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U.S. Marine Corps Equipment Readiness Information Tool: Usage and Decision-Support for Performance Based Logistics

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December 2004

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The Marine Corps is transforming its automated logistics programs to meet the increasingly complex operational requirements of the 21st Century. One program that is part of this transformation is the Marine Corps Equipment Readiness Information Tool (MERIT). Our research analyzed: how can MERIT be used as a decision support tool for performance based logistics (PBL) and what areas of MERIT are recommended for improvement. Included in the analysis is a description of current readiness procedures used in the Marine Corps, providing a point of comparison for how well MERIT enables the logistics transformation. The basis of our analysis was user perceptions, assessed by a user survey and focus groups. The conclusions of our analysis determined: MERIT has not received official Marine Corps endorsement for its continued use; MERIT is a valuable material readiness information tool used by the Marine Corps; there is a general lack of understanding by users regarding MERIT's logical architecture and operation; and there is a lack of training on MERIT throughout the Marine Corps.

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U.S. MARINE CORPS EQUIPMENT READINESS INFORMATION TOOL: USAGE AND DECISION-SUPPORT FOR PERFORMANCE BASED LOGISTICS

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U.S. MARINE CORPS EQUIPMENT READINESS INFORMATION TOOL: USAGE AND DECISION-SUPPORT FOR PERFORMANCE BASED LOGISTICS

ABSTRACT

The Marine Corps is transforming its automated logistics programs to meet the increasingly complex operational requirements of the 21st Century. One program that is part of this transformation is the Marine Corps Equipment Readiness Information Tool (MERIT). Our research analyzed: how can MERIT be used as a decision support tool for performance based logistics (PBL) and what areas of MERIT are recommended for improvement. Included in the analysis is a description of current readiness procedures used in the Marine Corps, providing a point of comparison for how well MERIT enables the logistics transformation. The basis of our analysis was user perceptions, assessed by a user survey and focus groups. The conclusions of our analysis determined: MERIT has not received official Marine Corps endorsement for its continued use; MERIT is a valuable material readiness information tool used by the Marine Corps; there is a general lack of understanding by users regarding MERIT's logical architecture and operation; and there is a lack of training on MERIT throughout the Marine Corps.

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LIST OF ABBREVIATIONS AND ACRONYMS

AAC	Activity Address Code
AIS	Automated Information System
ALOC	Advanced Logistics Officer Course
APU	Auxiliary Power Unit
ATLASS	Asset Tracking Logistics and Supply System
CG	Commanding General
CMR	Consolidated Memorandum Receipt
CO	Commanding Officer
DASF	Due and Status File
DLA	Defense Logistics Agency
DPR	Daily Process Report
DTL	Daily Transaction Listing
EPC	Engineering Process Change
ERO	Equipment Repair Order
FMC	Full Mission Capable
FOC	Full Operational Capability
FSSG	Force Service Support Group
FTP	File Transfer Protocol
FY	Fiscal Year
GCSS-MC	Global Combat Support System Marine Corps
GUI	Graphical User Interface
ILC	Integrated Logistics Concept
IMA	Intermediate Maintenance Activity
IOC	Initial Operational Capability
JTF	Joint Task Force
LOGCOM	Logistics Command
LUBF	Loaded Unit Balance File
MAL	Mechanized Allowance List
MARES	Marine Corps Automated Readiness Evaluation System
MC	Mission Capable
MCGERR	Marine Corps Ground Equipment Resource Reporting
MCLCAT	Marine Corps Logistics Chain Analysis Team
MCREM	Marine Corps Readiness Equipment Module
MDT	Maintenance Down Time
MEF	Marine Expeditionary Force
MERIT	Marine Corps Equipment Readiness Information Tool

MIMMS	Marine Corps Integrated Maintenance Management System
MMO	Maintenance Management Officer
MOS	Military Occupational Specialty
MR	Material Readiness
MSC	Major Subordinate Command
MTBM	Mean Time Between Maintenance
MTVR	Medium Tactical Vehicle Replacement
NAVICP	Naval Inventory Control Point
NCO	Non-Commissioned Officer
NIPR	Non-Secure Internet Protocol Router
NPS	Naval Postgraduate School
NSN	National Stock Number
OIC	Officer-in-Charge
OIF	Operation Iraqi Freedom
OMRIPT	Overarching Material Readiness Integrated Product Team
ONS	Object Naming Service
P&R	Programs and Resources
PBL	Performance Based Logistics
PEI	Principal End-Item
POM	Program Objective Memorandum
RDT&E	Research, Development, Testing, and Evaluation
RFID	Radio Frequency Identification
RMS	Readiness Management System
S&A	Studies and Analysis
SABRS	Standard Accounting Budget Reporting System
SASSY	Supported Activity Supply System
SCM	Supply Chain Management
SIPR	Secret Internet Protocol Router
SMFR	Section Material File Report
SPEAR	Strategic Planning Educational Assessment and Research
SYSCOM	Systems Command
TAM	Table of Authorized Material
TAMCN	Table of Authorized Material Control Number
TEEP	Training Effectiveness Evaluation Plan
TLOC	Tactical Logistics Officer Course
TOC	Total Ownership Cost
UIC	Unit Identification Code
WON	Work Order Number

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I. INTRODUCTION

A. BACKGROUND

Material readiness in the Marine Corps has been an on going issue for decades. Historically, identifying the root causes of equipment readiness problems was a time consuming and personnel intensive procedure. New systems were developed over the years in an attempt to effectively manage equipment readiness. This was demonstrated through the development and use of various legacy systems over the years – such as the Supported Activity Supply System (SASSY), Marine Corps Integrated Maintenance Management System (MIMMS), Marine Corps Readiness Equipment Module (MCREM), and Asset Tracking Logistics and Supply System (ATLASS).

While these systems filled the requirement to provide status information on repair parts and maintenance in progress, the output formats (reports) were difficult to read and interpret for non-supply and non-maintenance personnel. They were also only available via mainframe systems and it was difficult for non-natural programmers to query the data. Numerous man-hours were spent contacting vendors and maintenance organizations for updated statuses to ensure weekly briefs for the commanding officer, or his representative (supply, maintenance, and maintenance management officers) were accurate and current. This resulted in an excessive amount of manpower and resources utilized to track material readiness via Marine Corps legacy systems. Appendix A provides a brief overview on material readiness tracking prior to MERIT. Appendix B contains sample readiness reports from legacy systems (MIMMS and MCREM).

The Marine Corps Equipment Readiness Information Tool (MERIT), a web-based program, pulls data from all the supply and maintenance management legacy systems used by the Marine Corps. This program takes the data and consolidates it into one reporting tool that can be viewed by any registered user with internet access, enabling more timely information, which can be accessed world wide. As a result, a maintenance or supply problem can now be identified in a matter of seconds vice hours or days. This decreases the time spent researching problems, providing supply, maintenance, and maintenance management personnel more time to fix problems and improve the process,

preventing further problems. Appendix C contains sample readiness reports from MERIT.

B. PURPOSE

This research looks at the users' perceptions of MERIT to determine its effectiveness, whether or not it is meeting the needs of the using units, and if there are any aspects of the program that may need improvements. It also examines its viability to function as a decision support tool to help identify potential performance based logistics (PBL) contracts.

C. RESEARCH QUESTIONS

The two research questions addressed in this project are:

- How can MERIT be used as a Marine Corps equipment readiness decision support tool for performance based logistics?
- What areas of MERIT are recommended for improvement?

D. SCOPE AND METHODOLOGY

1. Scope

This report focuses on the user's perception of and satisfaction with the MERIT program. While the survey was taken by both military and civilian users, the analysis of the survey will focus primarily on the military members' responses. We have chosen to concentrate our efforts on the military perceptions because the using units originally requested a program be developed to provide readiness information during the interim while GCSS-MC is being developed.

2. Methodology

This report includes a literature review of news articles, web sites, government briefs, and draft reports available concerning MERIT and PBL.

We conducted telephone, electronic mail (e-mail), and personal interviews of personnel directly associated with the development and implementation of the MERIT program. The interviewees are MERIT subject matter experts at the Marine Corps

Logistics Command (LOGCOM). We received additional inputs from the process analysis division director and the program analyst responsible for executing all financial activity on the program. Initial communications were established via e-mail to facilitate a direct link with key personnel. Telephone conversations to gather general information and financial status/activity were conducted following the initial contact. Subsequent to this, we forwarded detailed questions, which provided the basis of information for our research. The entire process was comprised of two-way communication to transmit and accurately receive necessary data. A follow on informal interview was conducted with the MERIT team leader to gather additional information and knowledge of the program.

Three focus group sessions were conducted, with a total of three Marine Corps officers, 11 Marine Corps staff non-commissioned officers (SNCOs), and two Marine Corps non-commissioned officers (NCOs). Two sets of focus groups were conducted with maintenance management personnel and the third was with supply personnel. Subdivision of the focus groups by occupational field included ten maintenance management personnel and six supply personnel. All focus group participants represented various units from Camp Pendleton and MCAS Miramar, California. The focus groups were conducted at the Marine Corps Logistics Chain Analysis Team (MCLCAT) West building at Camp Pendleton, California. All focus groups sessions were recorded on audiocassette in conjunction with note-taking. All participants were informed at the beginning of each session that responses would be recorded and kept anonymous. Recordings were transcribed to capture the major points discussed. The questions were open-ended, allowing respondents to freely express their opinions on the topics asked. Separate protocols were used for the maintenance management and supply personnel to capture any similarities or differences between the two groups. Copies of the protocols are enclosed in Appendix I.

An electronic survey was published and the link sent via e-mail to all registered MERIT users with a request to participate in the survey. Two hundred thirty six Marines and civilians participated in the survey. Demographics of the survey participants are discussed in Chapter IV, with specific demographic information provided in Appendix E. A protocol of the survey objectives and questions was developed and submitted through

the project advisors and the Protection of Human Subjects Committee for approval prior to publishing.

Finally, a personal interview was conducted with a Marine Expeditionary Force representative (MEF), who had recently returned from deployment in support of Operation Iraqi Freedom (OIF), during which he used MERIT extensively. This interview was conducted at I MEF headquarters, Camp Pendleton, California. The interviewee was informed at the beginning of the interview that it would be recorded with audiocassette, in conjunction with note-taking. The questions were open-ended, allowing the interviewee to freely express his opinions on the topics asked. A copy of the protocol is enclosed in Appendix I.

The data collected from the interview, focus groups, and survey (text portions) were analyzed to identify the perceptions of the users. From these perceptions, themes were developed. We then compared and contrasted the themes between the various rank and occupational field groupings. The statistical analysis conducted of the remaining survey questions were analyzed for prevalent opinions. The results were compared and contrasted between the various rank and occupational field groupings.

E. ORGANIZATION OF STUDY

This report is organized into seven chapters. Chapters II and III include literature reviews on MERIT and PBL. Chapter III discusses MERIT's potential as a decision support tool. Chapter IV discusses the survey's development and Chapter V is an analysis of the survey. Chapter VI analyzes the focus groups and semi-structured interview. Chapter VII offers our overall conclusions and recommendations.

II. MERIT BACKGROUND AND DEVELOPMENT

A. BACKGROUND

MERIT was developed to be a management tool for commanders. It integrated the Marine Corps' supply and maintenance management legacy systems into a web-based decision support system. This program can be customized to show specific views for individual commands, from the force level (general officer) down to the battalion/squadron level (lieutenant colonel).

MERIT can be accessed by any registered user, regardless of rank or position, to view equipment readiness statuses. Registered users can range from the supply or maintenance management clerks to company, battalion, group, or force level commanders, including the logistics staffs in between.

Michael A. Williamson, the deputy director for LOGCOM S&A stated about MERIT, "for the first time ... we took a process that used to be incredibly research-intensive to two seconds to identify a problem and 10 seconds to find a cause." (1) Until MERIT, there was no Marine Corps sponsored automated program that enabled a commander to get daily status updates on his equipment. This is essential during periods of high operational tempo.

The MERIT project was awarded one of the Department of the Navy's 2004 eGovernment Awards in June 2004.

B. HOW DOES MERIT WORK?

MERIT was co-designed by a cross functional representation of the USMC major organizations and an applied research and development organization (Concurrent Technologies Corporation). It uses visual data analysis software (or "treemapping" software) developed by the Hive Group to retrieve data from all the Marine Corps legacy systems. "Treemapping" software allows a user to analyze enormous amounts of data in minutes. The data is stored in an Oracle database and can be viewed through a web browser.

The data is integrated into a single, interactive digital map and uses a green/yellow/red color coding method to give users a quick overview of their readiness posture. The readiness status for over 185 weapons and equipment systems owned by the Marine Corps is available for view via this new system.

The data can be viewed in various ways – by command/unit identification code (UIC), Table of Authorized Material Control Number (TAMCN), commodity, or functional area. Each cell is color coded in shades of green, yellow, and red, where green is good and red is bad. Each color shade corresponds to a readiness percentage as shown in Figure 1 below (see center top of picture for percent/color scale).

As the user moves the mouse over each cell, a pop up screen opens showing the most current readiness rate, as well as the average readiness rate for the month, quarter, and year for that unit or TAMCN. The picture below shows a view of the database by

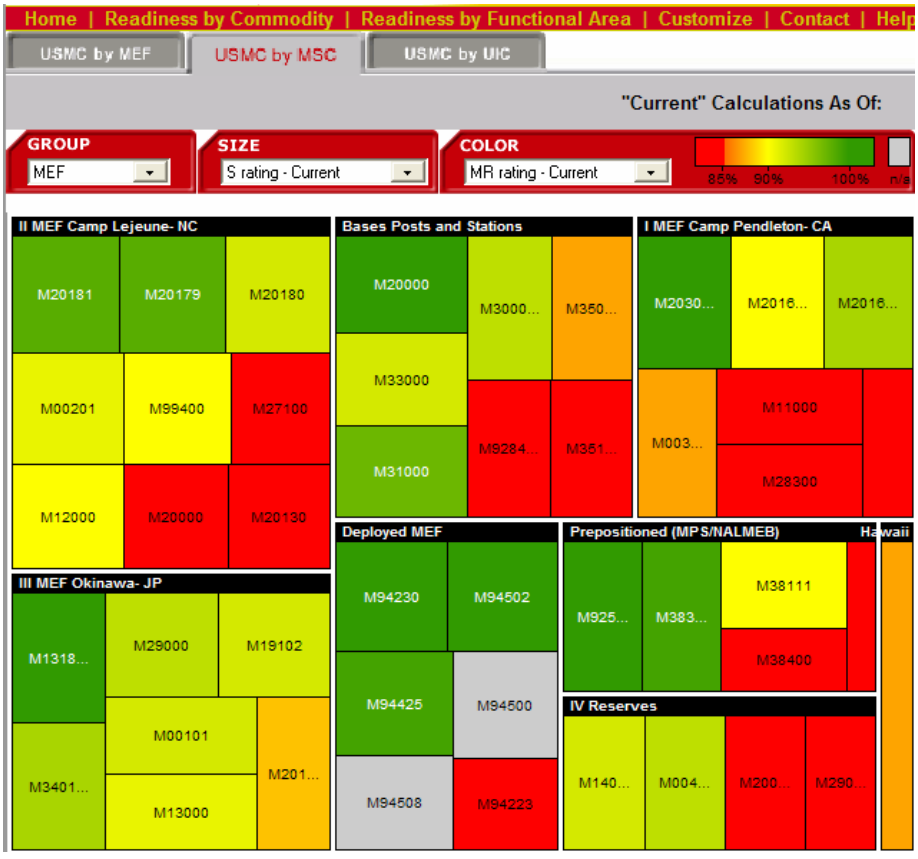

Figure 1: Readiness View by Major Subordinate Command.

major subordinate command (MSC). As you can see, this screen is set up as previously described, where each MSC is color coded to indicate their readiness rate at a glance.

