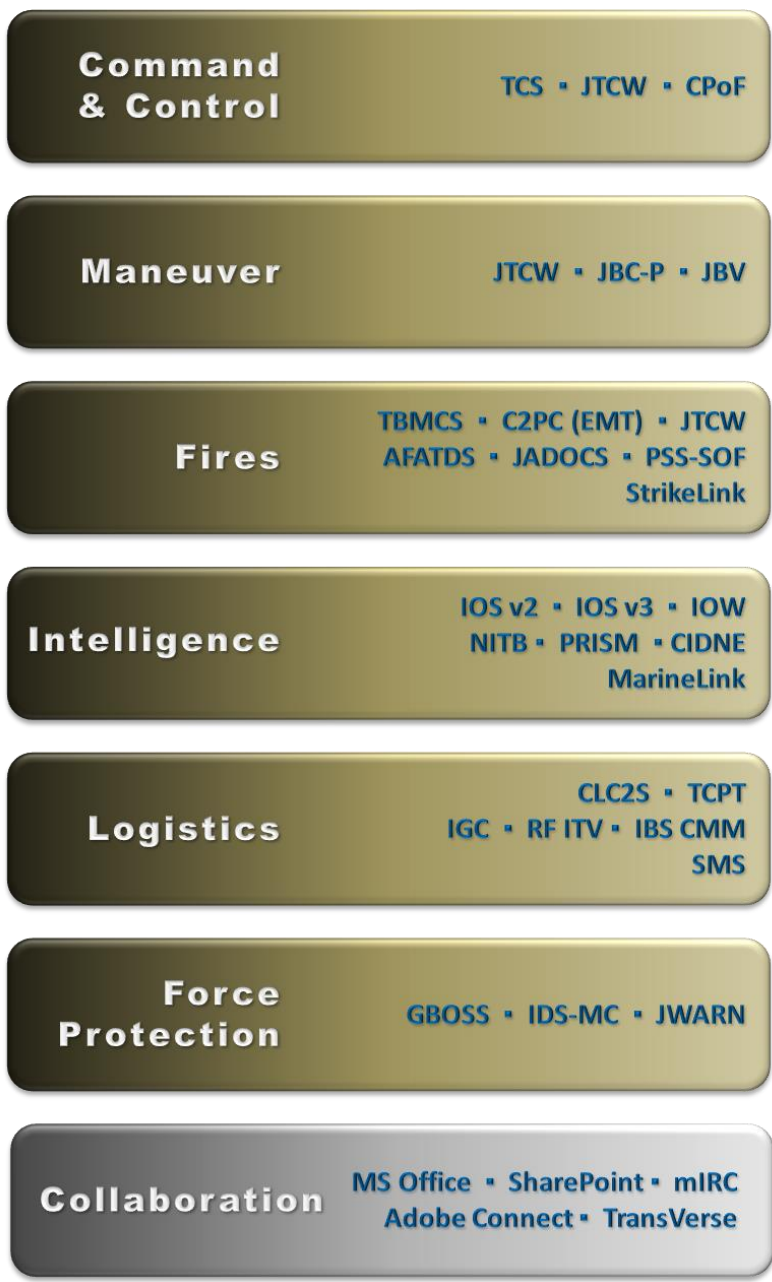


Figure 4 - Information Systems by Warfighting Function

2001. Command and Control Systems

a. Global Command and Control System – Joint (GCCS-J)

Primary Role: Provides automated C2 and command, control, communications, computer, and intelligence (C4I) capability to all the major combatant commands in a joint service environment.

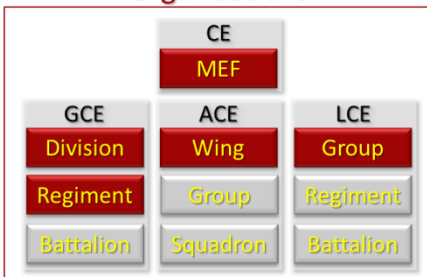


Capabilities:

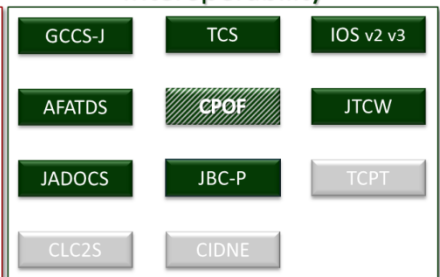
- Designed to interface w/ GCCS service level systems such as GCCS-M (Maritime) and GCCS-A (Army)
- Manages COP / CTP at Joint level.
- Supports Joint and Combined Environment
- Tracks air, ground, surface and sub-surface units
- Supports COA development
- Supports high speed COP Sync between Joint and Service Level family of systems
- Hosts XMPP and Internet Relay Chat (IRC) services

Available in three variants, Global for COP, JOPES which supports operational planning and the SORTS which manages assets.

Organizations



Interoperability



b. Tactical Common Operational Picture Server (TCS)

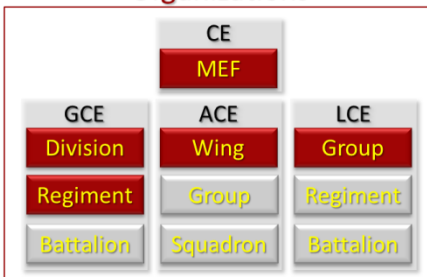
Primary Role: Provides automated C2 capability to support MAGTF Combat Operations Center (COC)

Capabilities:

- Designed to interface w/ GCCS-J compliant systems
- Manages COP / CTP
- Supports Joint and Combined Environment
- Tracks theater ballistic missiles
- Tracks air, ground, surface and sub-surface units
- Supports COA development
- Supports high speed COP Sync between GCCS family of systems
- Serves Joint Tactical COP Workstation (JTCW) clients
- Hosts XMPP chat services



Organizations



Interoperability



c. Joint Tactical COP Workstation (JTCW)

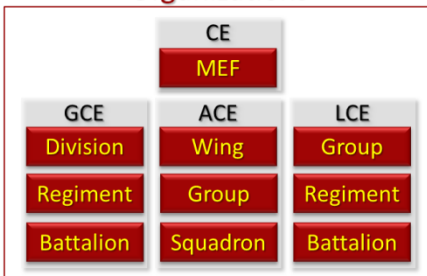
Primary Role: Provides the end-user with coherent view of the battlespace (COP).

