

LOGAIS in Support of MAGTF Logistics



MAGTF Staff Training Program
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LOGAIS in Support of MAGTF Logistics

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

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FOREWORD

1. **PURPOSE.** MSTP Pamphlet 6-6, *LOGAIS in Support of MAGTF Logistics*, provides techniques and procedures for employing Logistics Automated Information Systems (LOGAIS) in support of MAGTF operations.

2. **SCOPE.** This pamphlet is designed to aid the MAGTF commander and his staff in understanding how LOGAIS supports decision making and the Marine Corps planning process (MCPD). In addition this pamphlet will discuss the future development and integration of these systems.

3. **SUPERSESSSION.** None.

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.

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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

In its simplest form, “logistics” is about providing resources to support the commander. Technology is becoming increasingly important in enhancing the performance of logistics personnel to provide those resources effectively. In this way, logistics information systems are a force multiplier in the battlespace. They enhance logistic planning and execution. Logistics information systems contribute to situational awareness by exchanging detailed information among various logistic elements as well as among logistics, operations, and plans sections.

Marine Corps Doctrinal Publication (MCDP) 6, *Command and Control*, describes command and control as the means by which a commander recognizes what needs to be done and sees to it that appropriate actions are taken. Command and control is essentially about information. Logistics automated information technology can help create or enhance the commander’s situational awareness. This can assist him in making a decision and then directing and coordinating actions in executing that decision. This pamphlet is about how to leverage that technology in support of Marine air-ground task force (MAGTF) logistics.

1001. Logistics Automated Information Systems

Logistics Automated Information Systems (LOGAIS) is the Marine Corps family of applications designed specifically to support operations and logistics. There are six separate but related applications designed to enhance the planning and deployment efforts of commanders at all levels from the battalion to the Marine expeditionary force (MEF). These systems support force deployment planning and execution (FDP&E). There is currently no aggregate system that supports all functional areas of logistics to create a common tactical picture or common operating picture for the commander to use in his decisionmaking process.

a. Marine Air-Ground Task Force War Planning System II

MAGTF War Planning System II (MAGTF II) is a micro computer-based planning system able to respond to a wide variety of operational requirements. It accelerates the development, sourcing, analysis, and refinement of plans resulting in executable Joint Operations Planning and Execution System (JOPES) time-phased force deployment databases (TPFDD). This includes gross computations of both sustainment and force lift requirements. Planning response time is enhanced through interactive design and database methodologies. Extensive reference files and code tables are readily accessible to the planner. A variety of reports and graphs assist in the analysis and refinement of "feasible" plans. As a member of the MAGTF LOGAIS family of systems, it provides an interface with JOPES. MAGTF II is applicable to deliberate, crisis action, and exercise planning, and can be used to plan both deployment and redeployment. MAGTF II is a Marine Corps legacy system which was the basis for the Joint Force Requirements Generator (JFRG) II system.

b. MAGTF Deployment Support System II

MAGTF Deployment Support System II (MDSS II) is a unit level deployment database management system capable of planning and supporting rapid military deployment anywhere in the world. MDSS II allows personnel at various echelons of a MAGTF to build and maintain a database that contains force and equipment data reflecting how the MAGTF is configured for deployment. This data can be maintained during normal day-to-day garrison activities and updated during plan development and execution. Extracted MDSS II data provides the Joint Chiefs of Staff and National Command Authorities (NCA) with an accurate picture of the MAGTF composition-to include the lift requirement- by passing the data through MAGTF II and the Transportation Coordinator's Automated Information for Movement System (TC-AIMS). MDSS II is a Marine Corps legacy system which will migrate to the joint system, TC-AIMS II.

c. Asset Tracking Logistics and Supply System

Asset Tracking Logistics and Supply System (ATLASS) is a deployable micro computer-based management system which provides the Marine Corps with online logistics inventory for all ground supplies and equipment. It is the Marine Corps unit and intermediate supply system that supports inventory, requisition and asset tracking. Future development will include plans, schedules, reports, track maintenance actions, supply, and related

logistics support actions. ATLASS provides total MAGTF asset visibility for unit and intermediate level organizations. It represents a common picture of critical supply and maintenance information across the MAGTF.

d. Transportation Coordinator's Automated Information for Movement System

TC-AIMS is the operations oriented member of the MAGTF LOGAIS family of systems. TC-AIMS provides the MAGTF an automated capability to plan, coordinate, manage, and execute MAGTF movements at—

- Origin.
- Origin to point of embarkation.
- Point of debarkation to destination.
- Destination.

TC-AIMS is capable of producing special reports and forms required for shipping hazardous materials. TC-AIMS also produces military standard transportation and movement procedures (MILSTAMP) compliant in transit visibility (ITV) exports to the worldwide port system and the Global Transportation Network (GTN). TC-AIMS is a Marine Corps legacy system which will migrate to Joint TC-AIMS II.

e. Computer Aided Load Manifest

The Computer Aided Load Manifest is a microcomputer-based U.S. Air Force (USAF) legacy system which will migrate to air load planning system to provide air load planning. It can receive data from MDSS II for air load planning. The computer aided load manifest system produces Air Mobility Command approved load plans.

f. Computer-Aided Embarkation Management System

Computer-aided embarkation management system (CAEMS) is an automated tool designed specifically for planning and execution of amphibious, maritime pre-positioned force (MPF), and commercial shiploads. It supports tactical and administrative loading and provides advanced artificial intelligence capabilities assisting the planner in making timely and efficient stowage decisions. CAEMS can accept initial load plan data from MDSS II or create its own. CAEMS operates in a stand-alone

environment on a standard microcomputer hardware suite. CAEMS possesses a database/graphics interactive capability, providing continuous communication between the database management system and graphics package. CAEMS is a Marine Corps legacy system which will migrate to the U.S. Army's Improved Computer Deployment Execution System to provide ship load planning.

1002. Stand Alone Applications

Although not commonly referred to as part of the formal LOGAIS family, there are also stand-alone applications which provide different functional area support for logistics (supply, health services, etc.).

a. MAGTF Data Library

MAGTF Data Library (MDL) is a data base which provides logistics reference data to a broad family of Marine Corps logistics systems. CD-ROMs with new information are distributed periodically to update the MDL. These updates can be made available below the host level by CD-ROM, floppy disk, or local area networks. The Marine Corps Equipment Characteristics File is a file in the MDL and is the source for dimensional data for the MAGTF II/LOGAIS family of systems. MDL also pulls data from over two dozen reference files from various military information systems. As MAGTF II migrates to JFRG II this source data library will be integrated with the Joint Data Library.

b. Retail Ordnance Logistics Management System

Retail Ordnance Logistics Management System (ROLMS) is a flexible and fully deployable, comprehensive system which can perform all ammunition logistics management and reporting functions, such as inventory, requisitioning, issues, expenditures, receipts asset maintenance, notice of ammunition reclassification processing and transaction reporting. It is a three-tiered integrated system of applications with full level (weapons stations), client-server-based (intermediate level such as an ammunition supply point) and stand-alone (core level) modules to provide a real-time effective and efficient accounting tool to every individual ammunition supply point, field ammunition supply point, or using unit. ROLMS is capable of managing both Class V(A) and Class V(W) ammunition and reporting assets simultaneously to both Marine Corps and Navy sites by means of ammunition transaction reports or item transaction reports.

c. Cargo Movement Operations System

The Cargo Movement Operations System (CMOS) is a U.S. Air Force legacy system that the Marine Corps has adopted. It is designed to perform transportation management office (TMO) shipping and receiving as well as preserving, packaging and preservation functions. It was selected for migration to TC-AIMS II to provide TMO cargo movement functionality. This system produces Defense transportation system shipping documents.

d. War Reserve System

The War Reserve System (WRS) is a Marine Corps system designed to support deliberate and crisis action planning for sustainment and overall management of requirements for war reserve material requirements. WRS receives equipment list from MAGTF II, computes sustainment requirements at the supply parameters, and computes sustainment requirements at the supply class/subclass level. WRS then exports this data to MAGTF II or MDSS II for sourcing data.