In addition to displaying the unit's readiness information via the graphical user interface (GUI), MERIT has a long list of other features and modules. Some of the most commonly used features are:

- Organizational summary report
- Parts on order report (lists all parts on order for TAMCN)
- Maintenance TAMCN report (lists all equipment inducted in the maintenance cycle)
- Daily readiness report
- Deadline report page
- TAMCN readiness summary page
- Search (by equipment repair order (ERO), serial number, TAMCN)
- Export reports to Microsoft Excel
- Display RM4 remarks
- Allowance/possessed comparison
- Deadline discrepancies
- MyMERIT profile (identify specific TAMCNs to track).

While these are the most commonly used features within MERIT, there are numerous other features, with upgraded versions of the program released every few months by the program developers at LOGCOM. Appendix D contains the detailed timeline of version release dates and lists the improvements that have been added to the program.

C. LOGICAL ARCHITECTURE

The MERIT program is a database driven application that utilizes a three tier environment. These are the Oracle database server (data tier), the web-based application server (middle tier), and the client accessing the program via a web browser (client tier). Figure 2 (page 8) displays this architecture, where the MERIT database server pulls information from the SASSY/MIMMS mainframes and the ATLASS II+ database. The clients (users) access the MERIT database (the web application server) via their web browsers.

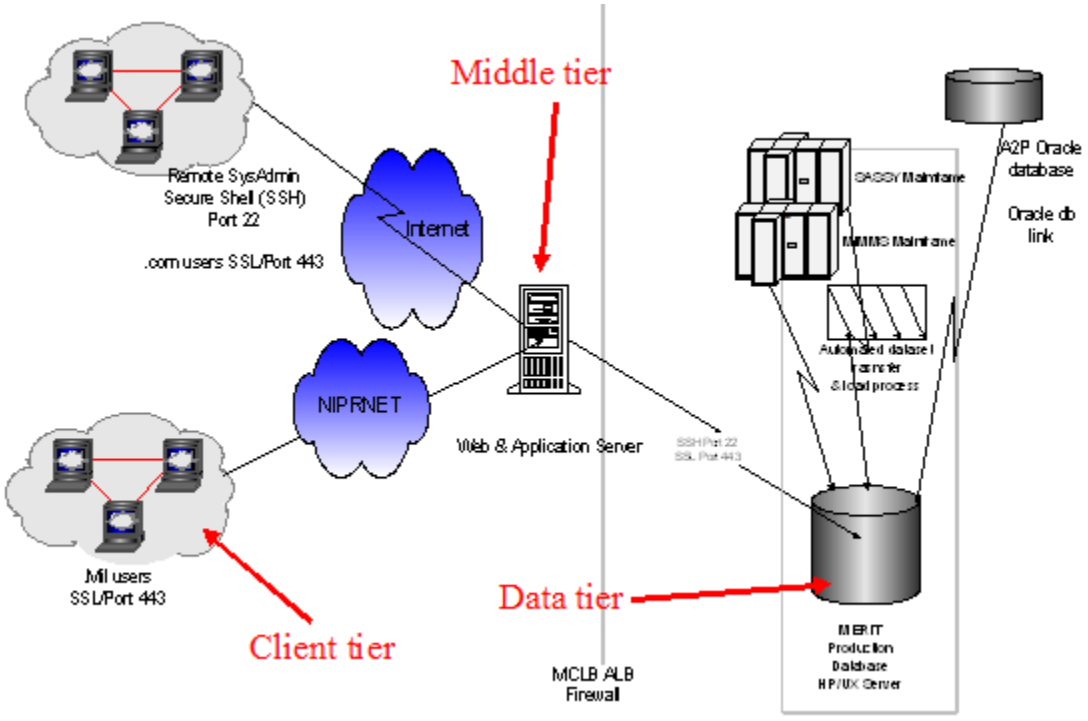

Figure 2: MERIT's Logical Architecture (After Ref. (2))

D. MERIT DEVELOPMENT

1. Funding Overview

When the requirement for a management tool to track equipment readiness was identified, funding to develop this tool was provided to LOGCOM S&A. Funding for MERIT began in FY03, supplied from the Research, Development, Testing, and Evaluation (RDT&E) funds of the Defense Logistics Agency (DLA) and Headquarters Marine Corps (HQMC). The funding was category I, which reimbursed all expenditures. The funds from DLA were provided by the DLA Headquarters Programs and Resources (HQ P&R). The funds were filtered down through the DLA HQ P&R Comptroller, the DLA Service Center, the DLA Supply Center Distribution Office, to the LOGCOM P&R. The funds from HQMC were distributed from the SECNAV budget to HQMC P&R and then directly to the LOGCOM P&R. Once LOGCOM P&R received funds, it allocated them to LOGCOM S&A via the LOGCOM P&R Comptroller. Figure 3 (page 9) illustrates the flow of funds from the sources to the user (LOGCOM S&A). Of particular interest, due to future funding implications, is the absence of MERIT from current

Program Objectives Memorandum (POM). A requirement to submit funding requests on a POM did not exist since the program was financed under the umbrella of RDT&E.

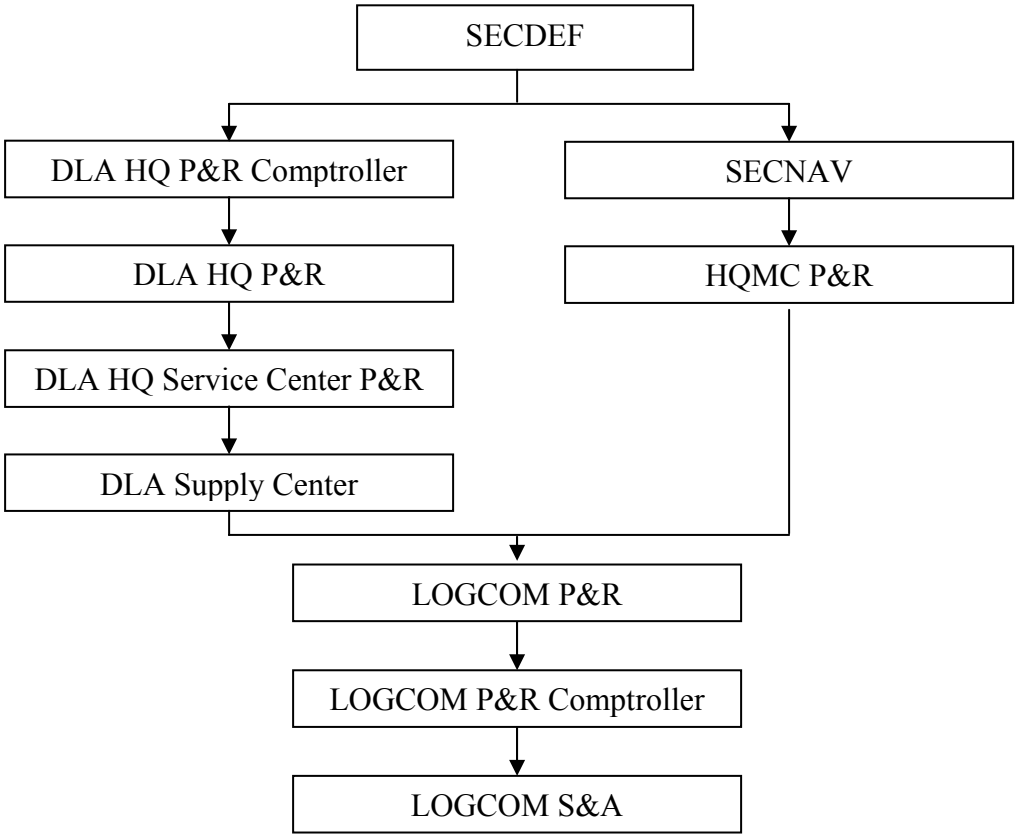

Figure 3: Flow of Funds for MERIT R&D

The initial MERIT budget request for fiscal year 2003 (FY03) was $1.156 million. At the end of the FY, they received $1.665 million in "plus ups." A total of $2.821 million was provided to the MERIT program ($1.45 million from DLA and $1.371 from HQMC). The utilization of funds can be categorized into three major expenses (see Figure 4 on page 10):

- Eighty two percent: contractor support for development and to establish requirements software.
- Fifteen percent: travel for training and demonstration of the MERIT program to current and potential customers.
- Three percent: contract fees.

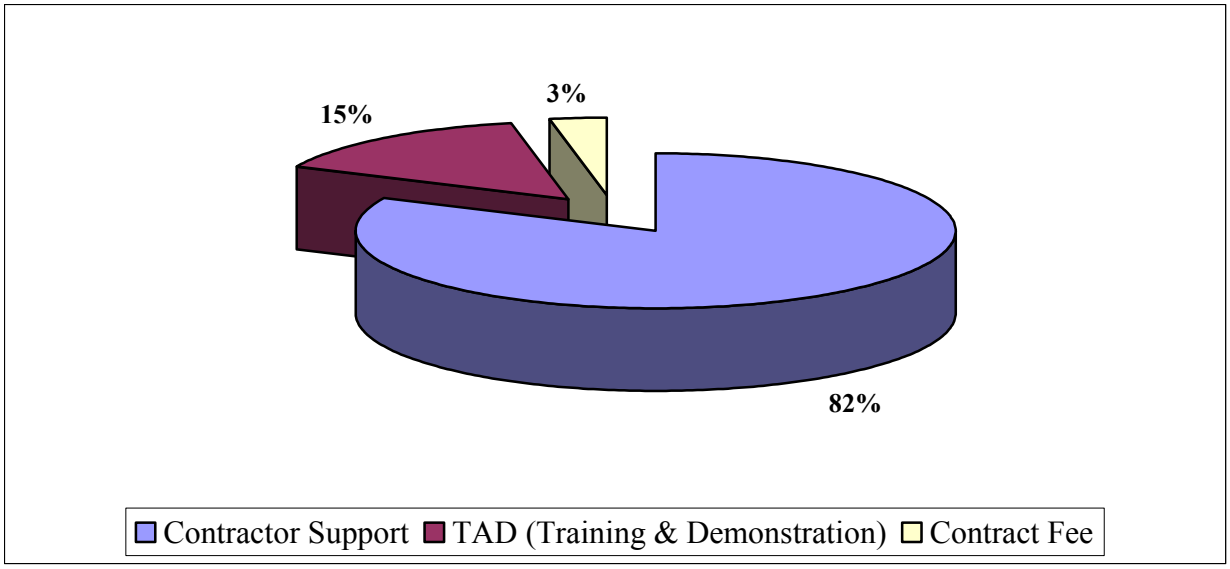

Figure 4: Allocation of Funds (Percentage)

The FY04 MERIT budget requested $3.671 million. This significant increase from FY03's budget request incorporated the planned funding required to stand up the Enterprise Integration Division, which is still in progress. This division will be comprised of program managers whose responsibilities are to support enterprise total life cycle management, develop logistic changes, contract management, outsourcing, and conduct A-76 studies. The increase in FY04's budget request also allowed for the increased requirement for travel and briefs. As of August 2004, LOGCOM S&A received $1.5 million of its budget request, from HQMC. They expect to receive "plus up" funds at the end of this FY to cover the estimated $1.02 million in MERIT deficiencies. The allocation of funds (percent) is expected to be the same as the FY03 rates.

The FY05 funding level is projected to be $3.726 million, which is FY04 funds adjusted for less than two percent inflation. RDT&E funding will be the primary source of funds for MERIT development and implementation through FY05. Allocation of funds is expected to remain at the same proportions as previous FYs for contractor support, TAD, and contract fees.

After FY05, MERIT faces a new challenge of acquiring sustainment funding, which does not reside under the umbrella of RDT&E, thus forcing MERIT to enter a new

arena of competing for resources. MERIT funding requirements is included in the FY06 (dated 16 July 2003) Global Combat Support Systems Marine Corps (GCSS-MC) POM (serial number 06-01). Since the decision to continue developing MERIT and utilizing it as the sole readiness reporting tool for the Marine Corps, future funding of the MERIT program should become more stable. A brief overview of GCSS-MC is enclosed in Appendix J.

2. Development Timeline

The non-traditional acquisition and development of MERIT was specifically instrumental in its speed of development and implementation. Unlike other programs that were procured through normal acquisition procedures, MERIT was not constrained by bureaucracy and politics during every step of its development and decision making process. This is significant because of how quickly the initial finished product was pushed out to the fleet and the development and release of new versions thereafter. MERIT was developed following an evolutionary approach to systems development. The major dates in the development schedule of MERIT are listed below. To view the detailed list of improvements incorporated in each released version, see Appendix D.

September 2000	Overarching Material Readiness IPT (OMRIPT) formed.
November 2000	OMRIPT charter signed.
April 2002	OMRIPT approved development of analytic roadmap (MERIT). Must be aligned with GCSS-MC and Integrated Logistics Concept (ILC).
20 December 2002	Initial operational capability (IOC) - Phase I (material readiness (MR) and supply chain management (SCM)). MERIT version 1.0 released.
28 March 2003	Full operational capability (FOC) - Phase I (MR and SCM).
July 2003	MERIT version 1.1.1.0 released.
28 August 2003	MERIT version 1.2.0.0 released.
30 September 2003	FOC - Phase II (SCM, depot maintenance, and wholesale).
1 October 2003	MERIT version 1.2.1.0 released.
29 October 2003	MERIT version 1.2.2.0 released.
28 January 2004	MERIT version 1.2.3.0 released.

15 March 2004 FOC - Phase III (Life cycle management planning).
19 August 2004 MERIT version 1.2.4.0 released.
27 September 2004 FOC - Phase IV (In stores and policy).
19 March 2005 FOC - Phase V (External).

E. WHY USE MERIT?

It is difficult to calculate the exact amounts of the cost savings the Marine Corps will realize by using MERIT. Since it was only fully implemented with I (Camp Pendleton, CA) and III (Okinawa, Japan) Marine Expeditionary Force (MEF) units until recently, there was insufficient data to quantify savings. However, anyone who has worked with the Marine Corps maintenance management system will appreciate the potential direct and indirect cost savings from MERIT.

1. Analytical Tool: as an analytical tool, managers at all levels get information faster to make decisions and manage their readiness. If a commander has a better overview of his equipment status then he can more efficiently allocate and pool resources, which is the greatest potential for cost savings. The ability to reallocate and pool resources would create a significant ripple effect: less equipment in the maintenance cycle would allow maintenance shops to optimize their mechanics, technicians, and other resources. Also, with less repair parts on order, the supply system would not be continuously overwhelmed. The quantity of backorders would decrease and parts would go to equipment that truly needed repair.

2. Unit Generated Reports: this is another benefit that would be hard to quantify due to the potential indirect cost savings. We can state from experience that the lack of timeliness, accuracy, and information on the LM2 caused the creation of many "homegrown" reports from unit databases or spreadsheets. These reports were created out of necessity: commanders need timely information and more than what the current systems can provide. As a result, the LM2 report was neglected to a certain extent (used as a source document only) since users spent a significant amount of time manually creating extracts of the LM2 report instead of managing the existing system. The

readiness reports generated by MERIT are more user-friendly and were designed to support the needs of the user. This should cut back the amount of locally generated reports and databases at the user level, freeing up man-hours to apply to other areas.

3. Program/Life Cycle Managers: program managers at the systems command and lifecycle mangers at the maintenance depot can use MERIT to help manage costs and track/analyze trends. For example, if a new weapons system continuously broke down for the same type of problem throughout the Marine Corps, managers would have instant visibility of this trend. Program mangers can quickly identify problems to manufacturers, work with them to correct defects, and develop an optimal maintenance solution for equipment already fielded. Life cycle managers can ensure that proper maintenance procedures are used throughout the Marine Corps and that sources of supply are informed of changes in demand for tools and repair parts. Also, as a fact of life in the military, program and life cycle managers frequently rotate. As a result, MERIT will provide continuity to incoming program and life cycle managers by giving them instant visibility on the current success (or lack of) of a particular fielding. It would also serve as a central repository for any historical data so managers can analyze trends and the success or failure of corrective actions previously taken.