Capabilities:

- Increases joint information exchange.
- Provides visibility of joint assets.
- Allows for joint coordination
- Imports information from Fires, Air, and Logistics elements.
- Provides near-real time cross coordination and management of the friendly and enemy COP
- Provides Decision Support Toolbox (DSTB) for support in the development of Intelligence Preparation of the Operational Environment (IPOE)
- Supports the Marine Corps Planning Process (MCPPE) with planning applications
- Supports digital mapping and overlay
- Third party application extensions provides additional capabilities that spans other functional areas



Organizations



Interoperability



d. Command Post of the Future (CPOF)

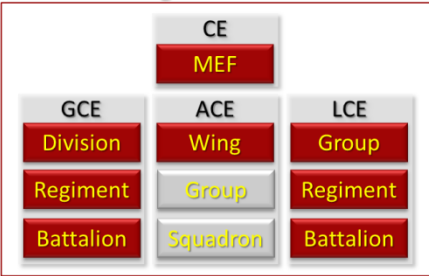
Primary Use: Is a joint COP /CTP presentation system usable at all echelons.

Capabilities:



- Provides collaborative tools to facilitate commanders decision- making process
- Provides situational awareness through command & control personal computer (C2PC) -injected COP display
- 2D and 3D Interface Utilization
- Supports parallel real-time and near real-time cross functional planning and execution
- Provides COP/CTP viewer through the injection of position/location information from systems such as advanced field artillery tactical data systems (AFATDS), intelligence operations server (IOS), C2PC, and battery computer system (BCS)
- Integrates information from other information systems to provide timely and relevant information to the commander
- Provides Voice Over Internet protocol (VOIP) through Ventrilo
- Allows collaborative sharing of unified information across the CPOF network

Organizations



Interoperability



2002. Maneuver Systems

a. Joint Tactical COP Workstation - JTCW

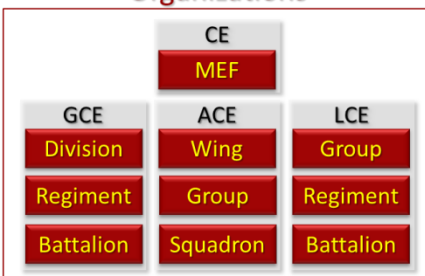
Primary Role: Provides the end-user with coherent view of the battlespace (COP)

Capabilities:

- Increases joint information exchange
- Provides visibility of joint assets
- Imports information from fires, air, and logistics elements
- Enables joint coordination
- Provides near-real time cross coordination and management of the friendly and enemy COP
- Provides DSTB for support in the development of IPOE
- Supports the MCPP with planning applications
- Supports digital mapping and overlay
- Third party application extensions provides additional capabilities that spans other functional areas



Organizations



Interoperability

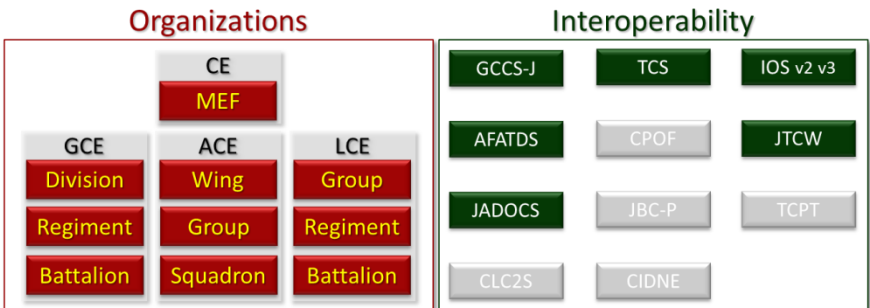


b. Joint Battlespace Viewer (JBV)

Primary Role: The JBV is a government off the shelf (GOTS) 3D visualization program

Capabilities:

- The software displays the entire earth with 1-km resolution imagery and height data
- It displays 1-degree-by-1-degree latitude/longitude cells at 5-meter imagery resolution, and 1-minute-by-1-minute cells at 1-meter resolution
- Users can fly through terrain interactively
- As one zooms to a specific area, the software automatically searches for higher-resolution data on disk to bring into the scene
- National Geospatial-Intelligence Agency (NGA) or other (i.e., United States Geographical Survey [USGS], TerraServer) imager data can be imported and processed on the host platform
- Used for terrain mapping, situational awareness, and GIS plotting



c. Joint Battle Command – Platform (JBC-P)

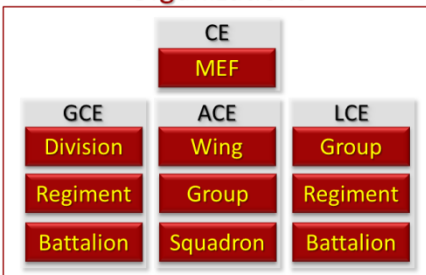
Primary Role: Creates, disseminates, and receives near real-time battlefield Situational Awareness

Capabilities:

- Generates real-time enemy location and battlefield reports
- Coordinates battlefield events with COC personnel
- Disseminates battle operations orders/plans
- Creates and disseminates navigation routes
- Creates and disseminates overlays
- Feeds data into the COP / CTP