e. Unit Diary/Manpower Integrated Personnel System

The Unit Diary/Manpower Integrated Personnel System (UD/MIPS) is a Marine Corps system that supports unit level manpower management. It provides the unit access to the mainframe personnel system Marine Corps Total Force System. UD/MIPS provides extract personnel files for MDSS II to use in FDP&E.

f. Theater Army Medical Material Information System

The Theater Army Medical Material Information System (TAMMIS) is the current U.S. Army, Navy and Marine Corps Class VIII automated medical logistics system. It is a user friendly database system which does not require mainframe support and is considered a stand-alone system. The software modules include set assemblage management, biomedical repair, equipment maintenance and a resupply and inventory control module. The system has been designated to migrate to the Theater Medical Information System.

g. Naval Aviation Logistics Command Management Information System

The Naval Aviation Logistics Command Management Information System (NALCOMIS) is a deployable microcomputer-based client server system

which supports aircraft maintenance. This system provides reports, parts technical data, inspection requirements, and life cycle information to the squadron which can be imported to higher headquarters elements of the MAGTF.

h. Automated Identification Technology

Although automated identification technology (AIT) (which is not a system) is constantly developing and it is impossible to provide an all inclusive description, AIT includes the use of logistics applications of automated marking and reading symbols (LOGMARS) and microcircuit technology for logistics applications (MITLA) technology.

LOGMARS utilizes cost effective bar code scanning methods to identify and track cargo, equipment, ammunition, and personnel (e.g., SMART card). The LOGMARS suite includes a portable data collection device, bar code scanner, and label printer. LOGMARS is used by the MAGTF LOGAIS family of systems to label equipment and cargo. This labeling lets a Marine accurately track current locations and update critical equipment information. LOGMARS also streamlines the tracking and manifesting of personnel and the tracking of ammunition.

MITLA uses radio frequency technology to provide in-transit visibility with a non-contact interface to the MAGTF LOGAIS family of systems. Radio frequency identification equipment, employs electronic tags and interrogators to locate, track and identify any item on which the electronic tag is attached. The Marine Corps is continuously assessing this technology in order to employ any information technology that may prove useful to the logistician.

Part II

System Support for Planning and Execution

Logisticians must participate in the commander's conceptual planning to ensure that his operational concepts can be supported by the resources available and that logistic factors have been taken into account in the development of the course of action (COA). He conducts functional and detailed planning to prepare useful and timely logistics plans. The logistician must be able to measure and assess logistics support to planned operations. He must also be able to assist the commander in supervising the execution of logistics operations. The following systems can assist the logistician in these actions. These systems, together with the logistician's knowledge, experience, and skills, allows the commander to rapidly and effectively plan, decide, execute, and assess MAGTF operations.

2001. Marine Air-Ground Task Force War Planning System II

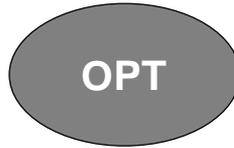
MAGTF II provides movement criteria of sourced MDSS II requirements from origin, through a port of embarkation and on to final destination. MAGTF II is unique to the Marine Corps, as it provides the above capabilities to the battalion/squadron through Marine component level. Operational and logistical planners use MAGTF II to phase forces into theater in support of the MAGTF commander's deployment concept. MAGTF II is the commander's deliberate and crisis action planning tool. It can be used as—

- A “what if” planning tool.
- A means to specifically identify deploying units requirements for sourcing of personnel, supplies and equipment.
- A means of providing the units transportation requirements to the joint force commander.

The MAGTF commander initiates the Marine Corps Planning Process (MCP) by directing the G-3/S-3 to stand up the operational planning team (OPT). Although the G-3/S-3 is the principle planner for the MAGTF, he is assisted by the entire staff, specifically the G-4/S-4 and G-5. To fully use the available FDP&E expertise, the MAGTF commander may also establish a deployment operations team (DOT). See Figure 2-1.

The OPT develops—

- **Mission.**
- **Concept of operations.**
- **Scheme of maneuver.**
- **Force list.**



The DOT develops—

- **Deployment guidance.**
- **MAGTF II shell.**

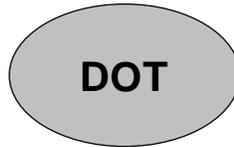


Figure 2-1. The OPT and DOT.

The DOT is a method of engaging the force deployment planning team, which includes the strategic mobility officers and embarkation officers down to the major subordinate command level. The OPT and DOT should work as an integrated team. The MAGTF strategic mobility officer, under the cognizance of the G-4/S-4 and assisted by the DOT, uses MAGTF II to produce plan shells for both exercise and real world contingencies.

The OPT and DOT can develop both force FDP&E and reception, staging, onward movement and integration (RSO&I) plans concurrently even before a COA decision has been reached.

Once a notional force list is identified and certain critical information requirements are met, the MAGTF II plan shell can begin to take shape. Some critical information requirements include—

- Area of operations.
- Plan identification.
- Force module.
- Unit line number (ULN) structure.
- Newsgroup designation.

- C-Day.
- Earliest arrival date/latest arrival date.
- Aerial/Seaport port of Debarkation.
- Destination.
- Required delivery date.

These plan shells can be provided to each major subordinate command for sourcing. They can provide each commander a unit type code, unit identification code, force description, unit name, locations and timing. ULN structure for the units, mode and source code and geographic location code for each increment of deployment. These shells can remain in the unclassified arena by leaving off any geographic location codes and passed via Unclassified but Sensitive Internet Protocol Router Network (NIPRNET). Plan shells can be downloaded from a unit website and provided some security through password protection. The plan should reflect the results of the force requirements specified by the G-3/S-3 and the commander’s intent regarding phasing of forces. The OPT and DOT use the authority “report for planning” to gain further situational awareness and fill in the information gaps as required. Report for planning authorizes direct communication between the MAGTF commander and the higher headquarters commander to clarify issues affecting logistics planning. See Figure 2-2.

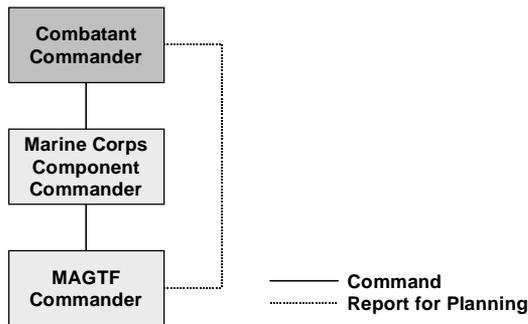


Figure 2-2. Report for planning information flow.

MAGTF II generates a number of reports. MAGTF II has a wide variety of standard reports and has an ad hoc query capability similar to MDSS II. It is essential for the MAGTF planner to understand three basic reports. These are the—

- Force List/Movement Requirements Working Paper (F11D).
- Time-Phased Transportation Working Paper (F11E).
- Force Requirements Detail Report (F11W).

The planner will often hear these reports referred to as the TPFDD, but that is incorrect. These are simply reports that organize the data contained in the MAGTF II plan. TPFDD is the JOPES data base portion of an operation plan. It contains time–phased force data, non-unit-related cargo and personnel data, and movement data for the operation plan.

For the reports generator to function properly, the ULNs within the MAGTF II plan must be assigned to a “force module.” Force modules should be used to organize information in a useable format. For example, a planner may create a force module for all ULNs moving via sealift, or a force module for all ULNs moving from the port of embarkation of MCAS Cherry Point between C003 and C006. The use of force modules can enhance the commander’s view of FDP&E and RSO&I.

2002. MAGTF Deployment Support System II

Major subordinate commanders should complete three tasks—

- Source each ULN with a unit or capability to fulfill the requirement as identified in the MAGTF II plan shell and the FDP&E guidance message through an MDSS II plan.
- Update the MAGTF II plan shell with actual MDSS II data to accurately reflect personnel, cargo and equipment going from the same location, to the same location by the same means of transportation at approximately the same time. Usually the strategic mobility officer will pass deployment guidance along with the MAGTF II shell plan that all personnel and cargo will be separated into different ULNs. This precludes system problems with updating the ULNs from MDSS II plans and overwriting both cargo and personnel records. Additionally, standard common naming conventions, vice the TECHDATA provided by MDSS II, is highly recommended. Standardized naming conventions create more “user friendly” reports. For example, the TECHDATA for MDSS II provides the description “Trk, Util, 5/4 Ton”. One may find that “M1038 or M998” gives them better information regarding assets loaded. See Figure 2-3.

