UNITED STATES MARINE CORPS
LOGISTICS OPERATION SCHOOL
MARINE CORPS COMBAT SERVICE SUPPORT SCHOOLS
TRAINING COMMAND
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STUDENT OUTLINE

INTRODUCTION TO THE LOGAIS FAMILY OF SYSTEMS

LESSON PURPOSE: To provide requisite information on the interfacing, communications, and capabilities of the Logistics Automated Information System (LOGAIS) family as they pertain to the deployment of a Marine Air/Ground Task Force (MAGTF). Learning objectives are not specified or measured during this class.

1. THE LOGAIS FAMILY OF SYSTEMS

a. **MAGTF II/LOGAIS**. MAGTF II/LOGAIS (Logistics Automated Information System) is a family of microcomputer based systems designed to provide Fleet Marine Forces with a tool kit of resources for the rapid planning and tracking of all MAGTF resources during all operational stages.

b. **FUNCTION**. The main purpose of the system is to communicate. Looking back on World War II the Marine Corps predominately fought in the pacific in the island hopping campaign. Marine Corps personnel peaked at 475,604 Marines, enough to comprise 6 Divisions and 5 Air Wings. These Marines conducted each campaign utilizing the United States Navy for transportation and support in conducting amphibious operations.

Today the Marine Corps and Navy are completely different. Marine Corps forces comprise of about 173,000 Marines that barely staff 3 Marine Divisions and 3 Air Wings. Due to a large amount of ships being decommissioned, the amphibious Navy does not retain the amount of ships required to move the entire Division of Marines with the other elements of the MAGTF. The Navy could only embark a Regiment of Marines with the other components of the MAGTF at best.

Today’s Marine Corps can no longer independently deploy and fight campaigns. The Marine Corps has been reduced to provide a forcible entry capability by means of amphibious warfare. Our capability extends to providing entry into a hostile country

over the beach, conducting limited combatant operations, and securing a port and airfield. Securing the airfield allows the use of Air Force assets flying in the remainder of the Marine Expeditionary Force, and later the Army, to arrive and conduct a major theater campaign.

Clearly, today we have to fight in a foreign land as a joint task force comprised of all services. In the pacific, we only needed to communicate to the Navy, today we have to talk to all of the services to be employed, sustained, and transported.

LOGAIS provides the capability not only to communicate within the Marine Corps but links to the joint world to show all commanders the MAGTF's capabilities. It is a tool used to help us deploy and show other agencies within the Department of Defense our requirements for transportation.

There are a number of systems and processes that are performed to provide the capability to communicate what the Marine Corps can do, what our transportation requirements are, and what timelines we can meet for deployment. MAGTF Deployment Support System II (MDSSII), MAGTFII, Transportation Coordination Automated Information Management System (TCAIMS), and Computer Automated Embarkation Management System (CAEMS) are the different programs within the family of systems that are used to accomplish this. Each of these systems and processes will be discussed.

There are other programs that we can use to help us but are not part of the suite. Asset Tracking Logistics and Supply System (ATLASS) is a program used by supply to track and maintain equipment, supplies and parts. Unit Diary Marine Integrated Personnel System (UDMIPS) is a system used by S-1 that contains information on personnel within your unit. Computer Aided Load Manifesting (CALM) is an Air Force program used to plan the loading of aircraft. Fleet Optical Scanning and Marking System (FOSAMS) is a program used to account for ammunition. MAGTF Data Library (MDL) is a data update for information contained in reference tables within LOGAIS. Joint Operations Planning and Execution System (JOPES) is a high level planning tool used in the Joint Community. Global Transportation Network (GTN) and Worldwide Port System (WPS) are networks that allows commanders to see what assets are in route and where they are.

2. **IN GARRISON**

a. **ATLASS**. As embarkers, we have a requirement to maintain a unit database that contains every piece of equipment that we own. A battalion or squadron should be managing a

database that contains the entire table of equipment. This is a supply function and is managed in ATLASS.