Organizations



Interoperability



2003. Fires Systems

a. Theater Battle Management Core System (TBMCS)

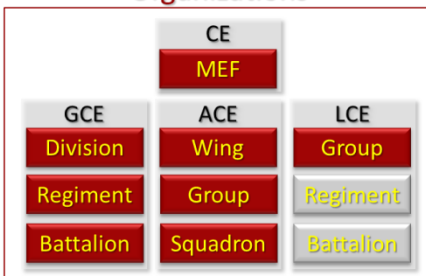
Primary Role: Produces the Air Tasking Order (ATO) and Airspace Control Order (ACO)

Capabilities:

- Provides situational awareness
- Ensures automatic data distribution
- Manages air battle execution
- Supports collection management
- Maintains local order of battle and threat databases
- Provides air defense artillery and friendly unit aircraft reports
- Provides surface C2 reports
- Provides missile, mission, and base reports
- Verifies effective utilization of offensive, defensive, and support assets
- Validates mission support status
- Manages and integrates Airspace



Organizations



Interoperability



b. Effects Management Tool (Application within C2PC) (EMT)

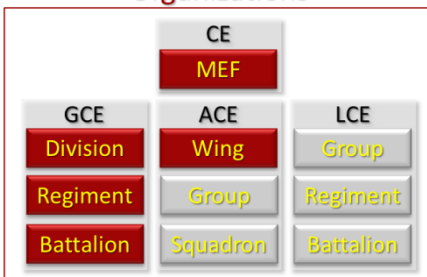
Primary Role: Provide a fires and effects command and control tool to remote users of the AFATDS.

Capabilities:

- Provides various injectors to manipulate COP for specific users (Logistics, Intel, Ops, etc.)
- Contains numerous Decision Support Tools to support IPOE
- Produces a COP via track data from a tactical database manager (TDBM)
- Constructs overlays of battlespace graphics to support COA development against a range of scenarios and ability to export/import overlays from other JTCW users and GCCS variants
- Supports a variety of map projections and digital map data (ARC digitized raster graphics [ADRGs], compressed ADRSs [CADRGs], combined information bureau [CIB], digital terrain elevation data [DTEDs], etc.) for a customizable geographic display of track plots
- Allows the import, manipulation, and analysis of terrain data in order to gain a better understanding of the effects of terrain on friendly and hostile force operations



Organizations



Interoperability



c. Advanced Field Artillery Tactical Data System (AFATDS)

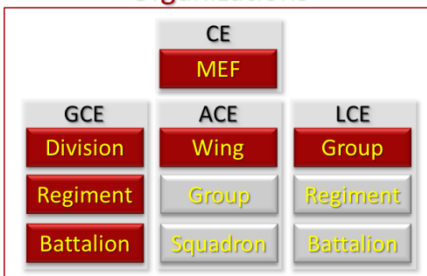
Primary Role: Provides timely, accurate, coordinated fire support tool to prioritize and engage targets

Capabilities:

- Configurable commanders' guidance is factored into each mission
- Provides situation awareness (SA). Depicts both friendly and enemy unit graphics are displayed, along with target information
- Provides support for controlling fire support assets
- Integrated, responsive, and reliable fire support data
- A means to input detailed attack guidance and criteria
- Displays and disseminates current friendly and enemy situations
- Applies doctrinal checks against coordination measure geometry to determine if coordination is required
- Assess each fire unit's capability to attack and defeat the target considering: unit's range fan and munitions ranges



Organizations



Interoperability



d. Joint Automated Deep Operations Coordination System (JADOCS)

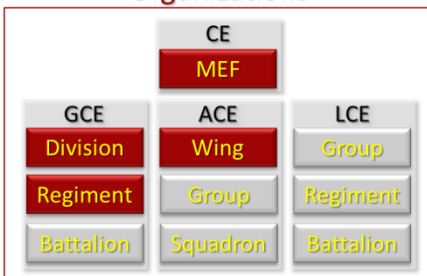
Primary Role: Processes, stores, and manipulates critical C2 information

Capabilities:

- Provides set of tools for data management, analysis and mission planning
- Validation of air interdiction (AI) nominations
- Close air support (CAS)
- Joint fires manager (JFM)
- Joint time sensitive targets (JTST)
- Collateral damage estimate (CDE)
- Provides integrated set of tools for
 - Data management
 - Analysis
 - Mission planning
 - Targeting
 - Fire support
 - Intelligence



Organizations



Interoperability



e. Precisions Strike Suite for Special Operations Forces (PSS-SOF)

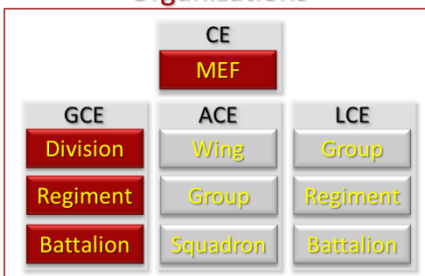
Primary Role: Enables observer on the front lines to determine precise coordinates for precision guided munitions (PGMs)

Capabilities:

- Verifies the location to be targeted by associating the grid to the digital point precision database (DPPDB)
- Provides a three-dimensional determination of coordinates that are precise enough to employ latest PGM's at tactical level
- Enables ground-based observers with eyes on the target to determine, refine and transmit precise coordinates to strike assets for precision strike munitions more quickly and easily
- Automatically pulls up the appropriate images, a stereo pair of two different images of the same target area