- Finally, the commander must refine the ULNs. Refining can refer to several actions:
 - Applying the mode and source of transportation with each origin and destination geographic location code for each leg of the journey.
 - Establishing timing by applying the proper C-day sequencing to the ready to load date, available to load date, earliest arrival date, latest arrival date, and required delivery date to reflect accurate force movement.
 - Adding cargo detail which reflects final actual unit configuration for deployment.

A MAGTF II plan is “refined” with unit MDSS II data that has had the embarkation planning considerations applied and records updated with correct dimensional data. This “refinement” process takes place within the MDSS II application using the DEPLOYMENT WORKBENCH. Once the plan is sourced, tailored, and refined the plan is ready to be transferred to MAGTF II for upload into JOPEs. Plan transfer is accomplished by either an import/export. MDSS II is designed to import a “.pex” file.

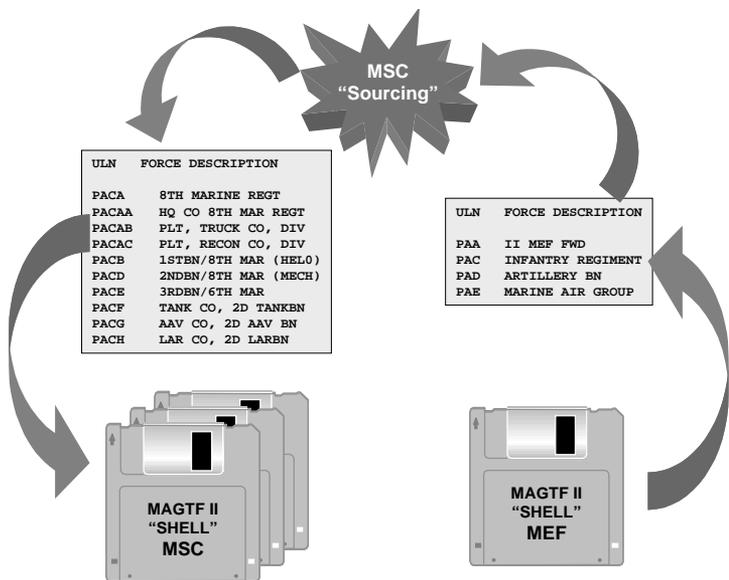


Figure 2-3. Force list sourcing.

Techniques which may be utilized by units to provide rapid responses to contingencies or deliberate planning include creating standard MDSS II plans, such as—

- Create standing “garrison plan” which includes everything the unit owns. This will be utilized as a basis for all plans and must be maintained and inspected for accuracy.
- Maintain combatant command operation plans (OPLANs) and “deployment” plans. A continuous task for MAGTF planners is to provide accurate information for plan reviews, updates as plan or forces change.
- Create MPF plan that includes units, fly-in echelon and assault follow-on echelon.
- Develop standing “capability sets”, based on functionality (i.e., water purification modules, mobility modules, material handling equipment, health services, arrival/departure airfield control group, fuel detachment, radar detachment set). These can be developed by subject matter experts and refined each year.
- Maintain historical MAGTF II “deployment” plan files to refine plans vice creating new plans.

For data integrity break MDSS II plans down into maintainable increments, such as ground combat element, air combat element, combat service support element, AFLOAT Mode, and AIR Mode to distribute, for refinement and validation. Each battalion/squadron/company should be required to maintain both “garrison” and “deployment” plans in MDSS II.

Personnel rosters for deployment invariably become the bane of the planner as units constantly change names, right up until the last moment. MDSS II has a personnel interface workbench menu which facilitates an upload of file data from the UD/MIP system, which is not commonly utilized. Rosters are commonly generated utilizing spreadsheets. G-1/S-1 personnel commonly take laptops/printers to the port of debarkation to update final manifests to ensure accurate personnel accountability. This data can be manually corrected back in MDSS II for accuracy, although it is time consuming and labor intensive.

MDSS II plans can be merged at any level. Reports can be generated from MDSS II plan data to reflect information pertinent to any ad hoc requirement such as—

- Principle end items.
- Containers packing lists.
- All cargo.
- All personnel.
- All vehicles.
- Classes of supply (cargo) by percentage.
- Maintenance modifications/calibrations.
- Mobile loads.
- MPF offload attainment.

Special capability exists within MDSS II to utilize AIT to receive and record bar code data. This capability will expand as this systems capabilities are included in TC-AIMS II.

2003. Asset Tracking Logistics and Supply System

The single source, deployable, computer-based, using unit ground material manager. ATLASS can conduct requisitions, receipts, inventory control and property accounting. It can be flexibly deployed with server connectivity or as a stand alone system, depending upon the requirement. ATLASS does not generate sustainment calculations, but manages supplies input into the system. ATLASS may also receive uploads of MDSS II files for the purpose of supporting MPF operations. The system can provide the commander or supply section with in-transit visibility on parts/supplies requisitioned. ATLASS is migrating to ATLASS II+ which will replace both ATLASS and the Marine Corps Integrated Maintenance Management System (MIMMS).

ATLASS II+ is the Marine Corps future single supply, maintenance and material readiness system. Future supply and maintenance (material management) operations and readiness reporting will be characterized by the following: one system for material management and materiel support management for all classes of supply (less Class V) using a single system featuring, distributed versus centralized computing, and a logistics relational database system. Systems that will interface with ATLASS II+ are:

- Defense Automated Addressing System.
- Federal Logistics Data System.

- Field Maintenance Subsystem (FMSS).
- MIMMS.
- Class IB (FMSS).
- MDSS II.
- MDL.
- Standard Army Retail Supply System-Objective.
- Shipboard Uniform Data Processing System.

Once linked via an area network, ATLASS II+ will provide MAGTF asset visibility for unit and intermediate level organizations, thereby permitting a common picture of supply/equipment status across the MAGTF whether deployed or in garrison.

2004. Transportation Coordinator's Automated Information for Movement System

TC-AIMS is one of the Marine Corps legacy systems, which was developed as part of the LOGAIS family of systems. It provides movement planners and operators with tools applicable to both planning and execution. TC-AIMS provides an automated capability to plan, coordinate, manage, and execute movements within the MAGTF. TC-AIMS provides the window for interface with the GTN by creating MILSTAMP compliant information for direct interface with GTN. GTN provides in-transit visibility of deploying forces. The TC-AIMS shipment workbench facilitates creation of the government bill of lading and transportation control movement document development. To initiate these actions the planner must first develop a transportation control number (TCN). The TCN becomes the single common movement control data element within the Defense Transportation System (DTS). TC-AIMS utilizes MDSS II plan uploads which enables the planner to create this data.

Not only is TC-AIMS utilized to pass information to ITV systems such as GTN, it can also be utilized in both tactical and garrison dispatching and transportation coordinating function. TC-AIMS is similar to MAGTF II as both utilize unit MDSS II data to feed the joint deployment community in the case of MAGTF II and the DTS in the case of TC-AIMS. TC-AIMS will transition to TC-AIMS II which will merge the capabilities of MDSS II and TC-AIMS into one integrated software package. CMOS may be "co-hosted" on the same hardware device to provide a complete support package on one

work station. TC-AIMS II will permit improvements in transportation efficiencies because standard transportation information will be captured once, at the source, resulting in less time needed for preparing required documentation and providing source ITV and force movement information to the DTS and JOPES.

Primary interfaces will be bi-directional from the Marine Corps ATLASS and JFRG II and MAGTF II. TC-AIMS II represents a multifunctional operational capability to support daily military transportation requirements, to sustain specific deployment related deliberate planning activities and to plan transportation and the necessary deployment execution requirements. The system will also support deployment operational requirements and will have the capability to provide management support to deployed field operational units requiring deployment RSO&I, employment, sustainment and redeployment activities. TC-AIMS II functionality will satisfy command requirements for providing logistics visibility to the common operating picture. Figure 2-4 depicts the enormity of this requirement.