4. Readiness Support Cost Module: another feature that is being developed is the total ownership cost (TOC) module, which has the capability to quantify all costs (operations and maintenance) associated with a piece of equipment. This module does not exist in the current fiscal system - the Standard Accounting Budget Reporting System (SABRS). Currently, fiscal data exists only in the most abstract form in SABRS. As a result, fiscal expenditures at the using unit level are tracked manually, a time consuming process. At the operational level, MERIT will capture the costs to operate (i.e. fuel) and maintain (i.e. repair parts) equipment. Costs accrue as a piece of equipment moves through different levels of maintenance. The current system (SABRS) has no feature that allows the Marine Corps to capture these costs.

5. Trend Analysis: trend analysis of cost data has the potential to identify and realize cost savings to the Marine Corps. Those at the operational level can track expenditures against their operating budget to optimize expenditures. Program and life cycle managers can identify excessive costs to contractors to remedy or use as a negotiating point for further contracts. Operations and budget analysts will have defined cost data to balance the equipment's service benefit or to calculate "return on investment." Overall, this feature allows the Marine Corps to perform more accurate cost benefit analysis to optimize the scarcest of resources: money.

III. PERFORMANCE BASED LOGISTICS

A. INTRODUCTION

Performance based logistics (PBL) is a method that provides logistics managers with a feasible way to reduce costs, reduce footprint, and increase reliability. The focus of our study, in regards to PBL, was to determine the feasibility of tailoring MERIT to be a decision support tool and identify candidates for PBL contracts. To accomplish this analysis, the following must be understood:

- What is PBL?
- The current Navy and Marine Corps view of PBL.
- Aviation and the use of PBL.
- Ground equipment and the use of PBL.

Understanding the inter-relationships between accurate, attainable metrics and PBL is required to further develop MERIT or future decision support tools.

B. BACKGROUND

PBL is a life-cycle strategy with three goals: improve readiness, increase agility, and reduce cost. The overall intent is to improve a unit's war fighting capability. Why should logisticians aim to reduce costs? In the corporate sector there are two ways to increase profit: raise revenues or lower costs. To double net income, a company with $1 billion in sales must raise revenues by 100 percent (all else remaining constant). However they can achieve the same result (double net income) by reducing costs 12 percent. See Table 1 below for an illustration of this comparison.

	Current Situation	**Sales Strategy (Increase sales 100%)**	**Material Strategy (Reduce costs 12%)**
Sales	$10	**$20**	$10
Material	$8	$16	**$7**
Marketing (10%)	$1	$1	$1
Net Income	$1	$2	$2

Table 1: Net Income – Revenues vs. Costs

In the public sector of constrained resources, government attempts to increase net income (savings that allow investments in other opportunities) are best achieved through cost reductions either by reducing spending or increasing efficiency. PBL is a method that logisticians can use to assist in cost reductions. With the cost of weapons systems rising, identifying ways to cut costs is imperative. However, reducing total TOC is only a portion of the requirement. Cost reductions must be achieved while at the same time improving a unit's war fighting capability through increased readiness. The most leverage for reducing cost is to improve reliability.

PBL strategies focus on improving reliability and material support. PBL allows a logistics manager to buy "performance" instead of "parts." Material support focuses on managing the supply chain with PBL. Naval Inventory Control Point (NAVICP) radically transformed their material support by utilizing PBL in 2001. "In lieu of lots of parts, NAVICP said they were going to buy performance and manage supplier relationships." (3) PBL allows the NAVICP to manage supply through their suppliers.

Readiness is another area that benefits from the use of PBL. Military aviation is one of the biggest proponents of PBL. "Another approach we are taking to improve logistics support to the warfighter and reduce total life cycle system costs is through Performance Based Logistics (PBL)." (4) Better performance and availability translates to better reliability.

> All new ACAT I and II programs have been submitted with PBL implementation plans and milestones. PBL has been successfully implemented on numerous weapon system components (improving capability and lowering costs) and the intention is to expand these successes to major weapon systems and subsystems. (5)

The PBL concept is very similar to what we expect with everyday purchases applied to military purchases. As consumers, we demand performance guarantees, along with the infrastructure to support the guarantees. PBL allows the military to purchase performance and reliability. The more reliable a component, the higher performance rating a vendor receives, for which they will receive additional compensation. Therefore, the vendor has a financial incentive to produce, maintain, and stock a better/top performing component.

An alternator is used to illustrate the advantages of PBL. With traditional methods, we purchase an alternator at a certain price and, based on projected reliability, we purchase spares or replacement parts. The more the alternator fails, spare parts are purchased, and the more profitable the alternator is for the supplier. Therefore, we (the buyer) provide incentive for the vendor to produce an alternator that meets the specified requirements, but one that will fail enough to keep the business thriving. PBL is a strategy that allows the vendor to thrive, but only if the alternator meets or exceeds a specific level of reliability. The vendor now has the incentive to produce a better alternator, and also to continue upgrading with the latest technologies. The benefit for the military is the use of a more reliable part requiring less replacement. This results in savings in operations and support costs, which comprises approximately 65 percent of TOC.

The ultimate goal of PBL should not be to "save" money, but to gain efficiencies through better supply chain management. Better supply chain management will result from acquiring and fielding more reliable parts and equipment that are purchased based on performance, not price. With PBL, the vendor takes a more active role. Thus, the concept is that the military manages vendors, not supplies. However, the supplies are managed indirectly by the military. The following are potential vendor roles with PBL:

- Warehousing
- Requirements determination
- Engineering/technical services
- Guaranteed availability
- Transportation
- Repair/overhaul/replacement decision
- Consumable piece parts
- Guaranteed reliability
- Configuration control
- Obsolescence management
- Technology insertion
- Warranties.

C. CURRENT USE OF PBL

Though there is application for PBL in material support, the use of PBL in aviation reliability is discussed as a point of comparison to the challenges of applying PBL to ground equipment. Operational availability is the probability that a system or principle end-item (PEI), when used under stated conditions in an actual operational environment, will operate satisfactorily when called upon (at any random time). Operational availability is the most common readiness measurement for weapons systems, and measures the percentage of weapon systems in mission capable (MC) status.

In aviation, all components are monitored by "flight hours." Operational availability can be calculated as the mean time between maintenance (MTBM) divided by the sum of MTBM and maintenance down time (MDT). It can also be determined by dividing the number of mission capable items by the total number of systems.

$$A_o = \frac{\text{MTBM}}{\text{MTBM + MDT}} = \frac{\text{\# of mission capable systems}}{\text{Total \# of systems}}$$

This calculation translates to every system, subsystem, and component on the aircraft due to the strict records of number of flight hours on aircraft. Therefore, calculating the operational availability for an aircraft subsystem or component (i.e., the auxiliary power unit (APU)) is feasible due to knowing the number of hours the aircraft is operational and the number of non-operational hours due to the root cause failure (APU) being carefully recorded.

D. PBL APPLICATION TO GROUND EQUIPMENT

The application of the operational availability metric to ground equipment is more difficult, although still feasible. To calculate an A_o for ground equipment PEIs, the formula stated above can be used. To calculate an accurate A_o for all ground PEIs, requires accurate monitoring of operating hours, which we know is not feasible with existing technologies to any level of accuracy. However, to calculate the A_o to evaluate a PEI's availability to a set hour is feasible. An example would be the Medium Tactical Vehicle Replacement (MTVR), where one could calculate the MTVR's A_o for a particular month based on the number of operational hours available divided by the total operational hours for the month. However, the metric does not provide a method to

identify what subsystem or component is the root cause for non-operational time (i.e., the manner that flight hours provide for an aircraft). With the current maintenance readiness reporting system, time between failure (hours) for a component is determined by computing the active maintenance hours, then traced backwards to the component that caused the loss of operational capability. Thus, a component (i.e., an alternator) would have an operational availability metric with hours as the unit of measure.

This highlights that the metric for ground equipment is more difficult to establish. A base unit of hours implies that a truck may have a high A_o when the truck was never driven. The metric must be analyzed in the context of how the PEI is intended to perform. Aircraft are intended to fly (hours), vehicles are intended to drive (miles), howitzers are intended to shoot (rounds), and engineer equipment is intended to operate (hours). Using hours as a base unit does not provide the proper metric for all equipment and a single metric cannot be applied to all PEIs.

E. MERIT AS A DECISION SUPPORT SYSTEM

To implement a metric, one must first capture the base unit of measurement. There is no method to capture an appropriate base unit within the current maintenance readiness reporting systems and supply management systems in the Marine Corps. MERIT, an information tool that displays information it draws from the data repository of MIMMS and SASSY, is unable to do anything more than report what is input into those systems. In order for MERIT to be used as a decision support system for evaluating PEIs, sub-systems, or components for possible performance based contracts, the system must identify items via trend analysis that are continuous readiness challenges, and identify the components that are the root cause of the degraded readiness. MERIT does not have this capability because the legacy systems do not have this capability either.

Implementing a procedure to capture appropriate metrics that determine operational availability would require the supported unit to document the base unit of measurement (i.e., miles on an MTVR) during the maintenance induction process. This base unit could eventually be assigned to the component causing the failure. Once the component is assigned the metric, an accurate MTBF can be calculated. This allows

comparison of actual ground equipment PEI, systems, subsystems, and components to the stated manufacturer's reliability estimates. If operational availability and readiness can be tracked, the readiness degraders can be evaluated as potential candidates for a PBL contract, which would incentivise the vendor to produce a more reliable component (see Figure 5, process map diagram, depicting accurate capture of component MTBF).

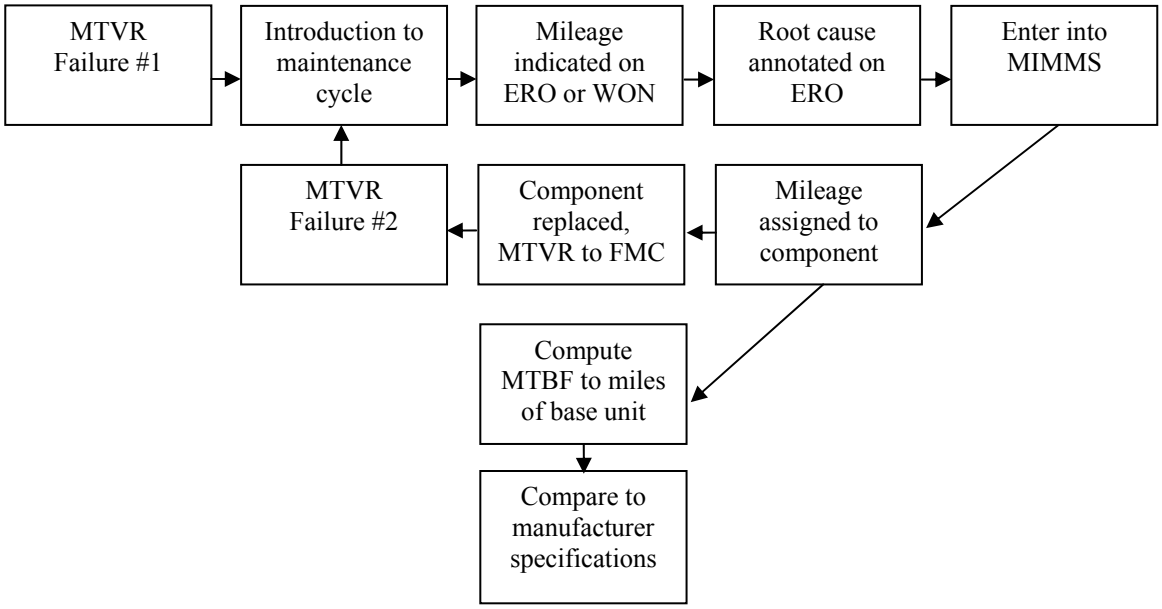

Figure 5: Decision Support Process Map

An organization must take strides to better themselves while awaiting the emergence and validation of technology. The metric assigned to any ground equipment is only one of many variables contributing to a model to optimize performance parameters. However, in the absence of technology, there are suitable metrics to begin evaluating equipment. Available metrics only provide partial information and can be implemented with little burden to the supported unit. If the data is entered, MERIT can be altered to pull, calculate, and display the metric. This approach would provide existing equipment, which are unable to track hours of operation (i.e., HMMWV), an assigned metric for performance evaluation. Newly fielded equipment and future acquisitions should be outfitted with radio frequency identification (RFID) or similar

smart technology to capture operational use and environments (i.e., ships, desert, hot, cold, etc.).

Separate consideration must be given to define "readiness degraders." Readiness degraders related to ground equipment (specifically vehicles and self-propelled equipment) must focus on components whose failure results in a "deadlined," thus non-usable, piece of equipment. This is somewhat different than the aviation community, in that aircraft can have a list of degraders, be partial mission capable, and still accomplish elements of their mission in a degraded state. Ground equipment degraders would be those items whose failure causes the equipment to be deadlined. The top readiness degraders would be the initial targets for comparison to stated manufacturer's reliability estimates and further consideration for PBL contracts.

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IV. SURVEY DEVELOPMENT

A. DEVELOPMENT AND SCOPE OF THE SURVEY

The purpose of this study was to determine user perceptions of MERIT by utilizing several survey techniques consisting of a questionnaire survey, text analysis from direct feedback, and conducting focus groups with active users. The most effective and inexpensive method to gather the necessary information to evaluate users' perception of MERIT was to administer an on-line survey. To receive the greatest participation, the MERIT administrators sent a broadcast email to all MERIT registered users. Additionally, e-mail traffic was sent through the Marine Corps "peer" network regarding participation in our survey. The purpose of the survey was to gather statistics from MERIT users. The questions focused on five objectives:

- Determine the amount of use of MERIT.
- Determine the level of user friendliness and accessibility of MERIT.
- Determine the users' perception of benefits from using MERIT.
- Determine the users' level of satisfaction with MERIT.
- Determine trends or concerns with MERIT.

The content analysis of textual feedback will identify trends from users who provided feedback on concerns or additional comments. When feasible, identified trends (from text analysis) will be discussed with the relevant survey questions, to compare or contrast the trend with the statistical analysis of the question. However, a complete reconciliation will not be provided in all instances due to unavailable logic. The survey consisted of 22 questions. The first four questions were screening questions to identify qualification and demographics, used to subdivide the sample for comparative statistical analysis. The screening questions consisted of the following:

- Rank
- Military Occupational Specialty (MOS)
- Unit
- Billet

The remaining 20 questions evaluated the users' attitudes, ratings, and likes and dislikes, with all questions associated with a specific survey objective. The survey included two questions that requested text feedback. The first question asked for information on the respondent's greatest concern and the second question requested any additional comments. The text feedback allowed participants to provide specific information about any question or other concern not addressed specifically by the survey.

1. **Objective 1: Determine the Amount of Use of MERIT**

- How long have you been using MERIT?
- On average, how often do you access MERIT?
- When accessed, what is the average amount of time you spend in MERIT?
- While deployed, have you ever used MERIT?
- Using MERIT during deployments was beneficial.
- What features of MERIT are you aware of? (check all that apply)
- What features of MERIT do you routinely use? (check all that apply)

2. **Objective 2: Determine the Level of User Friendliness and Accessibility of MERIT**

- Usability describes ease of navigation through the website and logical presentation of the displays and reports. In evaluating MERIT's usability, how satisfied are you?
- Accessibility describes the ability to access the website via the Internet. One aspect of accessibility is the time it takes pages to upload. In evaluating accessibility to MERIT, how satisfied are you?

3. **Objective 3: Determine the Users' Perception of Benefits from Using MERIT**

- What reports do you routinely use (check all that apply)?
- Many units have used locally prepared ad hoc readiness reports, such as an Excel spreadsheet, Access database, or LM2 extract, etc. Has MERIT reduced your need to produce local reports and maintain local databases?
- Have you ever used MERIT to "brief" readiness from the website (as opposed to producing slides)?

4. Objective 4: Determine the Users' Level of Satisfaction with MERIT

- I am confident in the accuracy of the information that MERIT provides.
- If MERIT was replaced with a different readiness information system, would you recommend that the new system adopt most, if not all of the features that MERIT provides?
- How would you describe your overall satisfaction with MERIT?
- Do you feel that MERIT saves you time?

5. Objective 5: Determine Trends or Concerns with MERIT

- Describe your largest area of concern with MERIT, if any.
- Please provide any additional comments or suggestions, as necessary.