Organizations



Interoperability

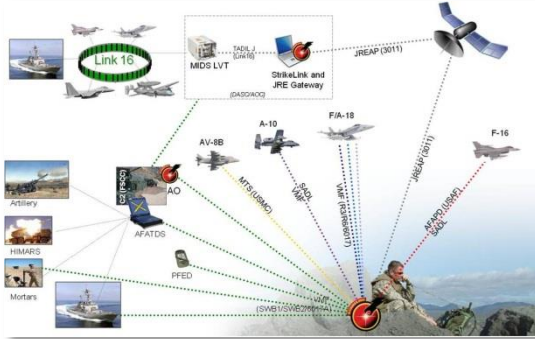


f. StrikeLink (see glossary)

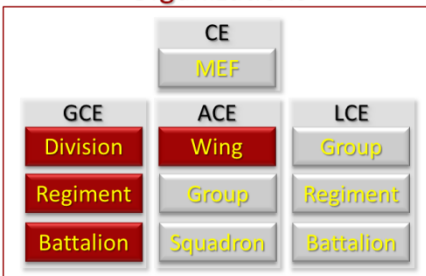
Primary Role: Enables operator the ability to quickly acquire precision targets in day, night, and near all-weather visibility conditions.

Capabilities:

- Supports both Indirect Fire and CAS missions based on currently approved doctrine with the flexibility to adapt to evolving tactics, techniques and procedures for forward air controllers (FACs), joint terminal attack controllers (JTACs), air officers (AOs), forward observers (FOs), fire support officers (FSO) missions and higher as required.
- StrikeLink can transmit and receive secure digital blue force and mission data with multiple supporting arms elements and Fire Support Coordination agencies simultaneously.



Organizations



Interoperability



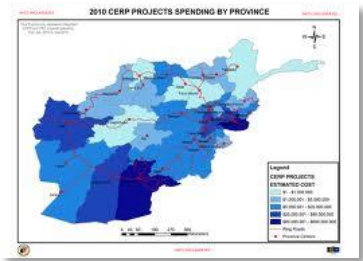
2004. Intelligence Systems

a. Combined Information Data Network Exchange (CIDNE)

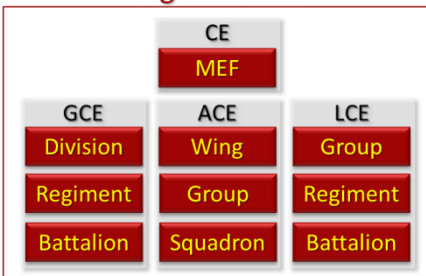
Primary Role: CIDNE serves the primary bridge between disparate communities who might not otherwise share data by providing a standardized reporting framework across intelligence and operations disciplines.

Capabilities:

- Allows structured operational and intelligence information to be shared vertically and horizontally as part of flexible, user-defined workflow processes that collect, correlate, aggregate and expose information as part of the end-user's individual information lifecycle requirements
- USCENTCOM/IJC – directed reporting tool within Iraq and Afghanistan
- Primary reporting tool for the following functions:
 - Significant activities (SIGACTS)
 - Human intelligence (HUMINT)
 - Explosive Ordnance Disposal (EOD)
 - Weapons Intelligence Team (WIT)
 - Target Development / Civil Affairs -
 - Psychological Operations / Engagement / Indirect Fires



Organizations



Interoperability



b. Intelligence Operations Server v2 (IOSv2)

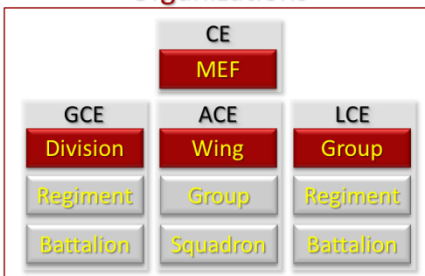
Primary Role: IOSv2 provides commanders with a tactical intelligence system that is capable of gathering all-source intelligence data for future processing and dissemination

Capabilities:

- Provides collection managers with the tools needed to support and maintain proper collection management
- The IOSv2 provides imagery analysts with a large repository for use in maintaining and processing imagery with its' integrated Shared Database System (SDS)
- Information is gathered i.e. equipment, facilities and enemy locations, then can be recalled through a web-based software
- In order to maintain situational awareness the IOSv2 is designed to provide commanders with real-time information through the use of the Integrated C41 Systems Framework (ICSF)
- The IOSv2 provides intelligence sections with the capabilities to manage and manipulate the Common Operational Picture (COP) through track management tools



Organizations



Interoperability



c. Intelligence Operations Server v3 (IOSv3)

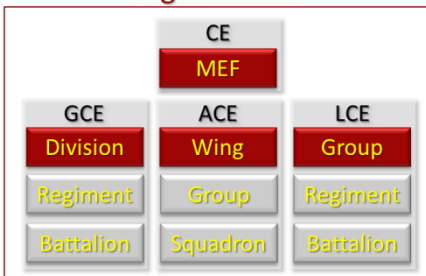
Primary Role: The IOSv3 like the IOSv2 supports the MAGTF intelligence section and its missions throughout the Marine Corps

Capabilities:

- The IOSv3 provides analytical tools that gather, process and disseminate information for follow on analysis
- The IOSv3 hosts a link between the Modernized Integrated Database (MIDB) and Marine Link
- With the combination of both MIDB and Marine Link, the Intelligence section is able to utilize their capabilities through a web based interface on both the Intelligence Operations Workstation (IOW) and the JTCW
- The current server software running on the IOS v3 is Windows Server 2003. With the capabilities of Windows Server 2003, the IOS v3 can run a variety of chat server applications such as Openfire and IRCXpro.
- The IOS v3 includes intelligence driven applications such as Analyst Notebook for the production of link analysis.
- The IOS v3 is designed to support disconnected operations as well as operations that are located within areas of limited bandwidth.