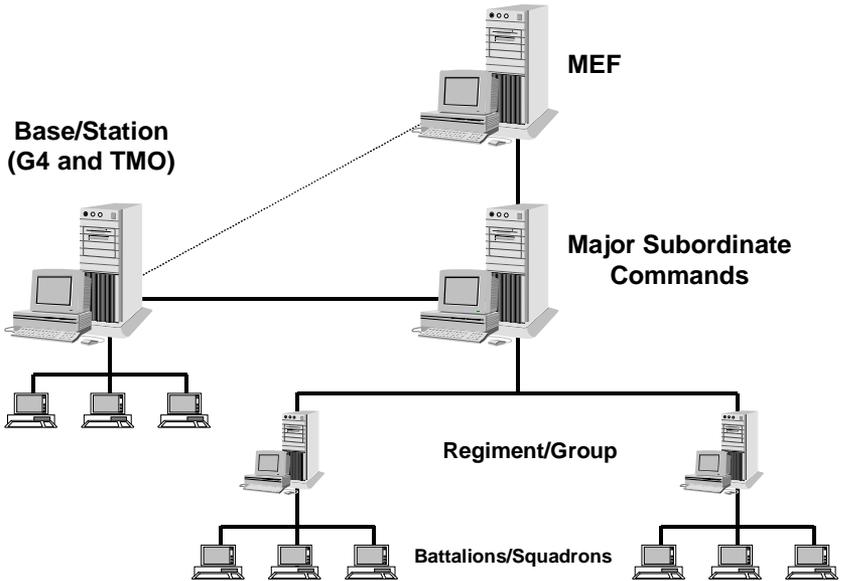


Figure 2-4. TC-AIMS II architecture.

2005. Marine Corps Integrated Maintenance Management System

MIMMS is a maintenance management information system which is designed to support commanders and logistics managers at all command levels in the execution of ground equipment maintenance management functions. MIMMS has three subsystems—

- **Headquarters Maintenance Subsystem.** The headquarters maintenance subsystem (HMSS) provides a data base of standards information and selected maintenance information to support logistics managers at Headquarters, Marine Corps and Marine Corps Materiel Command. Policy and procedures for the HMSS are governed by the current edition of MCO 4790.7 and other Marine Corps directives in the 4790 series.
- **Depot Maintenance Subsystem.** Policy for depot maintenance is contained in the current edition of MCO P4790.3 (MIMMS Depot Policy Manual). The depot maintenance subsystem is governed by the current edition of MCO P4790.6 (MIMMS Depot Users Manual).
- **Field Maintenance Subsystem.** Field maintenance policy and procedures are addressed by the current edition of MCO P4790.2 and its supporting information system which is governed by the current edition of UM 4790-5. Manual records and reports are the basic source for much of the information provided to the FMSS. The current edition of TM-4700-15/1 is the source document for all manual equipment record procedures.

MIMMS is a Marine Corps legacy system. Its functions will transition to ATLASS II, which will become the standard Marine Corps maintenance and supply system.

2006. Retail Ordnance Logistics Management System

ROLMS is a comprehensive system which can perform all ammunition logistics management and reporting functions, such as inventory, requisitioning, issues, expenditures, receipts, asset maintenance, notice of ammunition reclassification processing, and transaction reporting. This system provides the commander real time asset visibility for the force ammunition supply point. ROLMS reports to the Marine Corps

Ammunition Accounting and Reporting System II and/or CAEMS electronically. The commander may query ROLMS for specific munitions or munition types and receive reports on those items at any time. These reports can be collected, merged and provide a MEF wide snapshot of ammo status. This system also contains a storage and reference table which can provide storage compatibility and transportation load plan data. ROLMS can also employ AIT through the use of scanner programs for the processing of inventories, issues, and restows. ROLMS can receive inventory files from other ROLMS stand-alone networks or manual data inputs from the user.

For sustainment calculations for ammo, there is no automated system used to compute class V(W). For class V(W), the Marine Corps Ammunition Requirement Support Order specifies the force-held starter and strategic readiness requirement stocks. All assets above these quantities are swing stocks or testing and training stocks.

Peacetime force materiel stock (PFMS) provides the initial capability to respond to contingencies and are the basis of materiel readiness. PFMS are the assets on hand in our forces (active, Reserve, and supporting establishment) to perform peacetime day-to-day operations, assigned missions, and training. PFMS are composed of operating stocks, table of equipment materiel in the active forces, table of allowance equipment of the Reserve forces, training allowance of supplies for the active forces, and materiel held by the supporting establishment. PFMS also include the table of equipment for the special mission forces and general support forces, initial issue for the Reserves, and depot maintenance float assets.

2007. Cargo Movement Operations System

CMOS is used to move supplies and material within the DTS and performs all TMO cargo movement functions. This system provides most required shipping and receiving functions for freight, cargo and equipment, such as transportation control movement document, shipping labels, dangerous goods documents, hazardous material certifications (DD 1387-2), government bills of lading (both truck and rail and Signature and tally record (DD-1907). The system can provide information regarding continental shipments outbound, obligation of funds, route orders, and truck manifests. This system can deploy, provided it has remote server

connectivity. One will find this system supporting shipments at railheads, airfields, and all Marine Corps TMO offices. This system is in the process of migrating to TC-AIMS II. CMOS can be queried to provide ITV by TCN.

2008. War Reserve System

The WRS provides sourcing information for sustainment planning during deliberate and crisis action planning. WRS provides requirements for all classes of supply except class V(W) or V(A). Although WRS can do requirements for Class VIII, it is not commonly used for this. WRS can provide sustainment estimates for 30 days, 60 days, or whatever parameters are required for the contingency or OPLAN.

WRS may receive tables of equipment from MAGTF II, describing specific plans, however more commonly, the equipment and personnel lists are taken from files data. WRS computes sustainment requirements at the supply parameters provided by each MAGTF, and computes sustainment requirements at the supply class/subclass level. WRS can default to use peacetime or wartime usage parameters. Critical to developing accurate sustainment calculations is the input of the planner in the review and modify process. Within this phase, the planner can delete obsolete items, remove unnecessary requirements, delineate force held requirements (usually classes II, III (P) or IX) and establish final parametric data for the system to use. WRS computes the sustainment calculations, given the inputs, and produces quantities and national stock numbers for each item required to sustain the force. WRS provides ULN structure, grouped by origin of materiel and class/sub-class of supply. WRS provides numbers of containers and can also provide a by container content listing which is designed for import into MAGTF II. Currently that level of detail doesn't transition to MAGTF II, however the numbers of containers and short tons does. The user can retain that detail from WRS, but must manually input data back to MDSS II then to MAGTF II in order to accurately reflect the level of detail required in JOPES. WRS can then exports this data to MAGTF II for sourcing.

WRS supports the execution of war reserve withdrawals. The results of each WRS OPLAN model is notionally sourced by Marine Corps Materiel Command, with information being shared with Defense Logistics Agency to inform them of the scope of the force sustainment requirements. The

MAGTF merges their WRS data into JOPES via MAGTF II. WRS can be utilized confidently by the MAGTF planner as it is attainable via 3270 connectivity.

2009. Unit Diary/Manpower Integrated Personnel System

UD/MIPS is utilized to extract personnel files for interface with MDSS II to create deployed unit information to be utilized in FDP&E. In addition, UD/MIPS can be queried to provide critical military occupational specialty information for key skill requirements. Although the MDSS II UD/MIPS interface works well, word processing software is used more frequently.

2010. Theater Army Medical Material Information System

TAMMIS is an integrated stand-alone automated medical logistics system. It is a user friendly database system which supports set assemblage, biomedical equipment repair/maintenance, and resupply/inventory control. It provides the medical logistics company of the force service support group an automated tool to help accomplish its mission. This systems functions will be imbedded within the Theater Medical Information Program (TMIP) TMIP will include the automation capabilities associated with the following systems and their associated support infrastructure—

- Defense Medical Logistics Standard Support.
- Composite Health Care System.
- Defense Blood Standard System.
- Defense Dental Standard System.
- Shipboard Non-Tactical ADP Program Automated Medical System.
- TRANSCOM Regulating and Command/Control Evacuation System.