B. DATA COLLECTION

The anonymous survey was developed (see Appendix F for the complete survey) and sent to approximately 1,800 registered users of MERIT. Two hundred thirty six users participated in the survey, a response rate of 13 percent. The survey was hosted by the Strategic Planning Educational Assessment and Research (SPEAR) of the Office of the Registrar, Naval Postgraduate School (NPS). Information to develop the survey was gathered from the following website: http://www.nps.navy.mil/spear/surveys.htm. The survey, once approved for publication by the NPS Survey Review Board, was hosted for seven days.

The survey sample consists of MERIT "users." Users are classified as individuals who are registered and non-registered users. All users were solicited to respond to the survey to reduce the impact of non-sampling error due to selection bias. The goal was to allow anyone who used MERIT the ability to participate in the survey. Individuals who consistently use MERIT may have more favorable input than individuals who used MERIT on a few occasions, abandoning its use for unknown reasons. Our objective was to gather input from consistent users, as well as those who abandoned its use.

The population of Marine Corps personnel and government service employees who are registered MERIT users were asked to participate in the MERIT survey. The sample consisted of 236 respondents, with military participants ranging in rank from

Private First Class through Colonel, and included 36 government employees. The demographics of the sample were further grouped by rank and occupational fields. We were not able to determine if all respondents are from the registered user population. As stated previously, the goal of the survey was to query all users and not just "registered" users. Tables 2 (below) and 3 (page 27) and Figure 6 (below) depict the demographics of the sample, subdivided by MSCs, occupational fields, and rank.

Respondents by Major Subordinate Command					
	FSSG	**Division**	**Wing**	**Other**	**Total**
I MEF	24	32	5	16	77
II MEF	5	3	5	8	21
III MEF	10	11	11	7	39
Reserves	5	5	2	3	15
LOGCOM					12
SYSCOM					33
Other					33
Unidentified					6
Total	**44**	**51**	**23**	**34**	**236**

Table 2: Survey Respondents by Major Subordinate Command

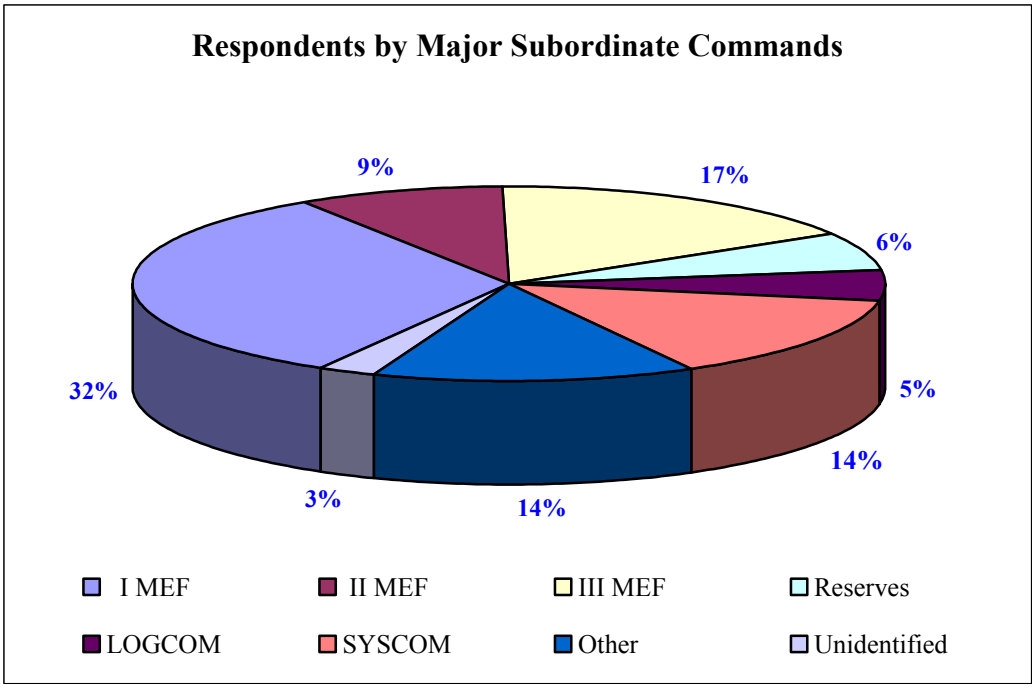

Figure 6: Survey Respondents by Major Subordinate Command

Respondents by Occupational Field					
Descriptive Title		Officer	SNCO	NCO & Below	Total
Combat Arms	Infantry	3		1	4
	Field Artillery	4			4
	Tank and AAV	2	1		3
	Pilots	1			1
CSS	Logistics	20	20	20	60
	Motor Transport	9	10	2	21
	Supply	10	9	7	26
	Command and Control Systems	2		1	3
	Personnel and Administration	1			1
	Utilities and Engineers	7	5	1	13
	Airfield Services	1	2		3
Maint	Ground Ordnance Maintenance	7	5	4	16
	Ground Electronics Maintenance	10	16	7	33
	Electronics Maintenance	4	2		6
	Aircraft Maintenance	1			1
Other	Special Education Program	1			1
	Colonels (9904/9906)	3			3
	Civilians				37
	Total	86	70	43	236

Table 3: Survey Respondents by Occupational Field and Rank

C. METHODOLOGY

The methodology for the survey was to present the findings that represent the population of MERIT users. The presentation of data consists of an overview of the entire survey, followed by a subdivision by major subordinate command (MSC), occupational field, and rank. An analysis comparing the difference between two sample means was conducted, when appropriate, to determine if there is a difference between two groups (i.e., officer and SNCOs).

D. SURVEY RESPONDENT AND MOTIVATIONAL THEORY

A question that needs to be understood is, "why do people answer a survey question and then provide a seemingly contradictory response in feedback?" In analyzing the survey questions, respondents may have indicated they were strongly satisfied with a feature only to contradict that assertion with a text feedback indicating that the area

where they are strongly satisfied contributes to their greatest concern. In order to provide insight to this phenomenon, Frederick Herzberg's motivation theory is discussed.

Frederick Herzberg first established his theories about motivation in the workplace with his 1959 research published in *The Motivation to Work*. The two-factor theory is based on hygiene and motivational factors (6). Hygiene factors contribute to a person's dissatisfaction, opposed to work motivational factors. They consist of items that people reasonably feel should be present in any/all work environments. An example is a non-hostile work environment, which people feel should always be present. Therefore, working in a non-hostile environment does not provide satisfaction, but working in a hostile environment may cause dissatisfaction. Hygiene attributes can be applied to automated information systems and various web-based information tools (such as MERIT). Users do not gain satisfaction from the tool working correctly; they expect correct operation to be standard. However, incorrect operation or functioning of the tool contributes greatly to dissatisfaction. Therefore, properly working web-based programs can be viewed as a hygiene factor.

When respondents evaluated their overall "feelings" about a web-based information tool, they expressed their overall satisfaction with its performance. After providing their "general feelings" about MERIT, the respondents were then asked to precisely identify an area "of greatest concern." The question solicited the respondent's greatest area of concern, even though that it may not have contributed to their overall dissatisfaction. Individually, a variable such as "accuracy" may have received a score of "strongly agree" for displaying correct information, but accuracy could still be the greatest area of concern for the respondent. It contributes to dissatisfaction, but not to satisfaction. The last two survey questions specifically asked for respondents' feedback regarding items contributing to dissatisfaction. Appendix H provides all comments (for Questions 21 and 22) from the survey participants In summary, it is normal to be both satisfied (motivated) and dissatisfied with one's work environment.

V. SURVEY ANALYSIS, DISCUSSION, AND RECOMMENDATIONS

This chapter analyzes the data from the MERIT survey. The responses were subdivided by using Microsoft Excel. The survey questions are in Appendix F and the statistical analysis tables are enclosed in Appendix G for all questions.

A. QUESTION 5: "HOW LONG HAVE YOU BEEN USING MERIT?"

1. Survey Scores

Figure 7 illustrates the survey responses for this question. Out of 236 respondents, three did not answer this question. One hundred forty four respondents (62 percent) used MERIT for more than six months.

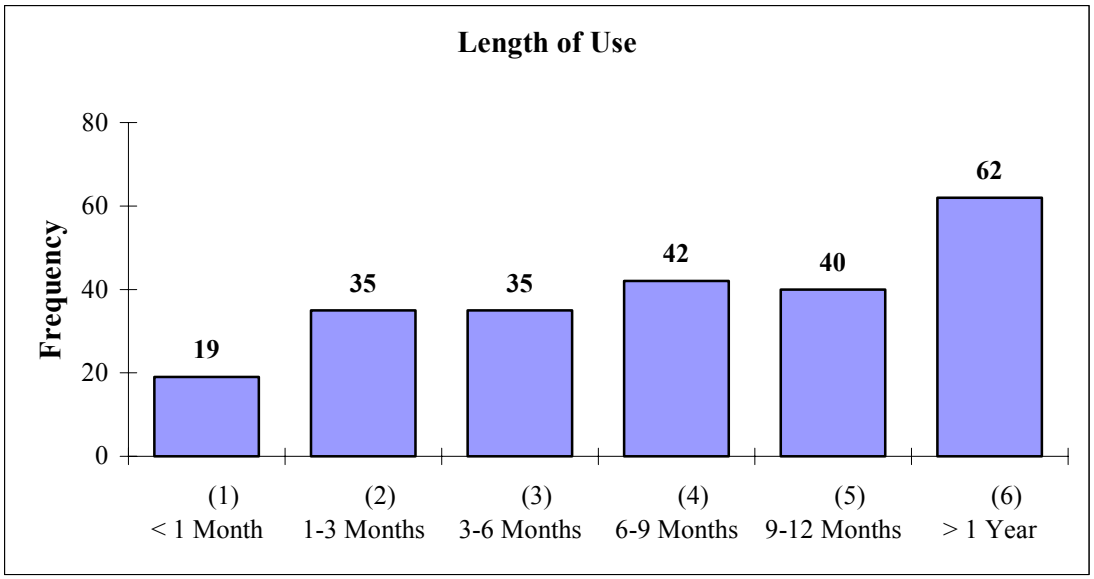

Figure 7: Length of Use Histogram

B. QUESTION 6: "ON AVERAGE, HOW OFTEN DO YOU ACCESS MERIT?"

1. Survey Scores

Figure 8 (page 30) illustrates the survey responses for this question. Out of 236 respondents, four did not answer this question. One hundred thirty eight (60 percent)

respondents reported using MERIT at least weekly. Eight (four percent) respondents reported never using MERIT.

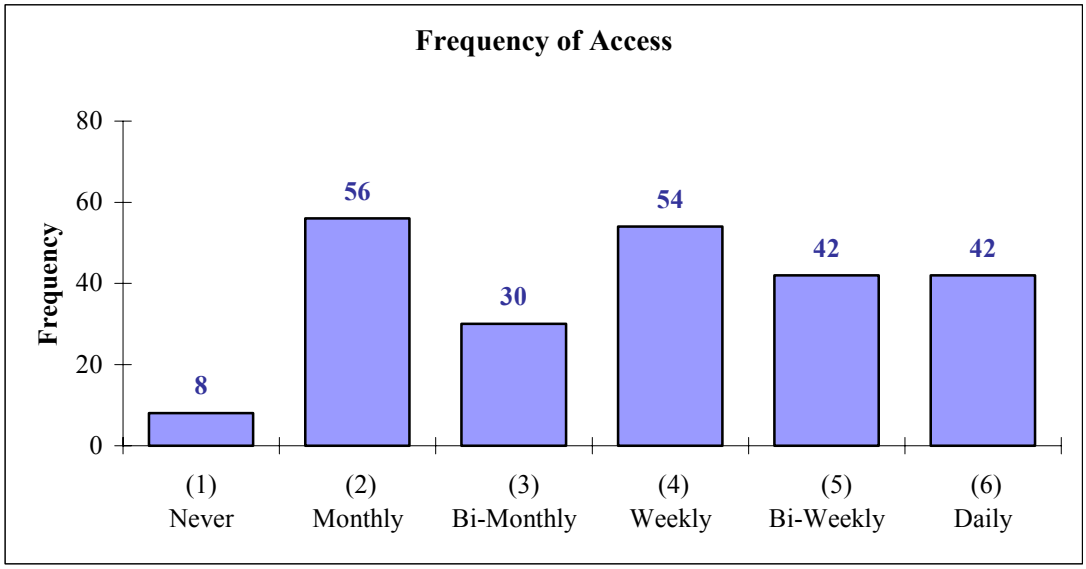

Figure 8: Frequency of Access Histogram

2. Discussion

The comments from the users who discontinued use of MERIT were that MERIT did not report all TAMCNs and their units were not represented in MERIT (i.e., ANGLICO or deployed UICs). Registered users are not likely to discontinue using MERIT once they are aware of its capabilities. Currently, MERIT only displays MARES reportable end items. The reality is that maintenance personnel are responsible for more than just those items. The scope of responsibility goes beyond what MERIT displays. In addition, the priority given to other items by the commanding officer may minimize the impact of MERIT. Specific comments were:

- If MERIT is tracking equipment readiness and does not track at least the readiness of tactical computer systems, I need a separate tool. If those systems are not considered "critical," we're wasting a lot of time locally supporting overstated requirements.

- MERIT only looks at MARES reportables even though there are many pieces of equipment that are important but are not MARES.

- Night Vision Equipment that is not in MCBUL 3000 how ever I need to know how the equipment is doing.

3. Recommendations

All battalions/squadron level units should be represented in MERIT. Along with this representation, deployed UICs should be represented under their deployed UIC instead of with their parent command. Future versions of MERIT should incorporate the readiness data for all TAMCNs.

C. QUESTION 7: "WHEN ACCESSED, WHAT IS THE AVERAGE AMOUNT OF TIME YOU SPEND IN MERIT?"

1. Survey Scores

Figure 9 illustrates the survey responses for this question. Out of 236 respondents, six did not answer this question. One hundred thirty six (59 percent) respondents used MERIT for 30 minutes or less during each session. Two hundred eight (90 percent) respondents used MERIT for one hour or less per session. Twenty two (10 percent) respondents reported using MERIT for more than one hour per session. These respondents were all experienced users (used MERIT for nine months or more) and an analysis reflected deployed or garrison readiness billets.

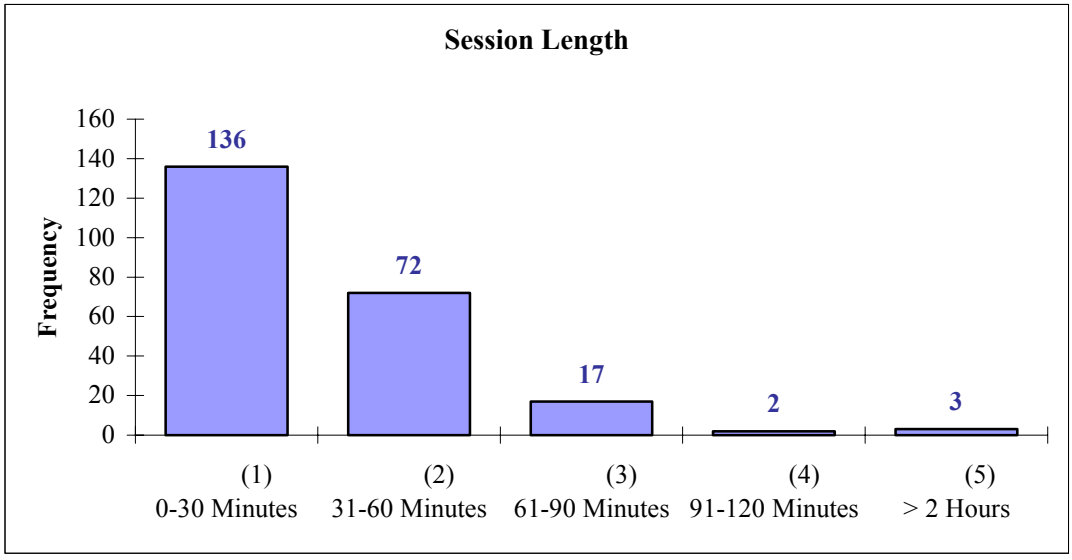

Figure 9: Session Length Histogram

2. Discussion

Three of the five respondents who were using MERIT for more than 90 minutes per session reported they were using MERIT in a deployed environment. The question that arises from this feedback is whether the extended session time is due to bandwidth limitations in a deployed environment. Bandwidth considerations were not considered in this study, but should be an area of concern for automated information systems (AIS) developers. Overall, the session length is consistent with viewing, exporting, and printing of readiness information. Though some users will exceed one hour per session, most experienced users are able to manipulate MERIT to view/print necessary information and reports within a short amount of time.