Organizations



Interoperability

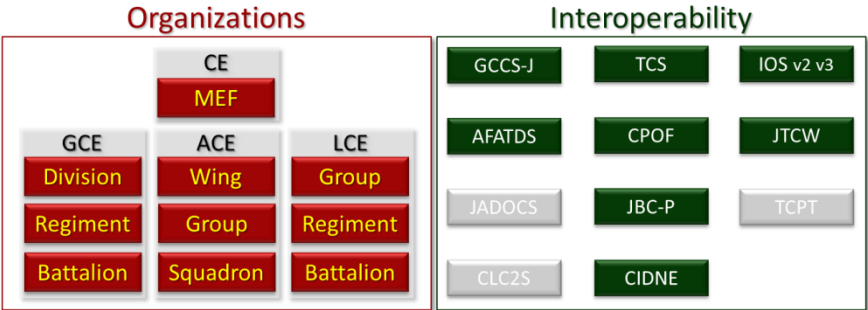


d. MarineLink

Primary Role: Aids the intelligence analyst in mission planning and situational awareness, and provided digital support to the IPOE

Capabilities:

- Provides simultaneous access to multiple internal and external data stores, allows users to submit structured queries and displays the results of these structured queries via geo-rectified maps/images or textually
- Reduced the time it takes a Marine Intelligence analyst to access relevant information – what used to take six Marines a week to find using traditional methods now takes one Marine less than one day
- Connected multiple sources of tactical and intelligence information, enabling analysts to quickly find the information they need and share it with others
- Provided on-screen manipulation and integration of differing data types retrieved from distributed data sources via doctrinal mission-specific query sets to produce virtual “products” to satisfy mission needs



2005. Logistics Systems

a. Common Logistics Command and Control System (CLC2S)

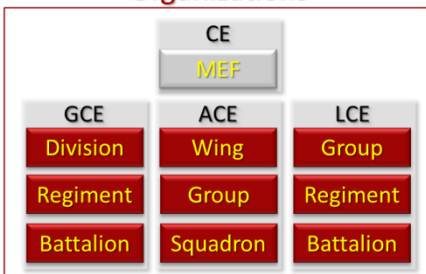
Primary Role: CLC2S is a web based Log C2 tool that provides situational awareness and decision support for MAGTF Commanders and Staff

Capabilities:

- Accredited for NIPRnet and SIPRnet.
- Provides a means to request, track and prioritize incoming support requests
- Contains four modules that when used together provide a near real time operating picture to leaders at all level
- Employed using the combat operations center (COC) equipment or deployable servers/laptops at all levels of the MAGTF
- Provides ad hoc capability, historic unit effectiveness, enables Information Analysis, and establish thresholds for C2 and command tracked items.



Organizations



Interoperability

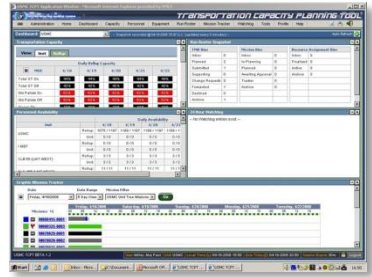


b. Transportation Capacity Planning Tool (TCPT)

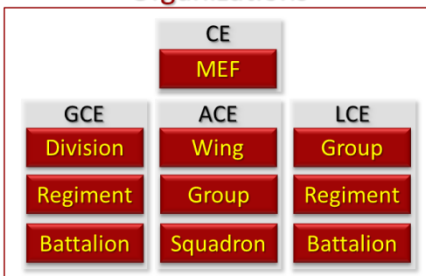
Primary Role: Net-centric/Web-accessible distribution tool to aid in transportation and engineer resource capacity for planning, tracking, and development of missions

Capabilities:

- Provides near term transportation, material handling equipment management and execution capabilities
- Provides tactical level convoy movement control and produces the Ground Transportation Request/Order (GTR/O)
- Maintain capacity/availability of transportation equipment
- Provides graphical overview of planned mission and missions underway, access to trip tickets and master log for all vehicles
- Allows each unit to define missions, associate loads, and submit missions to allocated units
- Provides for the entry, submission, and management of ground transportation taskers at all levels in the organization



Organizations



Interoperability



c. Integrated Data Environment (IDE) / Global Transportation Network (GTN) Convergence (IGC)

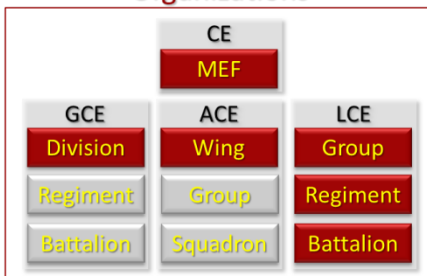
Primary Role: United States Transportation Command's (USTRANSCOM) Global Transportation Network (GTN) and Defense Logistics Agency's (DLA) Enterprise Business System are "converged" to provide Department of Defense (DOD) with an integrated set of networked, end-to-end visibility, deployment, and distribution capabilities

Capabilities:

- Provides supply chain, distribution, and logistics information fusion through common, integrated data and application services enabling the development of cohesive C2 and business-decision solutions
- Provides dashboards (see glossary) and reports
- Unifies people, processes, and systems in support of driving logistics performance to the warfighter
- Data Brokering Services
- Enterprise Data Warehouse (EDW)



Organizations



Interoperability



d. Radio-Frequency in-Transit Visibility (RF-ITV)

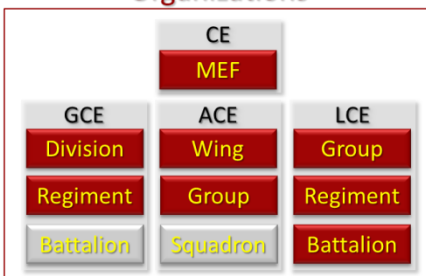
Primary Role: In-Transit Visibility (ITV) is a capability that uses Radio Frequency (RF)/Automatic Identification Technology (AIT) and is designed to provide the logistics customer with maximum visibility and near real-time status on the movement of all classes of supply.