These systems are expected to meet the medical information needs of the NCA, combatant commanders, and MAGTF commanders. They will provide a seamless, global medical information system linking information data bases and integration centers that are accessible to the force and military healthcare community, anywhere, anytime in any mission. Figure 2-5 depicts a current concept of operations for this system.

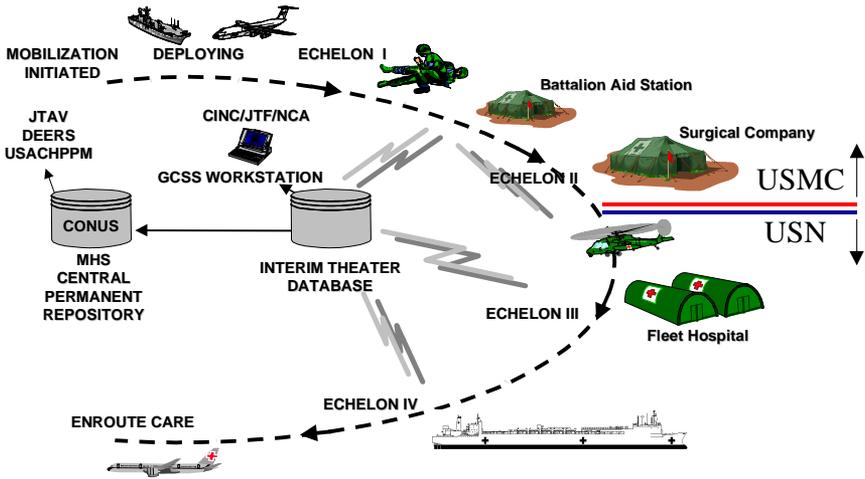


Figure 2-5. Theater medical information program operations.

TMIP will address these deficiencies:

- Lack of patient visibility (Where's PFC Jones and how's he doing?).
- Limited health care data collection for post operational analysis.
- Insufficient interoperability between Services medical operational forces.
- Inadequate automation for medical situational awareness.

Although the role of TAMMIS may not be replaced at the medical logistics company for now, TMIP will be the medical component (software) of Global Combat Support System (GCSS).

2011. Naval Aviation Logistics Command Management Information System

The NALCOMIS is a stand-alone personal computer based aircraft maintenance tracking system. This system is used primarily by Marine operational squadrons and intermediate Marine aviation logistics squadrons for transmitting information relative to maintenance and supply actions (in work, awaiting parts, requisitioning, receipt, issue, turn-in, etc.) The system is fully deployable at the wing/group/squadron/detachment level. It can be

used to compile information at group and wing level. It provides life cycle management for aircraft components. This system provides a record of lifecycle performance inspection, history files for each component and can produce history reports for each aircraft or component of the aircraft. It tracks updates to component technical information, can produce requisition documents and, at the intermediate maintenance level activity, communicate with shipboard uniform automated data processing system. This creates reports, by which each commander can determine aircraft readiness and capabilities.

2012. Automated Identification Technology

AIT provides the means to capture source data on the status, location and movement of assets. AIT devices may include bar codes for individual items, optical memory cards for multipacks and containers, wireless technology, radio frequency tags for containers and pallets, and movement tracking capability using satellite links for convoys, trains and barges. AIT supports logistics command and control on three levels, providing common communication infrastructure, applications which enable one to provide speed, agility and precision to the process and shared common data. It assists in accomplishing three essential tasks of: anticipating requirements, allocating resources and dealing with uncertainty. This area of technology is required to support the speed and accuracy of data collection required for precision logistics.

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Part III

Logistics Planning and Execution

The logistician must participate fully in the planning and execution of MAGTF operations. Logistics must be integrated with the operational plan to enable the force to generate maximum combat power and conduct operations without interruption. The logistician must link operational and tactical logistics to maximize the MAGTF's operational reach. He must understand the affect of logistics on the warfighting functions to effectively advise the MAGTF commander on logistics.

Logistics estimates are begun early and updated continually. The logistician does not wait until the commander has selected a COA to offer his assessment. The MCPP is used in integrated planning to ensure all warfighting functions are considered and that operational plans can be supported. The MCPP steps can be as detailed or as abbreviated as time, staff resources, experience, and the situation allow. It is a scaleable process depending on the level of headquarters, the nature of the mission, and the time allotted. An experienced commander and staff can generate unmatched tempo with this process; planning tempo that will translate into execution tempo.

LOGAIS is used to enable the logistician to fully participate in planning and execution. These systems allow the commander to make informed decisions whether the logistics plans can support mission accomplishment. Detailed planning depends on the establishment of sound functional logistic plans and integration with the conceptual plan for the operation. While participating in planning, the logistician uses LOGAIS to gather information to form initial data that can be used to compare capabilities against requirements. LOGAIS can also be used to support detailed logistics planning and orders development. Finally, LOGAIS provides essential information necessary to execute and assess MAGTF logistics operations.

3001. The Logistician in the OPT

The MAGTF G-4/S-4 and the strategic mobility officer are important members of the OPT and DOT. They must understand the organic capabilities of the MAGTF. They must understand the procurement and distribution of supplies, RSO&I, infrastructure enhancement/creation, health services, information management, movement control and regeneration. Finally the logistic planners must understand operational tempo and battlespace geometry. Logistics planning can be compared to an artist painting a picture. Because this is a picture which must have exacting specifications, they must understand all the “tools” (MAGTF capabilities) available to paint this picture. Finally they must understand the battlespace or the “canvas” on which he will work. See Figure 3-1.

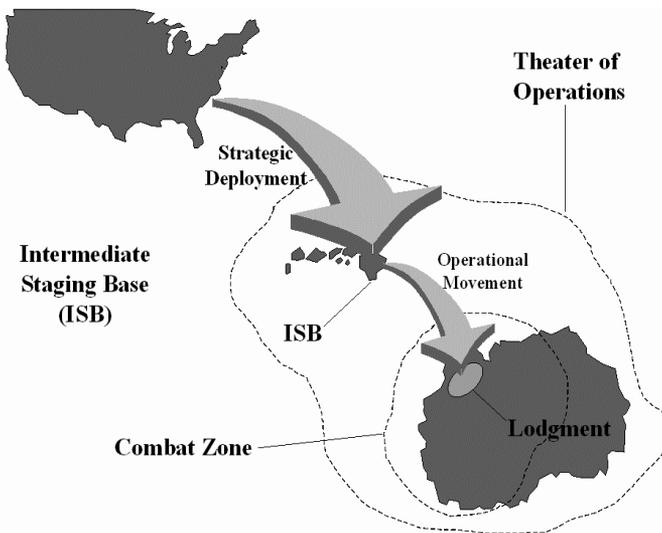


Figure 3-1. The logistic battlespace.

The logistic planners during the MAGTF OPT have specific things they must endeavor to work during each phase of the MCPP. Different LOGAIS systems can be applied to the process in order to assist the planners in developing analytical data to assess the success or failure of the operation. The logisticians enter the OPT realizing they must develop at the operational and tactical level estimate of support, the FDP&E/RSO&I plan and the sustainment plan.

a. Mission Analysis

Mission analysis is the first, and arguably the most important, step in the MCPP for logisticians. First, this is the step in the process where the commander and planners will determine the unit's mission. If the wrong mission is determined, everything else the planners do in the process is irrelevant. As the first step in the process, mission analysis is the step where the planners first come together, form an OPT, and begin generating the tempo that will set the tone for the rest of the process.

The purpose of mission analysis is to review and analyze orders, guidance, and other information provided by higher headquarters and produce a unit mission statement. The inputs to the mission analysis step come from the higher headquarters and the commander.

Intelligence preparation of the battle field (IPB) is a critical input for both the commander and the logistician in mission analysis. The IPB must be available to the commander as he develops the commander's initial orientation for the OPT. The commander's initial guidance will broadly outline what he expects of the OPT and the products produced in the planning process. The most critical inputs to the process are those contained within the commander's orientation comprised of his initial guidance and his commander's battlespace area evaluation (CBAE).