3. Recommendation

Conduct analysis to decrease bandwidth requirements to facilitate use of MERIT in deployed environments. Accessibility and performance of MERIT in a deployed environment should have priority when developing features of MERIT.

D. QUESTION 8: "WHILE DEPLOYED, HAVE YOU EVER USED MERIT?"

1. Survey Scores

Figure 10 (page 33) illustrates the survey responses for this question. Of 233 respondents, 35 (15 percent) used MERIT while on deployment. Three respondents did not answer this question.

2. Discussion

This question proved to be more difficult to analyze due to the possibility that respondents may have answered "No" when they should have answered "Not Applicable." A respondent should have answered "No" if they deployed, but did not use MERIT during the deployment. A respondent should have answered "Not Applicable" if they did not deploy, resulting in not being able to be included in the deployed sample.

Therefore, the only analysis conducted for this question is to determine the percentage of respondents of the survey who used MERIT while deployed.

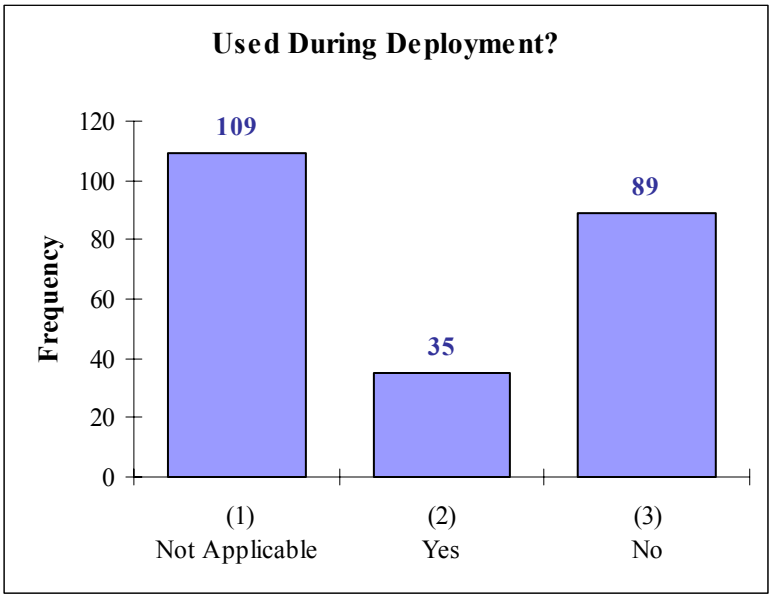

Figure 10: Used During Deployment Histogram

E. QUESTION 9: "USING MERIT DURING DEPLOYMENTS WAS BENEFICIAL."

1. Survey Scores

Figure 11 (page 34) illustrates the survey responses for this question. Twenty three (66 percent) respondents that used MERIT during their deployment felt it was beneficial. Five (14 percent) of those who used it during a deployment strongly disagreed that there was any benefit from using the program during the deployment.

2. Discussion

The general trend for this negative belief was because of the time lag between updates of MIMMS and reflection of new data in MERIT. As is the case with the advancement of web tools and the reliance on these tools in our everyday work experience, people become dependent on the data retrieval through connectivity and dependent on web tools' "real time" value. When this does not occur, it contributes to their dissatisfaction. A trend in the feedback of the respondents who "strongly disagreed"

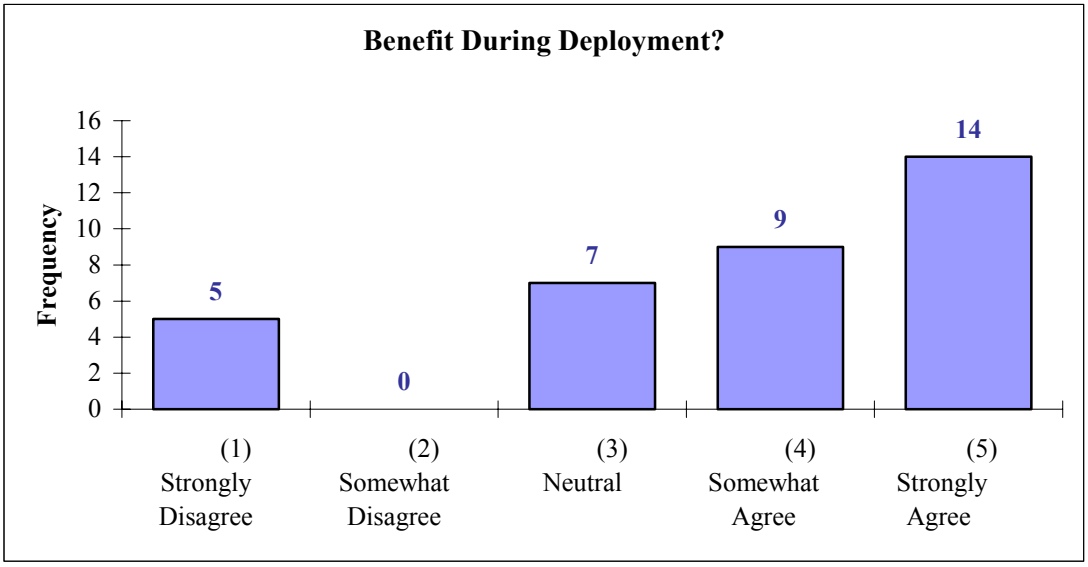

Figure 11: Benefit During Deployment Histogram

revealed dissatisfaction with MERIT due to a day or more time lag. A comparison with legacy reports reveals that this one day lag is thirteen days quicker than the bi-weekly cycles of the logistics management reports.

3. Conclusion

MERIT is a beneficial tool to have while operating in a deployed environment.

F. QUESTIONS 10 AND 11: "WHAT FEATURES OF MERIT ARE YOU AWARE OF?" AND "WHAT FEATURES OF MERIT DO YOU ROUTINELY USE?"

1. Discussion

These two survey questions were presented for a two-fold objective. First, to determine what MERIT features the users are aware of, and secondly, what reports that users are aware of are actually being used. Table 4 (page 35) illustrates the results of these questions.

The usefulness from the table is to identify items of high awareness and little use, and to identify items with low awareness and high use. The high awareness/low use items may be candidates for re-evaluation of their functionality. The low awareness/high

use may be candidates for marketing to increase awareness of what appears to be a highly used feature within a small group. The cut off for "low" and "high" rates should be determined by the program developers and evaluated in the context of which the feature was designed. For example, looking at the "Forgot my password" feature, the knowledge of it is relatively high (64 percent), but the use of it is relatively low (16 percent). While this would seem to be a candidate for possible re-evaluation of need, looking at the context for which it was designed, these percentages are appropriate.

	Total % of Respondents		
Feature	**Know of**	**Use Regularly**	**Know of & Use Regularly**
MyMERIT profile	61%	30%	**49%**
E-mail alerts	49%	15%	**30%**
"Forgot my password"	64%	11%	**16%**
Export reports to Excel	61%	33%	**55%**
Organizational summary report	63%	46%	**72%**
Parts on order	75%	53%	**71%**
Maintenance TAMCN report	81%	59%	**74%**
Daily readiness report	75%	54%	**72%**
Deadline report page	70%	51%	**73%**
TAMCN readiness summary page	72%	52%	**72%**
Display RM4 remarks	49%	28%	**57%**
Readiness rating calculation	69%	41%	**49%**
Organizational readiness maps	62%	30%	**49%**
UND A/B documents list	21%	8%	**40%**
Deadline discrepancies	48%	26%	**54%**
Allowance/possessed comparison	47%	28%	**59%**
Show excess/deficient equipment	44%	21%	**48%**
Historical maintenance/readiness data	48%	20%	**42%**
Charting features	42%	14%	**33%**
Tabular sorting	31%	13%	**42%**
Mouse-over status codes	44%	20%	**46%**
Filter by mission essential equipment	42%	12%	**29%**
Filter by current information	36%	15%	**41%**
Drill-up capability	32%	12%	**37%**
DODAAC link/search	34%	14%	**43%**
News ticker	32%	8%	**27%**
DLA WEBCATS interface	28%	13%	**48%**
Search	49%	29%	**59%**
"Printer friendly" capability	47%	21%	**45%**
Type Unit Code	35%	9%	**27%**

Table 4: MERIT Features

2. Recommendations

There are many options of low use in MERIT. These options should be re-evaluated for possible marketing to increase usage. The result is not to bolster usage of MERIT, but to ensure users and potential users are aware of the full capabilities of utilizing MERIT.

G. QUESTION 12: "IN EVALUATING MERIT'S USABILITY, HOW SATISFIED ARE YOU?"

1. Survey Scores

Figure 12 illustrates the survey responses for this question. In evaluating usability, 157 respondents (70 percent) were satisfied to some degree with the usability. Thirty six respondents (16 percent) reported they were dissatisfied. Nine respondents did not answer this question.

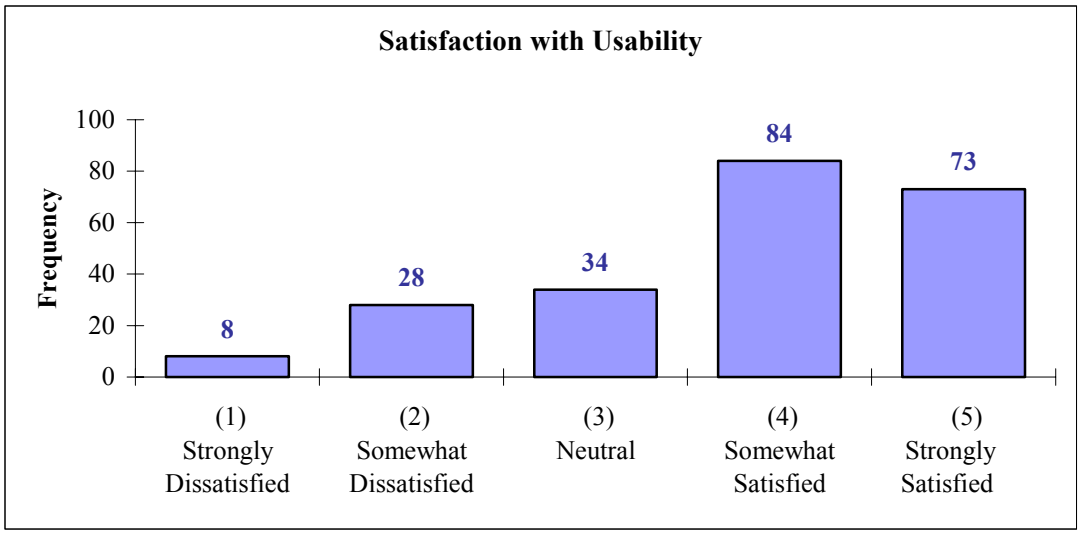

Figure 12: Satisfaction with Usability Histogram

2. Discussion

Usability in this question describes the ease of navigation through the website and the logical presentation of displays and reports. This question specifically addresses how friendly the respondents feel that MERIT is to operate and view. The common theme

with respondents who were dissatisfied to some degree stated their dissatisfaction was a result of the following:

- MERIT was difficult to navigate.
- Usability was impeded due to a lack of education on using MERIT.
- Graphical user interface (GUI) was overwhelming with the blocks and colors.

a. User's Manual

A major concern among users is that MERIT has no consolidated user's manual available to facilitate usage and learning. It should be noted that the MERIT program does contain a "Help" module, but knowledge and/or use of it may be limited. With the use of MERIT increasing, it is necessary to make available to new users a manual to increase knowledge and use of the system. Specific comments were:

- Need a user's manual.
- I have been using MERIT for quite some time and everyday I find some new tool that I can use. Maybe a tutorial program or something to that effect could be produced so that first-time users have a better understanding of the tool and its functions.
- When teaching new Marines on how to use the system, a manual or lesson plan should be accessible for download. Should be taught at the school house at Camp Johnson.
- I never knew so many reports were accessible through MERIT, is there a tutorial on how to use the MERIT website correctly and efficiently?

b. Graphical User Interface (GUI)

The common theme relating to the GUI is that it is difficult to "look at" (overpowering) and understand. The readiness map depicting status of equipment by functional area is not easy to understand to a new user. The more experienced users seemed to skip the GUI and go directly to equipment view by TAMCN. Specific comments were:

- Ease of navigation to those initially unfamiliar with MERIT.

- Not as user friendly as it could be. Need to simplify menus and access features. Unsure of what half the items are on the page or how to use them.
- Very useful tool, very informative, but not very "user friendly" for first time users.
- Make this easier to navigate, too many fields and takes too long to train new Marines.

3. Recommendations

We recommend that the MERIT administrators provide a user's manual that can be downloaded (i.e., Microsoft Word or Adobe Acrobat file). In addition to a manual, providing an interactive tutorial can help teach new users how to navigate through MERIT. Additionally, incorporating and marketing a "train the trainer" program using a tutorial CD would provide an avenue to broaden the trained users and equip trainers with the skills and knowledge to train others on the use of MERIT.

H. QUESTION 13: "IN EVALUATING ACCESSIBILITY TO MERIT, HOW SATISFIED ARE YOU?"

1. Survey Scores

Figure 13 illustrates the survey responses for this question. The analysis of this question reveals 160 respondents (72 percent) were satisfied with accessibility of MERIT. Twenty five respondents (11 percent) were dissatisfied. Thirteen respondents did not answer this question.

2. Discussion

Accessibility in this question describes the ability to access the website via the Internet. Necessary connectivity is the primary concern. However, another aspect to accessibility is the time required for pages of the website to upload. Accessibility is questioned due to slow network connectivity. The feedback relating to this theme primarily dealt with users who had trouble using MERIT due to their Internet connectivity either prohibiting use or it limiting the functionality of MERIT due to slowness. Specific comments were:

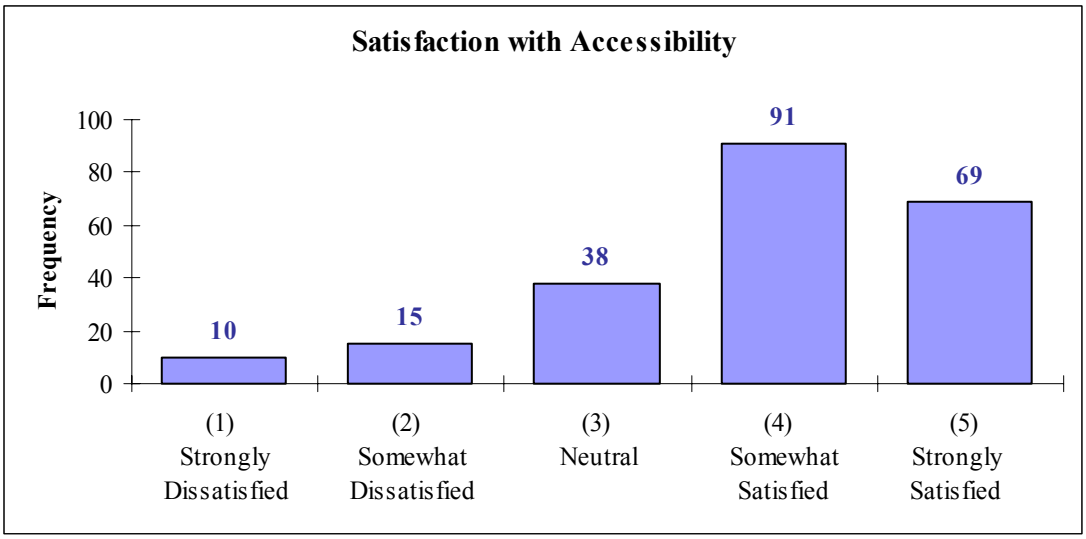

Figure 13: Satisfaction with Accessibility Histogram

- No access when the point of connectivity is inoperable. No connectivity.
- MERIT is great, the accessibility needs to be addressed for slower networks.