Capabilities:

- It identifies, locates, and tracks the movement of all classes of supply from source of supply to user.
- ITV is the fusion of logistics information and distribution technologies for rapid crisis response, deployment and sustainment.
- It provides decision makers at all levels of command and throughout the logistics pipeline with accurate, near real-time data to collaboratively plan, prioritize and redirect logistics operations.
- ITV provides the capability to track and shift units, equipment, and supplies that are en route.
- The use of ITV allows the delivery of tailored logistics packages directly to the warfighter.



Organizations



Interoperability

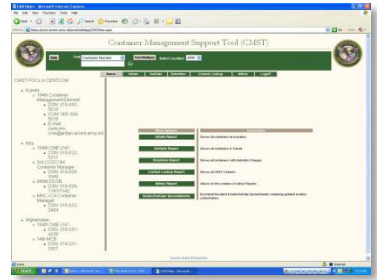


e. Integrated Booking System / Container Management Module (IBS CMM)

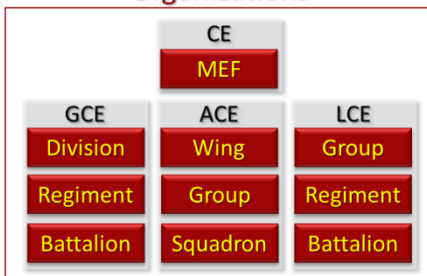
Primary Role: Automated web-based container management database that provides container visibility

Capabilities:

- IBS CMM is updated by the field users as the container is received at a location (in-gated), is shipped from a location (out-gated), or as the status (emptied or filled), use, and/or condition of the container is changed.
- Allows logisticians to track containers on a digital database.
- Provides tracking of each container's location on the ground.
- Provides the following reports:
 - AD HOC REPORTS
 - IN-GATED REPORT
 - IN-GATED
 - OUT-GATED REPORT
 - IN-GATED
 - DETENTION COST
 - CONTACT LOOKUP



Organizations



Interoperability



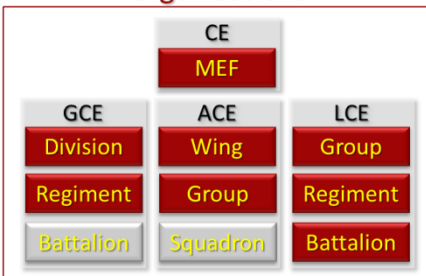
f. Single Mobility System (SMS)

Primary Role: SMS provides users with desktop and remote access to the Defense Transportation System (DTS), including air and surface mobility data, with the speed and ease of web-based applications

Capabilities:

- Allows users to plan, track, and report on strategic moves throughout the Department of Defense. Leading Indicator triggers alert users of potential movement pitfalls prompting analysis in sufficient time to make corrections to preclude late unit moves
- Draws information from several source systems including the JOPES, the Global Decision Support System (GDSS), the Worldwide Port System (WPS), the Integrated Command, Control and Communications System (IC3), the GTN, and others.
- Powerful filters allow users to quickly locate and present data
- Users can view distribution and deployment data at the strategic level or drill down to the tactical level and track individual shipments by Air Mission ID, Ship Name, Voyage Document Number (VDN), Transportation Control Number (TCN), pallet ID, passenger name and more. SMS users with JOPES access can further drill into Unit Line Number (ULN) level four detail
- Allows users to aggregate unit move data into graphical, drillable reports and filters that can be imported for ease of management and briefing

Organizations



Interoperability



2006. Force Protection Systems

a. Ground Based Operational Surveillance System (GBOSS)

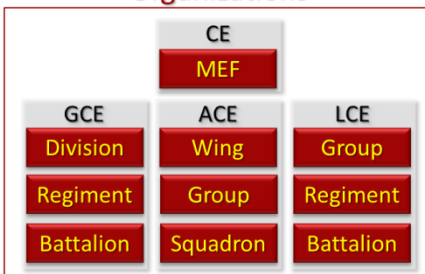
Primary Role: Employs multiple cameras distributed throughout an area of operations, all linked by a centralized network

Capabilities:

- The 24-hour network will allow one centralized location the ability to know what is going on in multiple regions
- Provides the warfighter with the capability to detect the enemy's movements at great distances, allowing for rapid response to threats
- GBOSS provides persistent surveillance using infrared sensors elevated on a stationary platform
- GBOSS is an expeditionary, camera-oriented tool that provides a 24-hour day/night detection, tracking, and recording capability to disrupt insurgent emplacement and employment of improvised explosive devices (IEDs)



Organizations



Interoperability



b. Identity Dominance System-Marine Corps (IDS-MC)

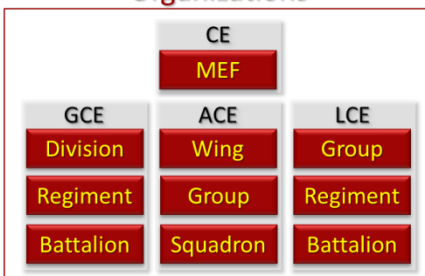
Primary Role: The IDS-MC is a multi-modal biometric collection system designed to collect fingerprints, irises, and photographs of persons of interest, local security forces, and indigenous population



Capabilities:

- Uses the secure electronic enrollment kit II (SEEK II) to provides untethered biometrics verification and a collection capability
- Will enable Marines to collect biometric, biographical, and reference information on an individual and match this locally developed information with pre-existing information available to the expeditionary force.
- Facilitates real-time enrollment and matching of persons of interest against a watch lists containing good quality, probative latent fingerprints
- Allows users to ingest Electronic Fingerprint Transmission (EFT) files, perform live enrollments, search the database, or receive immediate feedback regarding matches against a latent fingerprint watch list