The CBAE is comprised of the commander's view of his battlespace, what the commander views as his deep, close and rear operations (or "fights") within the single battle framework. The logistician must look at the infrastructure within this battlespace. Where are the ports, airfields, and roads? What are the chokepoints in the amphibious objective area? What are the limiting factors for FDP&E, RSO&I and intermediate support bases? During this process the logistician can derive the major ports of departure and begin to determine the anticipated throughput rates for these locations. The commander will also provide his first look at the friendly and enemy centers of gravity. The logistician will look at these from a logistics perspective to analyze where his center of gravity is for the operation. The commander will describe his intent by addressing the operation's purpose and end state. Finally the commander will outline what he views as the commander's critical information requirements, both in planning and in execution. Logistics related commander's critical information requirements (CCIRs) may be the capabilities of the port/airfield/bridges within the area of operations.

The mission analysis process begins by determining information requirements, recording assumptions that are required to continue planning and conducting a task analysis. This task analysis begins by identifying the specified, the implied, and the resulting essential logistical tasks. These tasks generally fall within the six functional areas of logistics. The logistician examines the higher headquarters' order to determine command relationships and the associated directive authority for logistics. Words such as "executive agent" and "lead service" are key terms. If a "report for planning" or "DIRLAUTH (direct liaison authorized) for planning" relationship is specified then immediate coordination and defining of "executive agent", "lead service" and "common item support" procedures with the provider should be initiated.

With the essential tasks identified, the OPT will arrange them in a draft mission statement seek the commanders approval and then disseminate them as required. The outputs of this step are the approved mission statement, the commander's intent and the commander's planning guidance. Remember, mission analysis sets the tone for all else that follows in the process. The logistician must identify the where and some of the how the force will be deployed and employed. Upon completion of mission analysis he should have enough information to—

- Analyze anticipated throughput rates.
- Identify mobility chokepoints.
- Analyze battlespace infrastructure.
- Propose or review support agreements
- Identify and arrange host nation support.
- Review equipment readiness and supply status.
- Identify logistics shortfalls.

The logistician uses this data to develop an initial estimate of support which will continue to be refined throughout the MCPP. All representatives to the MAGTF OPT should continually back brief the OPT's progress in mission analysis to their respective commanders to receive any additional guidance.

b. COA Development

During COA development, the planners use the mission statement (which includes higher headquarter's tasking and intent), commander's intent, and commander's planning guidance to develop several different COAs. In the analysis phase, we will first break the mission down into its essential tasks,

then into the battlespace conditions that allow the essential task to be accomplished. Next the planners identify the activities they can perform with the forces at their disposal that will create those battlespace environment conditions. Synthesizing these activities into varying “ways and means” to accomplish the mission, they develop initial COAs that are reviewed and refocused as required by the commander.

The MAGTF G-4/S-4 determines rough sustainment requirements that would support the likely COAs. These common requirements are based on mission, enemy, terrain and weather, troops and support available, time available (METT-T), and could include factors such as priority of support, days of ammunition and supply at sustained and assault rates, and other consumption factors. These factors must provide defining guidance for sustainment requirements for accompanying and follow on supplies and can be developed using MAGTF II and the WRS as outlined in Part II.

The results of the MAGTF II and WRS data must be validated by the G-4/S-4 team and specifically applied by each phase of the operation. Also the MAGTF G-4/S-4 must prescribe basic loads for each type of supply and ammunition to determine the size/capability of each combat service support element. Additionally, particular attention should be paid to RSO&I regarding capabilities versus requirements. Will an early engineering effort provide greater throughput and ensure logistics successes later in the operation? With this information the OPT representatives, with the assistance of the entire MAGTF G-4/S-4 staff, can begin to prepare for the war game, armed with knowledge of the battlespace, requirements, and capabilities. These factors initially define the logistical assessment of each COA and the more formal estimate of supportability to be provided by the MAGTF G-4/S-4 and the major subordinate commanders.

Following the commander’s review of the initial COAs, they will be refined so that they are adequately developed to stand up to the rigors of an adversarial wargame. With the COA refinement complete, the OPT will ensure the criteria specified for each COA has been met through a detached, objective review. Each initial COA is examined to ensure that it is suitable, feasible, distinguishable, acceptable, and complete with respect to the current and anticipated situation, the mission, and the commander’s intent. The primary output from COA development are COAs approved by the commander to be used in the COA wargame. Additionally, the commander is responsible for providing his wargaming guidance. He will describe how

the wargame will be conducted and which friendly and threat COAs shall be wargamed. Also, he will establish his COA evaluation criteria that will be the framework for COA comparison and decision. These evaluation criteria is used in the wargame to focus data collection efforts to support the evaluation, comparison and decision that will follow. At this point, the force list is probably close to being finalized.

The DOT can begin to frame the TPFDD by passing initial force planning guidance to each major subordinate command with accompanying force deployment plan shells as described in Part II of this pamphlet. Once again, throughout the COA development process, the logistician should backbrief his superiors and receive any additional guidance.

c. COA War Game

During the COA war game, each friendly COA is examined against selected threat COAs. COA wargaming involves a detailed assessment of each COA as it pertains to the threat and the environment. COA wargaming assists the planners in identifying strengths and weaknesses, associated risks, and asset shortfalls for each friendly COA. COA wargaming will also identify branches and potential sequels that may require additional planning.

Short of actually executing the COA, the COA wargame provides the most reliable basis for understanding and improving each COA. The inputs to the COA war game are the COA development products carried forward from the previous step of the process. The logistician must be keenly aware of the effects of the red cell actions and what effects they can have on the entire force. In addition the logisticians within the OPT are developing an operational tempo for logistics. See Figure 3-2. This tempo has dynamic peaks and valleys with actions associated with each functional area of logistics.

Friendly and enemy COAs, developed by the OPT and the Red Cell and approved for wargaming by the commander. Enemy COAs are prepared by the intelligence section and are played out in the wargame by a “thinking enemy” in the form of a Red Cell. The wargame process is conducted using an action, reaction, and counteraction process. Preparation for the war game includes preparing recording tools, arranging friendly and threat forces, displaying assumptions, incorporating constraints and restraints, selecting a wargame method, and deciding how to record and display the war game results.

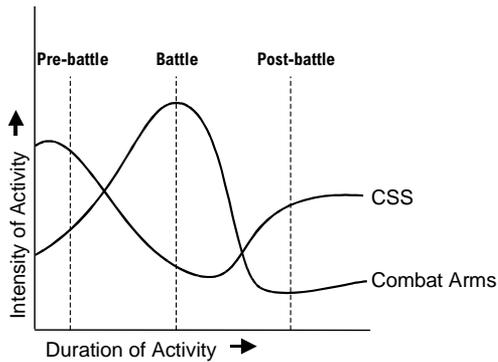


Figure 3-2. Logistics requirements against duration and intensity of activity.

The logistician should project probable location and sequence of actions which are most likely means of supporting the maneuvering forces. In addition he should understand the probable timing of each action. For example, he should know the probable ship to shore movement times for each type of landing crafts and offload and generation times for an MPF. These are initial projections, which should be products of the COA wargame. They include a list of critical events and decision points, identifying branches and sequels, and a refinement to, or clarification of, the commander's plan for COA comparison and decision. The logistician should be aware of critical events and decision points to enable the logistics support to be in place prior to the critical event. Logistics critical events and decision points are probably 24–48 hours ahead of the MAGTF events/decision points depending upon the action/reaction continuum. During the wargame the logistician can compare the requirements versus the capabilities estimates in concert with METT-T for each turn and be able to further assess the tactical and operational logistics support concept.

During the wargame the MAGTF G-4/S-4 should incorporate surge capability and branch plans as required, further developing key logistical decision points to be used for operational assessment. Additionally the MAGTF G-4 team would continue to refine support/sustainment estimates to be used in the COA comparison and decision. As with all phases of the MAGTF OPT the logisticians must backbrief and receive guidance for the next phase.

d. COA Comparison and Decision

In COA comparison and decision, the commander evaluates all friendly COAs against established criteria, then against each other and selects the COA that best accomplishes the mission. The inputs to COA comparison and decision are the products from the COA wargame. The commander, or his designated representative, may have an interactive discussion to evaluate and compare the COAs prior to the commander's decision. Unlike previous steps, the commander's primary staff, the major subordinate commanders and selected members of their staffs should be principle actors in the evaluation, comparison and decision process from start to finish. The back brief and the rough staff estimate should properly prepare the MAGTF G-4/S-4 and the major subordinate commanders and staff with adequate information to participate in this step.