3. Conclusion

Overwhelmingly, users were satisfied with accessibility. The trends indicating otherwise were highlighted to signify the importance of bandwidth evaluation.

I. QUESTION 14: "WHAT REPORTS DO YOU ROUTINELY USE?"

1. Discussion

Figure 14 illustrates the number of respondents who use each of the listed reports. The objective of this question was to determine any areas of MERIT that could be expanded. Candidates for inclusion to MERIT would be reports that are highly used, but are not currently able to be viewed/pulled from MERIT. To note, MERIT would need to be expanded to represent all TAMCNs for some reports to be effective.

2. Recommendation

Examine available reports for inclusion into MERIT to expand its capability.

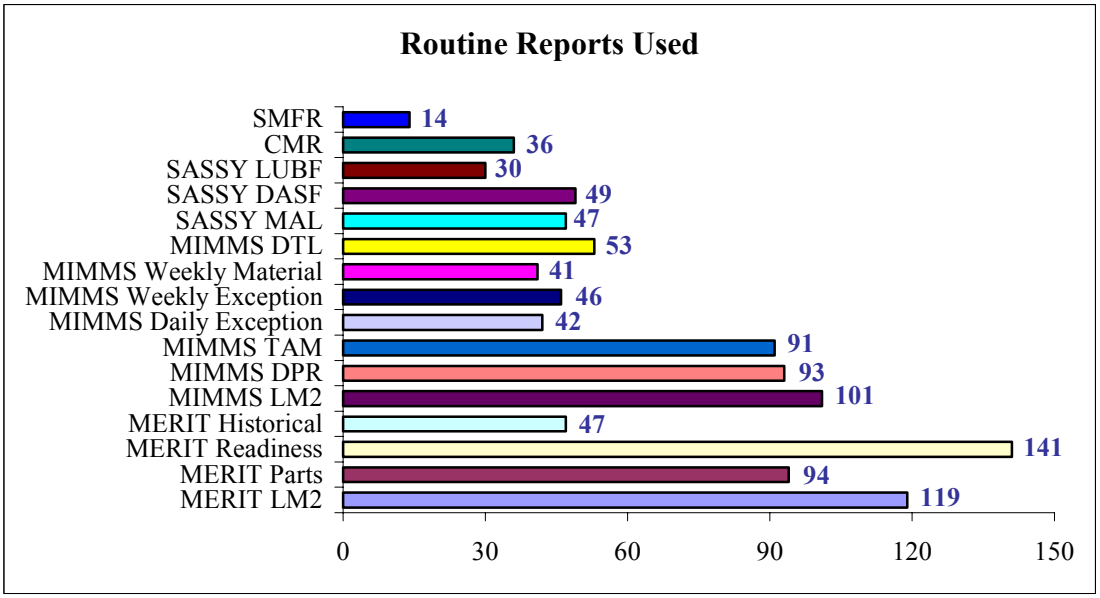

Figure 14: Routine Reports Used

J. QUESTION 15: "HAS MERIT REDUCED YOUR NEED TO PRODUCE LOCAL REPORTS AND MAINTAIN LOCAL DATABASES?"

1. Survey Scores

Figure 15 illustrates the survey responses for this question. For those units using locally generated reports, seventy seven respondents (51 percent) reported reducing the need to utilize locally prepared reports/databases since using MERIT. Eighty six respondents did not answer this question.

2. Discussion

The use of locally generated reports pervades maintenance shops, supply sections, and battalions/squadrons throughout the Marine Corps. Our objective with this question was to determine the impact that MERIT had on the use of these out-of-sight, non-system generated reports and databases. There are two views to this statistic, "the glass is half-full or half-empty." Better stated, the statistic revealed a partial success of MERIT or MERIT's low impact on eliminating the extra work required to generate local reports. MERIT has significantly reduced the need to generate more user-friendly or pertinent reports at the unit level. This is evident in over 51 percent of the respondents stating it

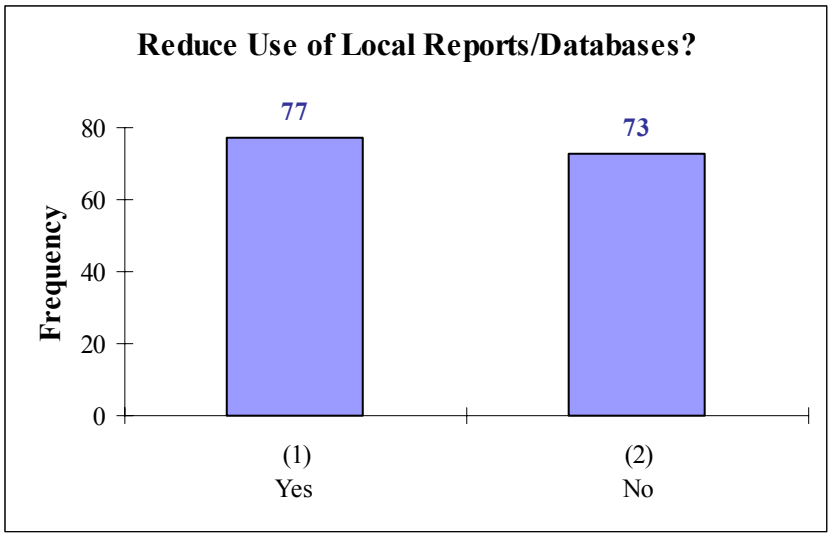

Figure 15: Reduce Use of Local Reports/Databases Histogram

has done so. However, the counter view is that there are many units still using their own reports. Why? The insistence to use local reports may indicate a lack of confidence in MERIT, or more accurately may indicate that MERIT does not generate the reports that satisfy every user's requirements. With priorities differing with every commander, it is not feasible to provide every potential feature or view to satisfy all priorities. In addition to not being able to provide a feature for all priorities, time lag between updates contribute to the use of local reports. The local reports provide a means to deliver real time data otherwise not available due to time lag in MERIT update. A specific comment from the feedback:

- Not real time data. Minimum 48 hour lag in readiness. That's why units still utilize locally produced reports.

3. Recommendation

Continue to market MERIT's capabilities. As users gain confidence in the system, the effort to produce duplicate reports should decline. MERIT's focus should not be on reducing locally generated reports, but on the ability of MERIT to provide the reports/views which allows time to be invested elsewhere.

K. QUESTION 16: "HAVE YOU EVER USED MERIT TO BRIEF READINESS FROM THE WEBSITE (AS OPPOSED TO PRODUCING SLIDES)?"

1. Survey Scores

Figure 16 (page 42) illustrates the survey responses for this question. Out of 236 respondents, 59 did not answer this question. Sixty two respondents (33 percent) reported using MERIT to conduct briefs vice preparing separate slides.

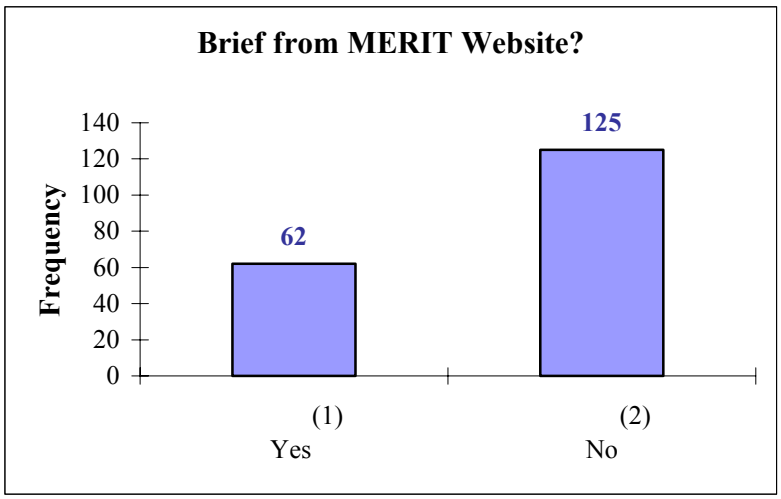

Figure 16: Brief from MERIT Website Histogram

2. Discussion

In evaluating the sample of respondents who used MERIT to brief (i.e., no longer needed to prepare separate slides), the majority were officers, SNCOs, and civilians. This is consistent with who we would expect to conduct briefs. The sample of respondents who did not use MERIT to brief are quite possibly never in a briefing situation (i.e., NCOs at an LM2 meeting).

L. QUESTION 17: "I AM CONFIDENT IN THE ACCURACY THAT MERIT PROVIDES."

1. Survey Scores

Figure 17 (page 43) illustrates the survey responses for this question. One hundred thirty one respondents (59 percent) had confidence in the data provided by

MERIT. Sixty respondents (27 percent) did not have confidence in the data. Fifteen respondents did not answer this question.

2. Discussion

A major trend in the written portion of the survey pointed to concerns with accuracy. The feedback for accuracy is very interesting in that it primarily focuses on the information that MERIT displays. The comments from those who disagreed reflect a

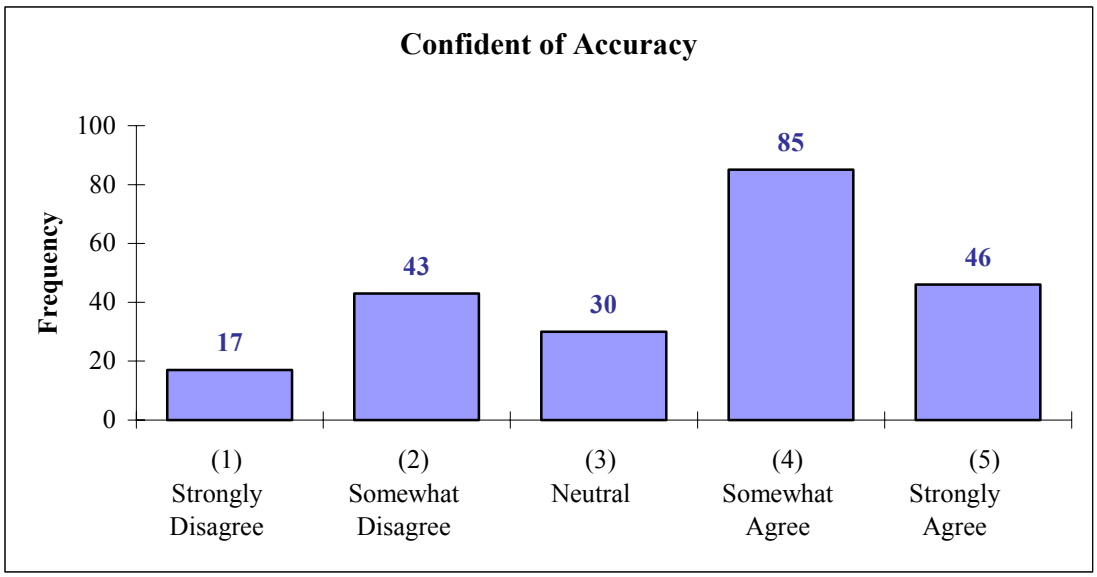

Figure 17: Confident of Accuracy Histogram

lack of understanding about the physical architecture of MERIT; that it "pulls" what is entered into the class I systems. Errors in MERIT are due to data entry errors into the legacy systems (MIMMS and SASSY). Some users believed that someone "types the information into MERIT" and this activity results in an inaccurate system. There were many comments that focused on "garbage in, garbage out," and then proceeded to explain that MERIT needs to display the correct information. Overall, there seems to be a general misunderstanding that MERIT is a transactional system. The feedback makes assertions that the users understand that MERIT is not a transactional system, but this understanding is countered with feedback from the same user stating the contrary (the garbage out is due to errors with MERIT transactions).

Other comments highlighting accuracy shed light on inadequate reconciliations. MERIT is not able to reflect correct data if incorrect data is in the class I system. Specific comments were:

- Accuracy of information. Garbage in is garbage out.
- As with any reporting system it takes time to update and it does not reflect the most current view of the Marine Corps. Personally I have fount ERO's that I have closed weeks before still being reported on MERIT. However these problems are isolated but are bugs that should be worked out before making this the future reporting system of the Marine Corps.
- I have a concern that commanders will rely on MERIT to provide accurate data. Current operational tempo has adversely impacted accurate SASSY reporting and status of equipment on hand.
- Does not always reflect what is shown on the LM2. This is mostly due to failure to key punch the information on time.
- The site is routinely a day behind CONUS. This makes it at least two days behind FWD Deployed units. Corrections made to MIMMS reports are not always updated properly to MERIT. This also applies to MARES reports. It is used exclusively, by higher, to track readiness in theater. We already have a few reports that do that. The DPR and LM2 provided through the FTP site is more accurate than MERIT. MERIT's nice look and "ease of use" make it attractive to those who have never read a MIMMS or MARES report. In all honesty, I only use it because I have to.

3. Recommendation

The only remedy to increase users' perception of accuracy is education pertaining to MERIT. The users must understand that the errors displayed are due to the transactions inputting data into the class I systems (MIMMS and SASSY) and not due to MERIT.

M. QUESTION 18: "IF MERIT WAS REPLACED BY A DIFFERENT INFORMATION SYSTEM, WOULD YOU RECOMMEND THAT THE NEW SYSTEM ADOPT MOST, IF NOT ALL, OF THE FEATURES THAT MERIT PROVIDES?"

1. Discussion

The analysis of this question reveals overwhelming agreement that the "functionality" that MERIT provides should be continued, either through MERIT or within GCSS-MC. Figure 18 (page 45) illustrates the survey responses for this question. The pervading feeling is that MERIT is a "good tool." However, the usefulness of MERIT is questioned due to it being viewed as a "legacy system." It should be understood that MERIT is not a legacy system; it displays data from legacy systems. Whether MERIT is incorporated with GCSS-MC is not the issue. The issue is whether GCSS-MC can provide the same functionality that MERIT provides, whether from a built-in capability or through "bolting on" MERIT to GCSS-MC. Twenty one respondents did not answer this question.

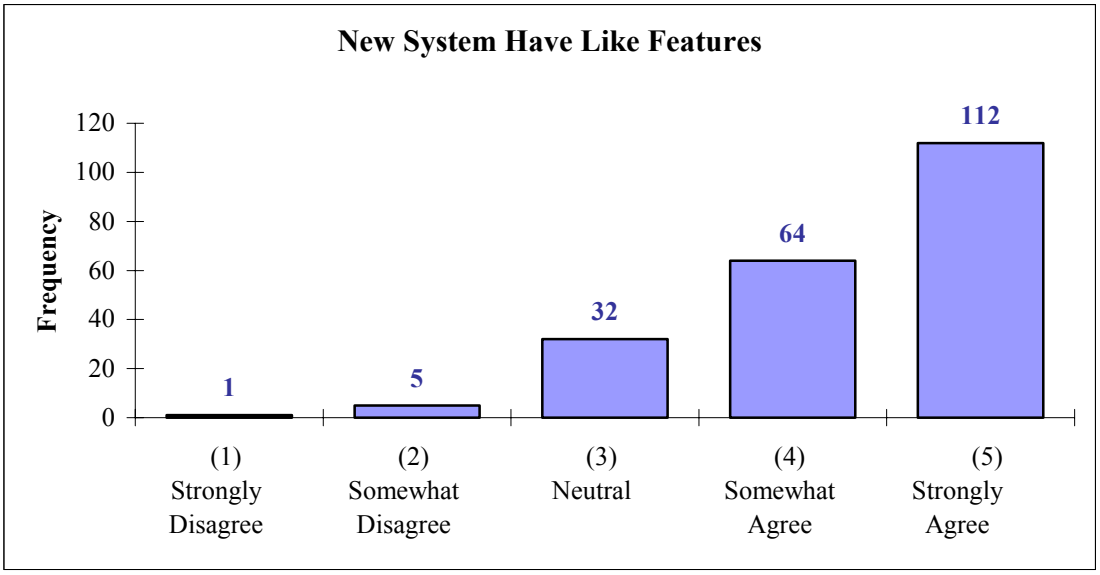

Figure 18: New System Have Like Features Histogram

Functionality is questionable regarding current users and specific uses. Comments pertaining to functionality were directed at wanting more capabilities added to MERIT. There were several comments wishing for MERIT to become a transactional

system. What seems to be misunderstood is that the transactional systems are established with SASSY and MIMMS, and that MERIT reveals that data. Specific comments were:

- My greatest concern is that when the equipment is at the IMA, it doesn't give me a linking organic ERO. So we have to cross reference the information with RMS (Readiness Management System).
- Parts on order portion of MERIT only provide using documents. Visibility of the Due Source documents would be much more useful in providing supply assistance to the MEFs in help getting parts problems resolved.
- Provide an interactive capability for unit Supply Officers to validate/comment on the accuracy of MERIT information per UIC/AAC. This will allow commanders to determine the level of confidence in the information presented.