(1) Asset Tracking Logistics and Supply System (ATLASS) is a base point for the LOGAIS family of systems.

(2) ATLASS contains every piece of equipment for an unit. MDSSII will accept an ATLASS download to aid in constructing a unit database. The information out of ATLASS is not configured for what is needed in MDSSII and requires modification.

(a) The level of detail ATLASS provides proves to be too much information for MDSSII to manage. For example, ATLASS maintains a record for each item in the unit. If a unit has 100 sleeping bags ATLASS will maintain one record for each bag. In MDSSII it is more advantageous to have one record that depicts sleeping bags with a quantity of 100. This keeps databases small so when they are combined at higher headquarters the amount of information is easily understood.

STUDENT NOTE: This level of detail is not mandated in policy but is necessary for the system to work properly to source a MAGTF requirement much later in the planning process.

(b) Units that do not have a massive Table of Equipment (T/E) may find the interface between ATLASS and MDSSII useful due to the fact that they do not have to modify a large amount of data. Units that do carry a heavy T/E may find that creating a database without the interface to be simpler and more time effective.

b. **MDSSII**: The center of the LOGAIS family of systems is MDSSII. This system is nothing more than a master database, which holds all information concerning equipment and supplies. It is managed at the battalion and squadron levels and utilized at higher headquarters for deliberate planning. The focus of effort for this information is to capture dimensions and weight for all of the assets that are included for deployments. By capturing dimensions and weights of deploying assets, transportation planning can be accomplished. A good base of information to establish a garrison database is the Table of Equipment (T/E). At a bare minimum the T/E in concert with the Consolidated Memorandum of Receipt (CMR) will provide high visibility items that are used in planning.

Having an accurate unit database in MDSSII is a requirement in garrison to facilitate time sensitive planning. It is

critical to make sure the 0431 Marines are updating this information constantly so when the warning order appears the Marines can concentrate on configuring the equipment vice spending long hours behind a computer.
The MAGTF Data Library (MDL) is tool that helps provide information to MDSSII in the spreadsheet based Unit Deployment List (UDL) for database construction. The MDL contains reference tables that maintain codes and data elements not commonly known. For example, a key reference table used in database construction is the Techdata. The Techdata, in concept, is supposed to retain information about every piece of equipment in the Marine Corps inventory to include data elements such as Table of Authorized Material Control Number (TAMCN), National Stock Number (NSN), etc. The Techdata, alleviates the requirement to know every particular about equipment in the unit. Often, the Techdata falls short in retaining all of the information but there is a supporting process to have corrections made. By editing the reference table, a entry is recorded into a Data Trouble Report (DTR). DTR can be printed out from the System Administration portion of LOGAIS and submitted through the chain of command. These DTR's are submitted to a contractor who makes the corrections and publishes a new MDL twice a year. Without users submitting DTR's, the MDL will remain inadequate and the same problems will remain.

3. **PLANNING STAGE.** To understand planning, it is important to understand how the Marine Corps deploys. The world is divided into different areas with each area being assigned to a Commander in Chief (CINC). These CINC's are war fighters that are pre-designated to command US forces when intervention is required within his/her responsible area.

When the President of the United States decides to deploy forces he tells the CINC for that area what he/she is required to do. The CINC refines a plan for what he/she requires to accomplish what the president requires and has forces allocated from the armed forces to meet these requirements. The war fighting CINC becomes the Supported CINC since he is being provided forces. Once the Marine Corps has been chosen to participate in the operation the Commanding General of the required Marine units compiles forces to meet the Supported CINC and fills the role as the Supporting CINC. The CG will choose which forces will go and form a Marine Air Ground Task Force (MAGTF) to deploy. All of this is planned and communicated through Joint Operations Planning and Execution System (JOPES).

a. **JOPES**. Operations plans (OPLANS) for every type of scenario are retained in the event of a crisis. These OPLANS are designed to get units out of town quickly without much planning. Not only do these OPLANS in JOPES give the Marine Corps scheme of maneuver but every branch or service. JOPES communicates in a joint language not only to articulate requirements for the force but to show how the Supported CINC's requirements are being fulfilled, movement requirements to transportation assets providers, and show status of the movement. It provides a foundation for commanders to build command and control of supporting and supported units.

b. **Force List**. All of this information is combined into a force list. The force list information is then transferred to MAGTF II. The force list will establish the mission requirements and help prioritize equipment and personnel into what is needed when.