It is here that the plans developed primarily by the OPT, now become those of the commander, his primary staff, and the major subordinate commanders. The staff prepares estimates for each COA. They will be called upon to provide information concerning supportability and the relative advantages and disadvantages of each COA. The major subordinate commanders will normally be asked to present their estimates of supportability. This is where the rough estimates will provide data to support the maneuver for the logistician. The commander's evaluation criteria are critically important and will likely determine which one COA will be selected. Potential criteria may include: sustainment, casualties, logistics footprint, force protection, risk or time.

The outputs from the COA comparison and decision step are a concept of operations that include a COA sketch and narrative and a refined task organization from the staff. The commander refines his inputs to the process as required. The commander's primary output is the decision, along with any refinements to what he has stated as his intent and CCIRs. Those products used in the OPT such as graphic representations of the selected COA, its narrative along with the wargame decision support tools, updated IPBs, and the staff estimates should be shared with all major subordinate commands to assist in their OPT process and increase situational awareness.

e. Orders Development

During orders development, the staff develops orders to direct the actions of each unit. Orders serve as the principal means by which the commander

expresses his decision, intent, and guidance. All of the products produced thus far, the COA sketch, narrative, and synchronization matrix form the basis of the concept of operations. The process begins with the chief of staff facilitating a gathering of those staff officers responsible for writing the order. It is here that the multitude of plans, orders, and standing operating procedures are referenced, writing assignments are made, and a timeline for orders production is established. To ensure the accuracy of the order the staff may conduct an orders reconciliation and orders crosswalk. Following these actions the commander approves the order.

For a better understanding of the intent of the plan the MAGTF OPT should provide to each major subordinate command the products produced in each MCPP step. The planners must make products accessible to increase the situational awareness of all concerned. These produces include—

- Briefing slides.
- C2PC overlays.
- The decision support templates.
- The synchronization matrix.
- The estimate of supportability.
- The concept of support.
- Paragraph 4 of the basic order or plan.
- Annex D (Logistics/Combat Service Support).

The DOT, in concert with the OPT, should be able to finalize force movement planning data while waiting for the initial plan shell to be sourced by the major subordinate commands. Since this process has been collaborative with the OPT logistics reps and the DOT strategic mobility representatives working together the TPFDD planning shell can be refined with more definitive dates and geographic location codes.

f. Transition

Transition is simply moving from planning to execution. It is an orderly hand over of a plan or order as it is passed to those tasked with execution of the operation. It provides those who will execute the plan with the situational awareness and rationale for key decisions necessary to ensure a coherent shift from planning to execution. The inputs to the transition step include the orders and all of the decision support tools that were developed

by the OPT. Transition may begin with a brief followed by a series of drills. The transition brief reviews the actual orders and supporting materials. The transition drill may be lead by the commander or his staff and is a guided review of major aspects of the plan. Its ultimate purpose is to increase understanding and build confidence.

The logisticians continue to validate their sustainment, throughput and support methodology throughout this process. They continue to refine throughput estimates, consider the logistics operational tempo, refine the attainment, mobility and concept of support previously delivered in the wargame and documented in the order. Refinement of capabilities and requirements should continue as new information is uncovered throughout the process. The output from the transition step is a shared understanding of what is about to happen, an appreciation and understanding of the decision support tools that have been provided, integrated execution, and sustained superior tempo. The commander may ensure a common understanding of his order to receive confirmation briefs from his subordinate commanders after he receives the order. This confirmation brief allows the higher commander to identify gaps in his plan, identify discrepancies between his and subordinate commander's plans, and learn how subordinate commanders intend to accomplish their mission.

3002. Execution

During execution, the logistician can assess the mobility plan, sustainment plan, and assessment plan. Critical to refining these plans is the development of measures of effectiveness drawn from data developed during mission analysis and refined during the COA wargame. Continually after the first wave goes ashore, those estimates which were created during plan development can become a measure of effectiveness upon which to assess the effectiveness of the plan and modify the plan to provide more precise combat service support. The measures of effectiveness can be in any medium most measurable and collection friendly for the commander. Whether it's movement rates, time to task, or specific stockage levels there must continually be an assessment of the plan. The MAGTF G-4/S-4 must seek to continually enhance infrastructure, throughput and facilitate the operational side of logistics, making available the right amount of resources in an operationally friendly sequence, in order to enhance, not hinder the tactical logistics support plan. See Figure 3-3.

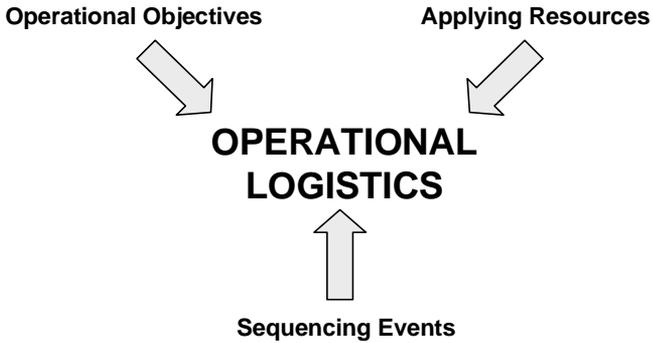


Figure 3-3. Improving operational logistics.

Assessment of planning factors, sustainment planning, and mobility plans can maximize effectiveness. All the data initially computed for the first mission can be utilized as a basis for refinement and modeling future actions. For the MAGTF G-4/S-4 the planning, decision, execution, and assessment cycle is continuous throughout operations. The refinement of subsequent plans is dependent upon the assessment of the current plan for the logistician.

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Part IV

Future Development

Joint Vision 2010 and the Clinger-Cohen Act requires organizations to reengineer and optimize their business processes before investing in information technology. This reengineering effort is based on performance based metrics. Accordingly, the primary performance based measurement for logistics processes is customer wait time. The emerging GCSS is an open architecture-based, family-of systems whose purpose is to enhance combat effectiveness. This is the future of LOGAIS.

The Marine Corps LOGAIS systems development receives guidance from the business objectives and strategies of the DOD Strategic Plan, *Joint Vision 2010*, and the DUSD(L) Logistics Plan and information technology objectives and strategies described in the DOD ITM Plan. Within the Marine Corps, the LOGAIS information resources plan is also guided by the Marine Corps Master Plan and the Commandants Guidance.

GCSS is the enabler for the DOD Logistics domain to achieve focused logistics and support the operational concepts of *Joint Vision 2010*. The ILC is the implementation of the business process review and the small unit logistics is the developer of the command and control logistics system. Logistics systems are in flux with most heading toward some sort of merger or transition to other systems. Extensive development in the LOGAIS arena will continue as new technology becomes available to the logistician.

4001. Global Combat Support System

The mission of GCSS is to provide interoperability, facilitate integration, and promote corporate data sharing across combat support and combat service support functions (transportation, supply, maintenance, personnel, health services, acquisition, finance and engineer). GCSS is the link between command and control and combat support/combat service support. The GCSS vision encompasses six essential attributes—

- Any box (within security parameters).
- Any user (authorized).
- One net (within security parameters).
- One common picture.
- Common services.
- Robust communications infrastructure.

To implement this vision the architecture will exploit these four characteristics—

- Real-time, actionable, web-based, logistics information systems.
- Total asset visibility through use of AIT, shared data environment and other applications.
- Optimize the logistics processes to minimize customer wait time using variance based metrics.
- Customer confidence in a simplified priority system with time definite delivery.

GCSS builds on existing technology, products, and applications, and integration strategies, but in a highly interoperable environment, and is geared to support seamless transition between war and peace.