2. Conclusions

MERIT is not incorporated into GCSS-MC, nor is its functionality available in GCSS-MC. The overwhelming feeling among users is to either ensure MERIT is incorporated into or its functionality is present within GCSS-MC. MERIT is viewed among users as a success, a tool that works. Users do not want to see a valuable tool disappear. However, the tool itself is not the issue that must continue. Whether MERIT is "bolted onto" GCSS-MC or whether a similar program with the same capability is provided is not the concern of the user. Users desire to continue the progress by having a tool that provides the help that MERIT provides. Specific comments were:

- That the capabilities be lost and that we go and try to reinvent the wheel. I have been doing this work for 32 years and I have seen the Marine Corps fail miserably with trying to 'invent' AISs. This (MERIT) is a success that was taken off the shelf, and that should not be lost! It should be incorporated into GCSS-MC.
- I like the features which MERIT offers. Would like to see (as described in question #18 above) many of these features incorporated into the future LM IT - GCSS MC.
- Why do we need MERIT? From what I understand MERIT is being develop separately from the program that is going to replace ATLASS II+ and MIMMS. Why are the capabilities of MERIT not included in the replacement program?

- Whether we stay with MIMMS, go to ATLASS or move to an entirely new system, this type of tool needs to be retained.

N. QUESTION 19: "HOW WOULD YOU DESCRIBE YOUR OVERALL SATISFACTION WITH MERIT?"

1. Survey Scores

Figure 19 (page 47) illustrates the survey responses for this question. One hundred seventy six (77 percent) respondents reported that they were overall satisfied with MERIT. Of equal importance is eight percent of the respondents are dissatisfied with MERIT. The underlying belief is that the users of MERIT are satisfied with a product, accepting its advantages and shortcomings, which aims to be a tool that facilitates their work requirements.

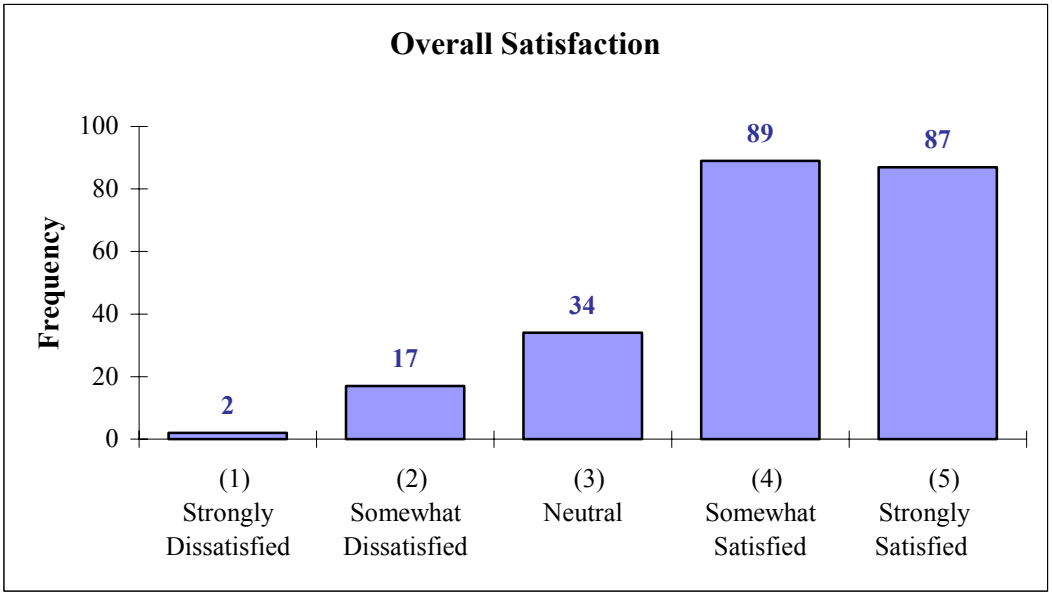

Figure 19: Overall Satisfaction Histogram

2. Discussion

MERIT is a great tool. The following comments are included to reveal the positive feedback regarding MERIT.

- I have no concerns other than I wish I had this program 30 years ago.

- Great tools for someone in my billet. Allows me the ability to quickly see what is going on in units without spending hours on the phone. Give me the ability to help identify shortfalls/problems within the MT field easily.
- MERIT is very useful at the battalion level or higher. A great tool for staff level managers and commanders.
- Have a good day. I retire in 29 days. Give a Bravo-Zulu to the whole MERIT team.

3. Conclusion

Users believe MERIT is a valuable tool and they are satisfied with its capabilities.

O. QUESTION 20: "DO YOU FEEL THAT MERIT SAVES YOU TIME?"

1. Survey Scores

Figure 20 illustrates the survey responses for this question. One hundred sixty seven (81 percent) respondents reported they save time by using MERIT. Twenty nine respondents did not answer this question.

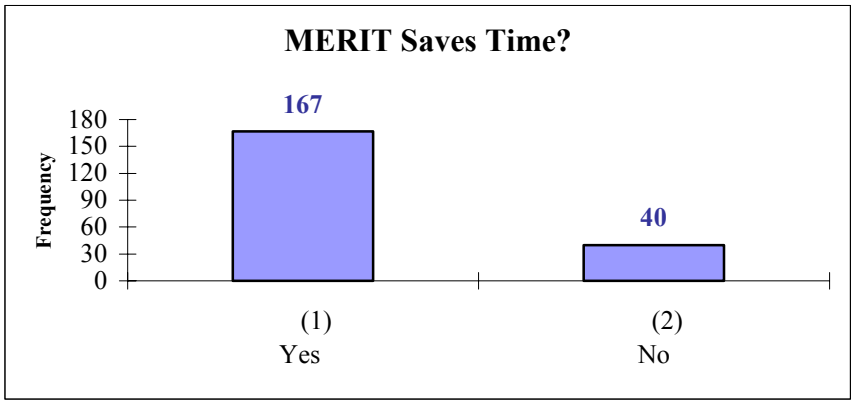

Figure 20: MERIT Saves Time Histogram

2. Conclusion

The result of this statistic is not surprising. The usage of MERIT would not be such without the user receiving benefit in the form of "saved time." The time savings allows personnel to focus efforts on other tasks at hand. This validates the assertion of LOGCOM that "MERIT is a time saver."

P. OTHER THEMES

1. Endorsement: There is Insufficient Endorsement of MERIT

Endorsement is the mechanism by which people are convinced to use the program. Endorsement signifies that upper leadership is expecting lower echelons of command to use the system and report what it displays. Currently, though receiving some endorsement, MERIT is seen as a tool that may be available which retrieves information, but if the information being displayed is inaccurate, it can be "explained" as MERIT not having the "latest information." Specific comments were:

- Official HQMC or GCSS-MC endorsement would be nice!
- It is significantly important for the Corps to undergo a cultural change that will assist with MERIT becoming the "one watch"/source for materiel readiness reporting. This needs to occur with I&L making MERIT the standard for such reporting, and then advertising that standard from the advocate.
- I think MERIT is a valuable tool. Unfortunately, the command has not been able to break away from the ad hoc locally created reports. At this particular unit, this is not a significant issue due to the limited amount of equipment. The command also does not utilize SASSY to account for on hand equipment. This reduces the impact of MERIT.

2. Marketing: Insufficient Marketing to Elevate MERIT Availability

One of the single most important keys to success for automated information systems and decision support tools is to make its availability known. Also important is to be able to market the vast capability and functionality that a tool can provide. MERIT seems to be gaining popularity through word-of-mouth. Though introduced through various schools (i.e., Tactical Logistics Officers Course (TLOC), Advanced Logistics Officers Course (ALOC), etc.), a focused marketing campaign would facilitate awareness. However, the greatest marketing that a program can receive is to be adopted by its leadership as the standard by which lower echelons of command are held responsible. Specific comments were:

- No one knows about it and it's hard to get help with.

- Hardly anyone knows of it and no information is being provided on how to use it. I feel that it is a great web site and should be used on a more consistent basis for the battalion level.
- That not enough unit commanders are briefed on the capability of MERIT.

VI. FOCUS GROUP DEVELOPMENT, SCOPE, AND ANALYSIS

A. DEVELOPMENT AND SCOPE OF THE FOCUS GROUP

The intent of the focus group was to conduct qualitative research on how well MERIT served its intended purpose as a readiness reporting tool for Marine Corps ground equipment. This analysis would augment (either validate or differ from) the results of the survey. The maintenance management focus groups consisted of MERIT users, while the supply administration focus group consisted of personnel who provide the data input that MERIT draws from. One of the findings from the maintenance management focus groups was the perception that the property accountability data in MERIT was not accurate. Since supply sections are the input source for that data we decided to look at this aspect during the supply administration focus group. The overall purpose of the supply administration focus group was to gain a better understanding of the property accountability process and its challenges.

Three focus group sessions were conducted at the Marine Corps Logistics Chain Analysis Team (MCLCAT) West's conference room at Camp Pendleton, CA. All focus group participants were advised at the beginning of the session that their responses would be anonymous. Additionally, the sessions would be recorded by audiocassette to augment note taking for transcription purposes.

1. Maintenance Management Focus Groups

Two sessions were conducted with maintenance management (04XX military occupational specialty (MOS)) personnel on 28 and 29 June 2004. Six Marines participated in the 28 June 2004 session. Three Marines participated in the 29 June 2004 session. There was a total of one officer, six SNCOs, and NCOs. Unit representation was from I MEF, to include the Wing, Division, and Force Service Support Group (FSSG). Their ranks and responsibilities ranged from the NCO at the unit (battalion/squadron) level to the maintenance management officer (MMO) of 1st Marine Division (MARDIV). Overall, most of the participants were SNCOs with up to 26 years of experience.

2. Supply Administration Focus Group

One session was conducted with supply administration (30XX MOS) personnel on 23 July 2004. Seven Marines participated in the 23 July 2004 session. One participant was from FSSG, the other six participants were members of MCLCAT West, with previous supply administration experience at the unit level. There were two officers and five SNCOs.

3. Semi-Structured Interview

Also included is a personal interview conducted on 23 July 2004. This semi-structured interview was with a maintenance management officer who used MERIT while deployed in support of Operation Iraqi Freedom (OIF). Our first objective was to determine how well MERIT served its intended purpose in a deployed environment. Additionally, we sought to gain more detailed insight into how well MERIT facilitated property accountability in a deployed environment.

B. ANALYSIS OF MAINTENANCE MANAGEMENT FOCUS GROUPS

1. "How Did You First Learn About MERIT?"

Methods by which Marines discovered MERIT were varied and informal. Specifically identified were:

- Brief (five to ten minutes) at the Logistics Officer Course, Camp Johnson, NC.
- Brief (ten minutes) at the Tactical Logistics Officer Course, Quantico, VA.
- Brief at commodity chief's courses.
- TechNet website.
- Classes from Darrell Waters (MERIT subject matter expert).

The classes from Mr. Waters were the most effective. One Marine stated that he received several classes that totaled three to four hours.

2. "To What Extent Were You or Your Unit Directed to Use MERIT?"

I MEF sent a message, dated 092259Z JAN 04, directing the use of MERIT to its subordinate commands. However, it appears the "word" was not adequately passed down the chain of command, as the focus group participants were not aware of the direction. 1st MARDIV directed subordinate units to use MERIT for specific reports. Others used MERIT because their higher headquarters used it and wanted to ensure what they saw was consistent with what higher was looking at. Others were directed to use it after they showed it to their officer-in-charge (OIC) or commanding officer (CO). Most used MERIT on their own initiative after discovering it.

3. "Think Back to When You First Started Using MERIT. What Were Your Initial Impressions?"

The overall initial impressions of MERIT were positive. Participants stated it was very easy to use and saved a significant amount of time with report preparation. This was particularly true for Marines working in maintenance management sections at higher headquarters (i.e., Division, Group, or Regiment), where preparation of consolidated readiness reports for several subordinate units was a primary responsibility. One Marine stated he saved nine hours per week on preparing reports. Another Marine stated report preparation that once took two days now only took a few hours. Many also stated that it was very accurate in reflecting data from SASSY and MIMMS.

However, there were several negative first impressions. Some were confused by the GUI screen that first appears when you open the program. However, the most frequently cited negative opinion was that it was a "new" program, and that many people who were set in their ways initially were unwilling to change. In many institutions, particularly with the military, resistance to change is normal and a large barrier to overcome when new programs or procedures are introduced. MERIT should have an easier time of overcoming this resistance because its development resulted from a combination of initiatives in the logistics community and a request by the using units, via the Material Readiness Integrated Product Team (7). The challenge in the future is to get "buy-in" of the program at all levels of the commands, from the clerks to the

commanding officers. Although not specifically cited, there was probably some correlation between the "busy" GUI screen and the fact that many were put-off by its "newness." The program itself does not look like anything Marines have used before, personally or professionally, so adapting to this type of web-based interface may be difficult to accomplish, particularly for the "computer-challenged" Marines. Additionally, one participant stated that he has seen new software programs come and go, creating the perception that perhaps MERIT was the latest fad in software "solutions."

4. "How Easy Was the Transition to Using MERIT?"

No problems were reported.

5. "How Did MERIT Help You Perform Your Duties?"

Aside from significant time savings for report preparation mentioned earlier, many cited the quicker and easier access to both maintenance management and supply reports. This enabled more accurate bi-weekly reconciliations between supply, maintenance management, and commodity sections. Also, maintenance management could "manage" daily with quick and easy access to information. This heightened visibility instilled a greater sense of urgency within sections to fix problems that were on display to anyone with access to MERIT. Examples include: close EROs that are complete and follow up on backordered repair parts and equipment inducted into intermediate level maintenance.

6. "In What Way Was MERIT a Hindrance Compared to What You Used Before?"

No hindrances were reported.

7. "What Features of MERIT Do You Most Like?"

Participants cited the following:

- Tracking number for repair parts that have been shipped.
- Easy to teach and learn.

- Mouse over capability.
- Readiness percentage by TAMCN.
- Data sorting features.
- Ability to export reports to Microsoft Excel.
- Visibility of supply reports.
- Easy maneuverability through the different features of the program.

8. "If You Could Change One Thing About MERIT, What Would It Be?"

The inability of MERIT to produce reports for regiments, Marine Air Groups (MAG), or intermediate maintenance activities (IMA) sized units was cited. A Regiment, MAG, and IMA are all one level below the Division, Marine Air Wing (MAW), and Force Service Support Group (FSSG), respectively. Most participants agreed this was necessary since these units are important links in the maintenance management chain.

There was a concern on how the supply rating was calculated. When the supply rating is calculated for a unit report, instead of factoring in deficiencies by individual TAMCN, bottom line excesses were offset by the bottom line deficiencies for all individual TAMCNs within a unit. This resulted in an in accurate supply rating and, as a result, an inaccurate M/R rating. Other recommendations were:

- Graph/chart wizard feature.
- History files of maintenance/data transactions.
- Ability to import reports into Microsoft Power Point.
- Include all equipment resident on the unit mechanized allowance list (MAL). MERIT only reports Marine Corps automated readiness evaluation system (MARES) and Marine Corps ground equipment resource reporting (MCGERR) equipment.
- Add change tracker feature for reports.
- One log-in for other systems accessed via MERIT (i.e., DLA's WEBCATS).