Organizations

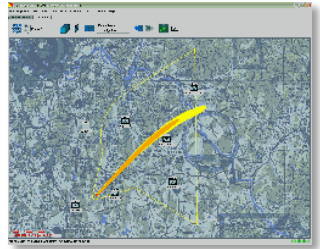


Interoperability



c. Joint Warning and Reporting Network (JWARN)

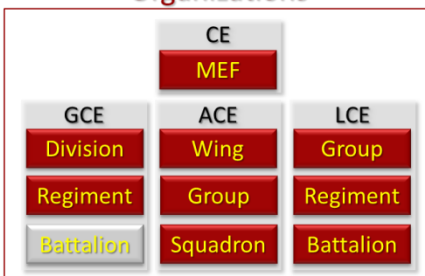
Primary Role: JWARN is a collection of software applications and hardware intended to provide nuclear, biological, and chemical (NBC) warning and reporting, downwind hazard prediction, operations planning, and NBC management capabilities for joint forces, from battalion to theater-level command



Capabilities:

- Report and warn Commanders and personnel of NBC attacks
- Perform analysis of NBC information by correlating multiple NBC-1 reports, and conduct hazard prediction using standard Allied Tactical Publication (ATP) 45(C) [(ATP- 45(C))] plots
- Support planning and assessments of NBC defense
- Track unit operational status, NBC equipment readiness, and consumption rates of NBC supplies
- Enables immediate and integrated response to threats of contamination by weapons of mass destruction through rapid warning and dissemination of Chemical, Biological, Radiological and Nuclear (CBRN) information

Organizations



Interoperability



2007. Collaborative Systems

Adobe Connect: Web-based Flash system used to create information and general presentations, online training materials, web conferencing, learning modules, and user desktop sharing. Primarily used for real-time collaboration.

Microsoft Office: Proprietary commercial office suite of inter-related desktop applications, servers and services for the Microsoft Windows and Mac OS X operating systems

MakoChat: Low-bandwidth internet relay chat client (mIRC) with file sharing capability (only authorized in USCENTCOM area of operations [AO])

Microsoft SharePoint: A centralized replacement for multiple web applications, and supports various combinations of enterprise website requirements. It is typically associated with web content management and document management systems

TransVerse Jabber: An XMPP-based protocol for near real-time Instant Messaging. XMPP, based on open standards, allows anyone with a domain name and suitable Internet connection to run their own Jabber server and talk to users on other servers. Provides cross domain, cross classification, and translation capability. XMPP-based chat programs are the only type of chat programs authorized on the global information grid (GIG), except for mIRC in the USCENTCOM AO

Part III

Summary

Creating networked capabilities is a critical component of the MAGTF approach to commanding and controlling Marine forces. Every node in the network— commander, staff, unit, rifleman, supporting organization, platform, piece of equipment, or item—can be a producer, processor, and user of information. All information must be readily available to nodes without overloading or paralyzing them with irrelevant information. Further, many of the nodes in the network are required to perform multiple functions, so the essence of MAGTF C2 is decentralized and highly adaptive. It uses the communications architecture and information systems to foster and exploit the human capacity for mutual understanding, implicit communication, and intuitive decisionmaking. The cumulative network effect, achieved by organizing all nodes into an information-rich, collaborative, global network, is expected to enhance these inherently human qualities.

To maintain the superiority of these MAGTF information capabilities, the Marine Corps must have a plan to continually integrate new and proven technologies as they become viable and affordable. Often, these solutions only become apparent during ongoing operations, so the plan must allow the Marine Corps to leverage technologies in the near-term with a consistent, repeatable process that will continue to meet the long-term goals of data standardization and interoperability.

The increasing numbers of information systems that do not integrate standardized data place an ever increasing burden on the time and funding required for operations, maintenance, and training. These burdens impact the ability of the Marine Corps to support troops on the front lines as it transforms to meet the challenges of the future. (MCWP 3-40.3

Glossary

ACRONYMS

ACE.....	aviation combat element
ACO	airspace control order
ADRG.....	ARC digitized raster graphics
AFATDS	advance field artillery tactical data systems
AI.....	air interdiction
AIT	automatic identification technology
AO	air officer, area of operations
ATO.....	air tasking order
ATP	allied tactical publication
BCS	battery computer system
C2	command and control
C2PC	command and control personal computer
C4I.....	command, control, communications, computer, and intelligence
CADGR	compressed ARC digitized raster graphics
CAPSET	capability set
CAS	close air support
CBRN	chemical, biological, radiological and nuclear
CCIR.....	commander's critical information requirements
CDE	collateral damage estimate
CE.....	command element
CIB	combined information bureau
CIDNE.....	combined information data network exchange
CLC2S	common logistics command and control system
CMM	container management module
COA	course of action
COC.....	combat operations center
COIN	counterinsurgency

COP.....common operational picture
 COTS..... commercial off the shelf
 CPOF.....command post of the future
 CTP..... command tactical picture
 DLA.....Defense Logistics Agency
 DOD Department of Defense
 DPPDBdigital point positioning database
 DSTB..... decision support toolbox
 DTEDdigital terrain elevation data
 DTS Defense Transportation System
 EDW..... enterprise data warehouse
 EFT.....electronic fingerprint transmission
 EMTeffect management tool
 EOD.....explosive ordnance disposal
 EXPPextensible messaging and presence protocol
 FAC..... forward air controller
 FO..... forward observer
 FSO..... fire support officer
 GBOSSground based operational surveillance system
 GCCSglobal command and control system
 GCCS-AGCCS-Army
 GCCS-J..... GCCS-Joint
 GCCS-M..... GCCS-Maritime
 GCE.....ground combat element
 GCSS-MCglobal combat support systems-Marine Corps
 GDSS..... global decision support system
 GIG..... global information grid
 GIS geospatial information systems
 GOTS government off the shelf
 GTN..... global transportation network
 GTR/O..... ground transportation request/order
 HUMINT..... human intelligence