For example, an infantry battalion does not move as an entire unit because transportation assets are limited. The battalion is broken into at least three different echelons, an advanced party, main body, and follow on echelon.

Only the personnel and equipment that are necessary to receive the main body are sent first and they are generally flown in. The main body is the bulk of the battalion and may deploy using air and sea transportation assets. The follow on echelon is all the equipment and personnel that are required to sustain the force in country for the duration they are there. The follow on echelon will use whatever transportation assets are available.

c. **MAGTF II**. MAGTF II is the part of the LOGAIS family of systems that belongs to the S/G-3 operations sections. The primary operator of this system is the 0511 MAGTF Planner. MAGTF II removes the force list from the joint worlds view so the Marine Corps can refine the plan for supportability without joint agencies acting on it before action is required.

(1) The MAGTF Planner is responsible for tailoring the force structure to the mission requirements and ensuring that the deployment information is fed back to the joint community. Almost all of the functions that are found in JOPES for the joint world are available in MAGTF II. Some of these functions include:

(a) Ability to construct Unit Line Numbers (ULN) which break down the unit, where they are originating from, deployment echelon, mode of transportation, destination, and

required date to be there (RDD). Notional equipment and personnel are assigned to each ULN based from the Table of Equipment (T/E), Table of Organization (T/O) and mission requirements.

(b) Ability to determine lift requirements for the deploying forces. This is the moving units' responsibility to verify but the MAGTF Planner must have the ability to show justification for the amount of lift required to United States Transportation Command for allocation of transportation. The lift requirement is accumulated by the use of Joint Chief of Staff Cargo Category Codes (JCSCCC). The codes sum the total weight requirements for bulk, over, and outsized cargo so that United States Transportation Command (USTRANSCOM) can determine the aircraft and ships required to deploy the force.

(2) **Requirement**. The MAGTF Planner constructs the requirement and sends it to the subordinate units to fulfill. The requirement will only state the type and amount of equipment required to fulfill mission requirements. This information is typically obtained from the T/E and/or the garrison database that is submitted annually from the unit. At this point the information is transferred from the Operations section to the S-4. The Embark section builds a deployment database from the MAGTF requirement. This is a critical link in the process. The notional data (type of equipment and amount) provided from the MAGTF Planner becomes actual data reflecting actual weights and dimensions to establish accurate lift requirements as equipment is assigned by the Embarker. At this point MDSSII comes back into to the picture to tailor the deployment database for movement.

d. MDSSII offers the following capabilities to aid in doing so:

(1) **UDL Workbench**. Allows the user to view the MAGTF requirement and copy equipment from the garrison database plan to a deployment database plan listing only the equipment and supplies the unit will deploy with.

(2) **Linking**. The user has the ability to establish parent/child relationships. This is needed to show that a particular truck is the prime mover for a particular trailer and that in the back of the trailer there is a certain box mobile loaded. Another example would be a large container with eight boxes put inside. The container is the parent and the boxes are children.

(3) **Embarkation Workbench**. After linking is accomplished the user can assign the cargo to a specific mode of transportation to start determining lift requirement. This process does not yet establish load plans but gives the user an idea of how many airplanes will be required by weight and how many ships will be required by square and cube. This process must be done in order to communicate to the programs that will aid the user in load planning.

e. **Load Planning**. MDSSII will communicate with two programs to aid in load planning. These load plans are necessary in the execution phase to aid in the embarkation of forces.