4002. Integrated Logistics Capability

The Integrated Logistics Capability (ILC) organization was activated on 28 Dec 1999 as part of the Warfighting Development Integration Division, Marine Corps Combat Development Command (MCCDC). The Assistant Commandant of the Marine Corps directed CG MCCDC to standup the ILC organization to assist in developing, integrating, and fielding emerging logistics capabilities. The ILC organization is the result of Marine Corps logistics process improvement and transformation work conducted over the past year. These efforts clarified the need to establish a separate organization to develop, test, validate and facilitate the implementation of identification, documentation, testing, validation, standardization, and implementation of all Marine Corps logistics improvements/capabilities with a special focus on enabling operational maneuver from the sea.

4003. Small Unit Logistics

The objective of the small unit logistics advanced concept technology demonstration (ACTD) is to develop an interoperable tactical logistics command and coordination system to revolutionize and enhance support to the tactical-level commander.

Expanding and changing mission profiles for the military, as indicated in the conceptual framework of *Joint Vision 2010*, requires the logistician to provide rapid crisis response, track and shift assets en route, and deliver tailored logistics packages where and when needed. In this context, the small unit logistics ACTD will focus on the integration of tactical and logistics information. This ACTD will demonstrate technology concepts to satisfy the critical mission need for a logistics command and control system. The ACTD will provide near-real time situational awareness, a common tactical-level logistics picture, and access logistics planning, decision support, and action analysis tools. It will be scaleable and will comply with defense information infrastructure common operating environment architecture standards.

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Appendix A

Web Sites

The following web sites may prove useful in planning. The list is not inclusive, however there are links and search engines on these sites.

| Web Site | URL |
|---|---|
| JFCOM | http://www.jfcom.mil/ |
| PACOM | http://www.pacom.mil/ |
| CENTCOM | http://www.centcom.mil/ |
| SOUTHCOM | http://www.ussouthcom.com/ |
| EUCOM | http://www.eucom.mil/ |
| USFK | http://www.korea.army.mil/ |
| MARFORLANT | http://www.marforlant.usmc.mil/ |
| MARFORPAC | http://www.mfp.usmc.mil/ |
| U.S. Marine Corps | http://www.hqmc.usmc.mil/ |
| U.S. Army | http://www.army.mil/ |
| Army Logistics Management College | http://www.almc.army.mil/ |
| Center for Army Lessons Learned | http://call.army.mil.call.html/ |
| MAGTF Staff Training Program | http://www.mstp.quantico.usmc.mil/ |
| Joint Doctrine Training Center | http://www.jdtdc.eustis.army.mil/ |
| CIA Factbook | http://www.odci.gov/cia/publications/factbook/index.html/ |
| Combined Arms Support Command | http://www.cascom.army.mil/ |
| Defense Technical Information Center | http://www.dtic.mil/ |
| MERLN | http://www.ifn.mims.org:8000/ |
| FAS | http://fas.org/ |

Web Site**URL**

| | |
|---|---|
| JADD | http://www.tradoc.army.mil/jadd/links.html/ |
| 19th Theater Area Army Command | http://www.147.242.150.235/ |
| 21st Theater Area Army Command | http://www.21taacom.army.mil/ |
| Defenselink | http://www.defenselink.mil/ |
| FedStats | http://www.fedstats.gov/ |
| Rand Corporation | http://www.rand.org/areas/LOGI.TOC.html/ |
| Info Please | http://www.infopleas.com/ |
| Logistics Zone | http://www.logisticszone.com/knowledge |
| Logistics Planning (Excel spreadsheets) | http://158.238.51.14/g4/plans/logisticplan.html/ |
| World Geography | http://cliffie.nosc.mil/ |
| Almanac | http://www.almanac.com/ |
| LPO Web | http://www.hqmc.usmc.mil/LPOWEB99.NSF/ |
| Research It | http://www.itools.com/reasearch-it/ |
| Marine Corps Technical Publications | http://www.pubs.ala.usmc.mil/ |
| Marine Corps Materiel Command | http://www.matcom.usmc.mil/ |
| Defense Logistics Support Command | http://www.supply.dla.mil |

Appendix B

Glossary

Note: Acronyms change over time in response to new operational concepts, capabilities, doctrinal changes and other similar developments. The following publications are the sole authoritative sources for official military acronyms:

1. Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*.
 2. MCRP 5-12C, *Marine Corps Supplement to the Department of Defense Dictionary of Military and Associated Terms*.
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|--------|--|
| ACTD | advanced concept technology demonstration |
| AIT | automated identification technology |
| ATLASS | Asset Tracking Logistics and Supply System |
| CAEMS | computer-aided embarkation management system |
| CBAE | commander's battlespace area evaluation |
| CCIR | commander's critical information requirement |
| CMOS | Cargo Movement Operations System |
| DOT | deployment operations team |
| DTS | Defense Transportation System |
| FDP&E | force deployment planning and execution |
| FMSS | Field Maintenance Subsystem |
| GCCS | Global Command and Control System |
| GTN | Global Transportation Network |
| HMSS | headquarters maintenance subsystem |

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|----------|---|
| ILC | Integrated Logistics Capability |
| IPB | intelligence preparation of the battlespace |
| ITV | in-transit visibility |
| JFRG | Joint Force Requirements Generator |
| JOPEX | Joint Operational Planning and Execution System |
| LOGAIS | Logistics Automated Information Systems |
| LOGMARS | logistics applications of automated marking and reading symbols |
| MAGTF | Marine air-ground task force |
| MAGTF II | MAGTF War Planning System II |
| MCPP | Marine Corps Planning Process |
| MDL | MAGTF Data Library |
| MDSS II | MAGTF Deployment Support System II |
| MEF | Marine expeditionary force |
| METT-T | mission, enemy, terrain and weather, troops and support available, time available |
| MILSTAMP | military standard transportation and movement procedures |
| MIMMS | Marine Corps Integrated Maintenance Management System |
| MITLA | microcircuit technology for logistics applications |
| MPF | maritime pre-positioned force |
| NALCOMIS | Naval Aviation Logistics Command Management Information System |
| NCA | National Command Authorities Management Information System |
| NIMMS | Naval Aviation Depot Inventory Material Management System |
| NIPRNET | Unclassified but Sensitive Internet Protocol Router Network |
| OPLAN | operation plan |
| OPT | operational planning team |
| PFMS | peacetime force materiel stock |
| ROLMS | Retail Ordnance Logistics Management System |
| RSO&I | reception, staging, onward movement, and integration |

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| TAMMIS | Theater Army Medical Material Information System |
| TC-AIMS II | Transportation Coordinator's Automated Information for Movement System II |
| TMIP | Theater Medical Information Program |
| TMO | transportation management office |
| TPFDD | time-phased force and deployment data |
| UD/MIPS | Unit Diary/Manpower Integrated Personnel System |
| ULN | unit line number |
| WRS | War Reserve System |

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Appendix C

References

Joint Publications

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| Joint Pub 0-2 | Unified Action Armed Forces (UNAAF) |
| Joint Pub 1-02 | Department of Defense Dictionary of Military and Associated Terms |
| Joint Pub 4-0 | Doctrine for Logistic Support of Joint Operations |
| CJCSM 3122.03 | JOPES Vol. II Planning Formats and Guidance |

Naval Publications

| | |
|-------|-----------------|
| NDP 4 | Naval Logistics |
|-------|-----------------|

Marine Corps Publications

| | |
|--------------|---|
| MCO P3000.18 | Marine Corps Planning Manual |
| MCO 4400.39 | War Reserve Military Policy Manual |
| MCO 8010 | Class V(W) Supplies for IMF Combat Operations |
| MCDP 3 | Expeditionary Operations |
| MCDP 4 | Logistics |
| MCDP 5 | Planning |
| MCDP 6 | Command and Control |
| MCWP 0-1 | Marine Corps Operations |
| MCWP 4-1 | Logistics Operations |
| MCWP 4-11 | Tactical Level Logistics |
| MCWP 4-11.1 | Health Service Support Operations |
| MCWP 4-12 | Operational Level Logistics |

MCWP 4-13.1
MCWP 5-1
MCWP 6-2
MCRP 5-12C

Strategic Mobility (Draft)
Marine Corps Planning Process
MAGTF Command and Control
Marine Corps Supplement to the
DOD Dictionary of Military and Associated Terms

USMC Logistics Information Resources (LOG IR) Plan Version 2.0, July
1998

Miscellaneous Publications

United States Code, Title 10