IBS.....integrated booking system
 IC3..... integrated command, control and communications system
 ICSFintegrated C4I systems framework
 IDE integrated data environment
 IDS-MC identity dominance system - Marine Corps
 IED improvised explosive device
 IGCIDE/GTN Convergence (see IDE and GTN in this list)
 IIC ISAF (International Security Assistance Force) Joint Command
 IMP.....information management plan
 IOSintelligence operations server
 IOSv2intelligence operations server version 2
 IOSv3intelligence operations server version 3
 IOWintelligence operations workstation
 IPOEintelligence preparation of the operational environment
 IRCinternet relay chat
 ITVin-transit visibility
 JADOCS..... joint automated deep operations coordination system
 JBC-Pjoint battle command - platform
 JBV joint battlefield viewer
 JOPES.....joint operation planning and execution system
 JSM..... joint fires manager
 JTACjoint terminal attack controller
 JTCWjoint tactical COP workstation
 JTSTjoint time sensitive targets
 JWARNjoint warning and reporting network
 LCElogistics command element
 MCEN Marine Corps Enterprise Network
 MCPP Marine Corps Planning Process
 MCWP.....Marine Corps Warfighting Publication
 MIDB modernized integrated database
 mIRC mu internet relay chat (see terms)
 MS Office..... MicroSoft Office (see terms)

MSTP Marine Air-Ground Task Force Staff Training Program
NBC.....nuclear, biological, chemical
NGA National Geospatial-Intelligence Agency
NIPRnet..... nonsecure internet protocol router network
NITB..... NATO Intelligence Toolbox
PDE&A planning, decision, execution and assessment
PGMprecision-guided munitions
PRISM.....planning tool for resource, integration, synchronization
..... and management
PSS-SOF.....precision strike suite for special operations forces
RF..... radio frequency
RF-ITV radio frequency in transit visibility
SA.....situational awareness
SDS..... shared database system
SEEK..... secure electronic enrollment kit
SIGACTsignificant activity
SIPRnet..... secret internet protocol router network
SMS..... single mobility system
SORTS software reliability modeling and analysis tool set
TBMCStheater battle management core system
TCN..... transportation control number
TCPT transportation capacity planning tool
TCS.....tactical COP server
TDBMtactical database manager
UDOPuser-defined operational picture
ULN..... unit line number
USA..... United States Army
USCENTCOM United States Central Command
USGS..... United States Geological Survey
USMC..... United States Marine Corps
USTRANSCOM..... United States Transportation Command
VDN voyage document number

VOIP..... voice over internet protocol
WIT weapons intelligence team
WPS..... worldwide port system
XML Extensible Markup Language (see terms)
XMPP Extensible Messaging and Presence Protocol (see terms)

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TERMS

Term	Definition
Adobe Connect	An Adobe software for web conferencing. A web-based Flash system used to create information and general presentations, online training materials, web conferencing, learning modules, and user desktop sharing. Primarily used for real-time collaboration.
Dashboards	Dashboards summarize collections of metrics on a single computer screen, provide big picture with details and are visually interactive. They provide alignment, visibility and collaboration across an organization by allowing users to define, monitor and analyze performance via performance indicators.
Jabber	An open Extensible Markup Language (XML) protocol for real-time exchange of messages and presence between any two points on the Internet.
MarineLink	A system developed by Semandex, Corp. MarineLink provides simultaneous access to multiple internal and external data stores, allows users to submit structured queries and displays the results of these structured queries via geo-rectified maps/images or textually.
mIRC	A low-bandwidth internet relay chat client with file sharing; only authorized for USCENCOM
MS Office	A MicroSoft (MS) proprietary commercial office suite of inter-related desktop applications, servers and services for the Microsoft Windows and Mac OS X operating systems. Commonly consists of MS Word, Excel, and Power Point for Windows
OpenFire	Previously known as Wildfire, and Jive Messenger, OpenFire is an XMPP server written in Java and dual-licensed under both a proprietary license and the Apache License 2.0
SharePoint	A MS product. A centralized replacement for multiple web applications. It is typically associated with web content management and document management

systems. It creates an intranet portal to centralize access to enterprise information and application on a network. Also stores electronic documents or images of paper document. It can keep track of different versions created by different users

StrikeLink A targeting acquisition system involving both hardware and software that will digitally transmit information to both aircraft and ground artillery in support of Marine Corps FO and FAC missions.

TransVerse An XMPP-based client for near real-time Instant Messaging. XMPP, based on open standards, allows anyone with a domain name and suitable Internet connection to run their own Jabber server and talk to users on other servers. Provides cross domain, cross classification, and translation capability. XMPP-based chat programs are the only type of chat programs authorized on the global information grid (GIG), except for mIRC in the USCENCOM AO.

Ventrilo A proprietary VoIP software which includes text chat. Widely used by on-line game players, who often call it Vent, because it allows them to communicate with other players in real time.

XML Extensible Markup Language. A simple, very flexible text format. Originally designed to meet the challenges of large-scale electronic publishing.

XMPP Extensible Messaging and Presence Protocol. Originally called Jabber.

Appendix
References

Marine Corps Warfighting Publications

MCWP 3-40.1 Marine Air-Ground Task Force Command and Control
with Change 1 (September 2005)

MCWP 3-40.2 Information Management (June 2014)

MCWP 3-40.3 MAGTF Communications Systems (January 2010)

Marine Corps Doctrinal Publications

MCDP 6 Command and Control (October 1996)

Naval Doctrine Publication

NDP 6 Naval Command and Control (May 1995)

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