(1) **CAEMS**. Computer Automated Embarkation Management System (CAEMS) is used to aid in the development of shipload plans. CAEMS is a graphics tool that shows a two dimensional representation of a ship with all available stowage compartments. CAEMS will take the assigned cargo from MDSSII and convert them to two-dimensional templates that reflect how much space the cargo will occupy. From CAEMS the user can not only construct a shipload plan but also produce documentation to satisfy transportation agency requirements.

(2) **CALM**. Computer Aided Load Manifesting (CALM) is a program that is not in the typical LOGAIS format. This program is managed by the Air Force to aid the user in producing documentation to satisfy transportation agency requirements. MDSSII can communicate to CALM but it cannot import CALM data. Chalks are constructed in MDSSII and exported to CALM. When CALM imports this information the user can then manipulate the information into a load plan. This system, like CAEMS, gives the user a two dimensional representation of the aircraft stowage area and cargo so the user can balance the aircraft and produce the information for the aircraft to fly.

f. **TCAIMS**. Not only is it important to establish how many ships and airplanes will be required for a deployment but it is also critical to be able to move the deploying assets and personnel to the points of embarkation. Transportation Control Automated Information Management System (TCAIMS) manages these functions.

TCAIMS is in the LOGAIS operating system. This program is to be used to manage assets that move equipment and personnel and to convert movement to Military Standard Transportation and Movement Procedures (MILSTAMP) format. This program should be networked in a Logistics Movement Control Center (LMCC) and in

every support battalion that has transportation assets. Some of the functions the TCAIMS provides are:

- Dispatching
- Plan Convoys
- SAAM Requests
- Aid in In-Transit Visibility.
- Creating Transportation Control Numbers (TCN)

4. **VALIDATION**: Equipment locations and team assignments are validated from CAEMS back into MDSSII. Equipment assigned to convoys and receiving Transportation Control Numbers (TCN) are compiled from TCAIMS and also validated in MDSSII. This establishes a requirement for lift.

This deployment data and the lift requirement is collected from the subordinate units and are pushed back to the MAGTF planner. The MAGTF planner ensures that the lift requirements are allocated for and restructures the force list based upon the commander's input. The Time Phased Force Deployment Data (TPFDD) reports are constructed. The TPFDD reflects all of the equipment and personnel movement information. Obviously the best plans are nothing more than a basis to start with and require changes and validation. The MAGTF Planner has the ability to produce TPFDD reports that have not been inputted into JOPES for validation.

When the conflicts are resolved priorities are reestablished, and transportation requirements are validated the force list is fed back into JOPES. The Supported CINC then consolidates and validates the information received from all the services.

5. **EXECUTION**

a. **IN-TRANSIT VISIBILITY**. ITV is the largest part of the execution of movement. It is a hard requirement to show the Joint Chief of Staff as well as the Theatre Commander the capabilities that they have at all times in addition to being accountable for Marines and their equipment.

(1) **LOGMARS/AIT II**. Logistics Marking and Reading Symbols (LOGMARS) technology aids the deploying force by giving them the capability to put a bar code label on equipment. Automatic Identification Technology (AIT II) is used to scan these labels and record locations on equipment as it is moved to the operating forces. Typically, this technology is used to monitor movement from the unit to the Port of Embarkation as

well as the movement from the Port of Debarkation to the operating forces.

(2) **WHEELS IN WELL**. In conjunction with LOGMARS and AIT, deploying forces are required to report when the equipment is sent. Wheels in the Well Reports can be produced to show force closure to JOPES and the CINC can track his assets. This can be done in GTN and/or with the aid of MAGTF II.

(3) **GLOBAL TRANSPORTATION NETWORK**. GTN is a relatively new system that interfaces with LOGAIS to help show accountability and visibility of forces being deployed. Currently this system is being managed by the Air Force. It helps show visibility more rapidly as it has the capability to be located and operational anywhere in the world by SATLINK. This system shows visibility of assets as they are moved from the Port of Embarkation to the Port of Debarkation.

REFERENCES:

1. **LOGAIS 6.0 Help Menu**