9. "What Is Your Overall Impression of MERIT Now?"

Consensus was very positive.

10. Other Issues

Two additional concerns were addressed throughout the course of the focus groups that cannot be assigned to any one question: property accountability and enforcement. The MAL is the unit's master equipment accountability report, maintained by supply. Maintenance management personnel now have easy visibility of the MAL and can quickly identify discrepancies between the "on hand" quantities reported in the LM2 and the MAL, via MERIT, on a daily basis. The maintenance management personnel reported that there were numerous discrepancies, which created the perception that supply personnel are not adjusting the property records in a timely manner. To note, MCO P4400.150E (Consumer-Level Supply Policy Manual) requires units to update the MAL on a monthly basis. As mentioned in the chapter overview, this concern led to a second focus group with supply personnel.

Another concern was "enforcement" of procedures and policy. Although adoption of MERIT was quickly spreading, none of the major subordinate commands were enforcing use via their inspection offices. Another aspect of enforcement is training. Thus far, the formal Marine Corps schools have briefed the overview of what MERIT is (five to ten minutes). Time has not been allocated in these courses to provide introductory instruction of MERIT in the course curricula. The focus group participants considered enforcement and training in schools necessary to MERIT's survival and success.

C. ANALYSIS OF SUPPLY ADMINISTRATION FOCUS GROUP

1. "Please Tell Us About Challenges Maintaining Accountability?"

Communication with commodity sections as equipment moves into and out of a unit was the biggest challenge. All the supply chiefs stated they updated property account records as they became aware of changes. However, they were not always informed when commodity sections moved equipment into and out of the unit (i.e., temporary loan of equipment to another unit, receipt of new equipment, or redistribution of equipment). It was not uncommon for the supply section to be unaware of changes to the property records until quarterly reconciliations with the commodity sections.

However, some did state that maintaining good working relationships and communication with the commodity sections negated this problem.

The supply sections were also unanimous in stating that installing RFID tags on all equipment was the most effective method to maintain equipment accountability. The intent behind this idea would be to scan equipment whenever it entered or left the unit area. This would alert supply of a change to the property records and allow them to follow up with that section for the paperwork.

Another challenge was the proficiency level of the supply clerks responsible for maintaining the property records. The overall consensus was that Marines responsible for supervising and executing property adjustments do not have the adequate level of proficiency, despite the best efforts of on the job training (OJT). The lack of proficiency is caused by two factors: Marines are only taught the basics at MOS school; and the supply system, to include the transactional system, has grown increasingly complicated. One supply chief put the error rate of his section (for property transactions) at 25-30 percent.

2. "Are You Using MERIT or Have You Ever Used MERIT? If Not, Then Why? If Yes, in What Capacity?"

Overall, the supply participants viewed their use of MERIT as irrelevant. Their opinion was that they provide the data (input) to MERIT, they know what the MERIT data shows (MERIT pulls its property data from the master accountability records), and therefore, they do not need to look at MERIT to know what the data shows ("what is on the MAL is what is in MERIT"). Additionally, supply sections are mandated by the MCO P4400.150E to use the MAL as the master property accountability document.

D. SEMI-STRUCTURED INTERVIEW

1. Using MERIT in a Deployed Environment

The biggest concern was connectivity. The non-secure Internet protocol router (NIPR) network did not have sufficient bandwidth to support its use. As a result, the secret Internet protocol router (SIPR) network was used for MERIT; better connectivity

and more bandwidth. However, one drawback of using SIPR was that you could not drill down to the same level of detail as you could on NIPR. Still, this was an acceptable tradeoff. When connectivity problems did arise, the deployed unit would call LOGCOM to trouble shoot. However, on weekends the LOGCOM duty officer did not always know what MERIT was, which caused additional delays.

MERIT was also used to brief and provide readiness reports to the joint task force (JTF) command. Since JTF was looking for very specific information, MERIT was able to produce reports tailored to their requirements. All briefs for the JTF were prepared using MERIT information. Another challenge was getting "buy in." The goal was to get unit commanders to use MERIT as a management tool, but not as a report card. Overall, once JTF and commanders were using MERIT everyone was on "one watch," meaning they were all synchronized.

2. Property Accountability in a Deployed Environment

Some Marines believe that the LM2 report is obsolete. The MAL is the "boss" file, or the master document. The LM2 is supposed to reflect quantities on the MAL. Therefore, maintaining both reports is a duplication of effort. MERIT should incorporate all equipment on the MAL, which would enable the user to produce any type of report desired.

In the meantime, there is a concern that discrepancies between the LM2 and MAL are a result of supply not adjusting the property records as events occur, which change on hand quantities. If this occurs, it is maintenance management's responsibility to apply pressure on supply to adjust the records by noting comments in the remarks section of the LM2. It is also a command responsibility to ensure equipment accountability occurs. Within the interview subject's unit, the commanding general (CG) mandated equipment accountability a command priority, resulting in a mirror image MAL and LM2.

3. Additional Comments

MERIT should incorporate control charts for national stock numbers (NSNs). Control charts when matched to the Training Effectiveness Evaluation Plan (TEEP)

would help to determine what equipment and NSNs cause drops in readiness. Using unit supply accounts should use MERIT in order to better integrate the supply/maintenance management team. This includes intermediate level supply, which could use it to control their stock levels as well. This would also help integrate MERIT into the RFID tag initiative (the database is maintained at intermediate level supply).

MERIT should be a formal course of instruction at both Marine Corps schools (MOS, Chiefs courses, etc.) and external agencies (i.e., DLA). This would enable MERIT to be used to its full potential by all ranks and levels of command. Knowledge of the program enables DLA to better control stock, since they can track the performance of specific equipment. This would also encourage users to provide recommendations for future features of MERIT.

Some very creative solutions to problems were implemented by users who understood its full capabilities. For example, while in OIF one supply officer used the search feature to locate his equipment for accountability purposes. He simply input the serial number and TAMCN to find the ERO number (if available). Every piece of equipment will eventually have an ERO opened, whether for corrective or preventive maintenance. Once an ERO has been opened, you can determine what unit had physical possession of a piece of equipment.

E. SUMMARY

The focus groups and interview provided detailed insights into how well MERIT is serving its intended purpose. Their comments lead us to conclude that MERIT's overall impact is positive. However, there is still room for improvement. Recommendations are provided to help MERIT better serve its customers.

1. Perception That Readiness Equations Are Inconsistent

In both the maintenance management and the supply administration focus groups, the rating calculations in MERIT were questioned. The MRIPT approved the new definitions for material readiness in April 2002, where the material readiness (MR) rating is equal to the S rating multiplied with the equipment operational capability (R) rating.

$$MR = S * R = \left(\frac{\text{possessed} - \text{deadlined}}{\text{authorized}} \right) \text{ where}$$

$$S = \left(\frac{\text{possessed}}{\text{authorized}} \right) \quad \text{and} \quad R = \left(\frac{\text{possessed} - \text{deadlined}}{\text{possessed}} \right)$$

These definitions were incorporated in MCO 3000.11D, Marine Corps Automated Readiness Evaluation System (MARES), dated 15 February 2004. The MR calculation shown above was designated as the "universal Marine Corps material readiness measure."

In the maintenance management focus group, the S (supply or equipment on hand) rating calculation in MERIT was questioned. The users believed the equation that calculated S rating in MERIT was not the same as the one stated in MCO 3000.11D. Instead, they believed that the MERIT S rating equation took into account the excess equipment units had on hand, resulting in the following equation:

$$S = \left(\frac{\text{possessed} - \text{excess}}{\text{authorized}} \right)$$

What actually occurred was each individual TAMCN was calculated using the S rating equation stipulated in MCO 3000.11D. However, when all the TAMCNs were "rolled up" to provide a S rating for that "functional" or "commodity" area, the other S rating equation was used, because the excess of one TAMCN cannot off-set the deficiencies of another TAMCN. See Figure 21 (page 61) for an illustration of this.

The supply administration focus groups questioned why the R rating, and therefore the MR rating, could be a negative number. The validity of the calculations used in the MERIT program was questioned. What actually occurred was the unit in question reported more quantities deadlined than the quantity that they possessed. The erroneous data inputted by the unit led to an erroneous R rating. While the MERIT programmers could have made the R rating calculation reflect zero percent for these cases, they opted to let the formula remain as is, in order to give the commands the opportunity to quickly see where the erroneous data was. See Figure 22 (page 62) for an illustration of this.

TAMCN	Authorized	Possessed	Excess	Deficiency	Deadlined	S	R	MR
E0149	21	15	0	6	1	71%	93%	67%
E0150	17	11	0	6	0	65%	100%	65%
E0180	690	598	0	92	14	87%	98%	85%
E0207	315	295	0	20	12	94%	96%	90%
E0277	418	372	0	46	4	89%	99%	88%
E0330	642	610	0	32	36	95%	94%	89%
E0665	420	366	0	54	27	87%	93%	81%
E0726	64	58	0	6	0	91%	100%	91%
E0727	658	674	16	0	0	102%	100%	102%
E0796	80	63	0	17	6	79%	90%	71%
E0846	1001	839	0	162	87	84%	90%	75%
E0856	49	41	0	8	3	84%	93%	78%
E0915	1146	1079	0	67	40	94%	96%	91%
E0935	812	724	0	88	43	89%	94%	84%
E0942	81	67	0	14	13	83%	81%	67%
E0946	45	34	0	11	3	76%	91%	69%
E0947	333	277	0	56	68	83%	75%	63%
E0948	82	66	0	16	9	80%	86%	70%
ALL	6874	6189	16	701	366	90%	94%	84%

$$S = \left(\frac{\text{possessed}}{\text{authorized}} \right) \qquad S = \left(\frac{\text{possessed} - \text{excess}}{\text{authorized}} \right)$$

Figure 21: Supply (S) Rating Calculation (After Ref. (8))

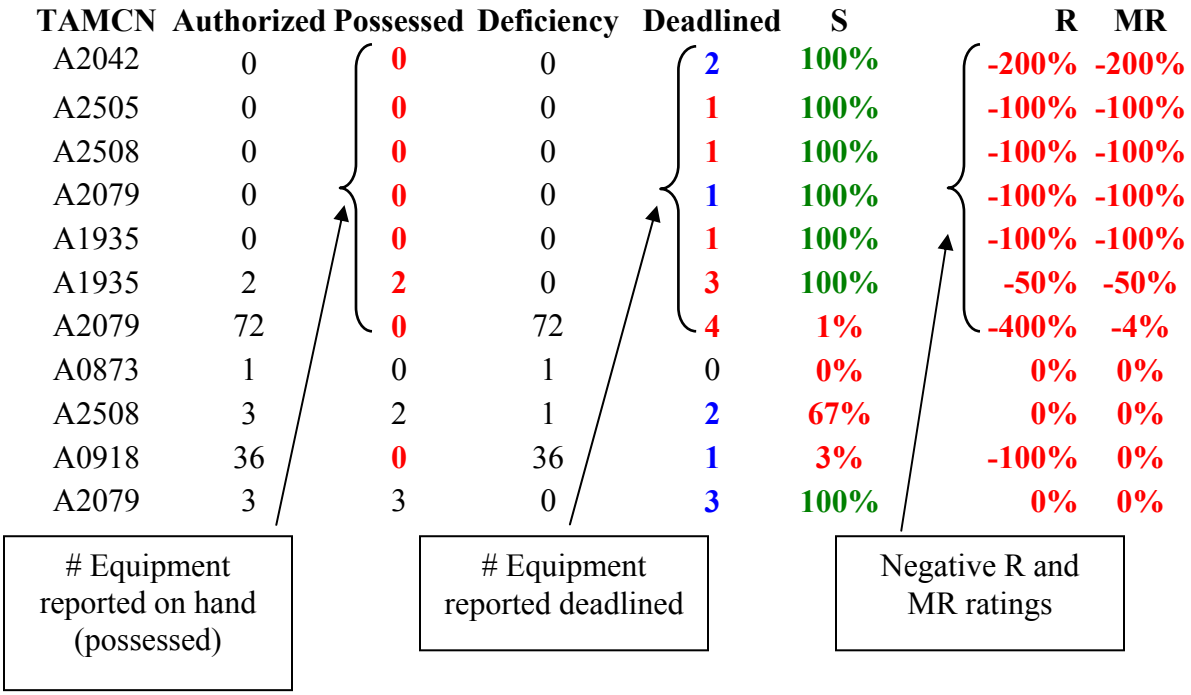

Figure 22: Equipment Operational Capability (R) Rating Calculation (After Ref. (9))

F. RECOMMENDATIONS

- Incorporate proficiency with MERIT as a learning objective within the curriculum at all training and schools.
- Mandate use of MERIT within Marine Corps Orders and Directives.
- Incorporate a function into MERIT that will produce reports for regiments, MAGs, and IMAs.
- Incorporate history feature that tracks transactions and changes to reports.
- Provide visibility to all equipment on a unit's MAL.

VII. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this project was to research MERIT's potential as a decision support tool that identifies equipment best suited for performance based logistics contracts, and to assess user perceptions through surveys and focus groups. User perceptions were analyzed to determine the current performance of MERIT and recommend improvements. We believe that lessons learned from this study can be applied to the future development of other decision support systems.

MERIT has tremendous potential. However, no software tool can be effective if the process that feeds into it is broken. Ultimately MERIT is just an informational tool that reports information output from the process, which in this case is the entire Marine Corps supply chain. In some ways MERIT has not necessarily made managing the supply chain easier, at least not in the short term. Rather, MERIT has held up a large microscope to the entire supply chain, exposing all the weak links. This will require Marines at all levels to be more vigilant as commanders now have greater visibility over their link in the supply chain. If units "short-cut" or do not understand the property accountability or maintenance management reconciliation process, it will quickly become apparent through MERIT. This provides the ultimate long term benefit to the Marine Corps: weak links can be quickly spotted and fixed, resulting in a robust supply chain.

A. CONCLUSIONS

1. There Has Been No Official Endorsement for Continued Use of MERIT By Marine Corps Senior Leadership

Some users are resistant to embracing MERIT for various reasons. While there has been some "informal" discussion that MERIT is a successful and valuable readiness information tool, there has been no "formal" endorsement of the program by either Headquarters Marine Corps (HQMC) or Installations and Logistics (I&L). Future adoption of MERIT by more users will require official endorsement and direction from senior Marine Corps leadership.

2. MERIT Is a Valuable Material Readiness Information Tool

The responses to the survey and focus groups are overwhelmingly skewed in favor of MERIT. The consensus is that MERIT is a software solution which improves our current maintenance management and supply systems and should also be applied to future systems under GCSS-MC.

3. But There Are Significant Misconceptions of MERIT's Architecture by Users

There was a trend from both the survey and focus group responses that indicate a general misconception or lack of understanding by users of MERIT's architecture and how it operates.

4. There Is Insufficient Training on MERIT Throughout the Marine Corps

For a web-based tool to succeed within the entire institution, education and training aids must be made available. Currently, informational classes are being offered at a variety of schools. Though MERIT is receiving enormous "word of mouth" advertising, continued adoption will be facilitated by publishing a user's manual and interactive tutorial.

B. RECOMMENDATIONS

1. Headquarters Marine Corps (HQMC) Should Formally Endorse and Mandate Use of MERIT for All Levels of Command to Unify Material Readiness Reporting

Immediate HQMC official endorsement can be provided via naval message to all MSCs. This can be followed up with inclusion in updated material readiness orders and directives, as required.

2. MERIT's Functionality Should Be Incorporated in GCSS-MC

There was an overwhelming positive response that MERIT users were satisfied with its functionality and belief that its functionality should be incorporated into GCSS-MC.

3. LOGCOM Should Create a Consolidated User's Manual and Tutorial Program That Can Be Downloaded at the Unit Level

Not only would this be an ideal method to provide training to the using units, but it is also an efficient way to educate users on MERIT's architecture and functionality (i.e., the difference in how it calculates the S rating for one TAMCN and for a functional area roll-up).

4. Formal Instruction on MERIT Should Be Provided at All Basic MOS Courses for New Users

To further the awareness and use of MERIT, formal training requiring demonstrated proficiency should be incorporated as instruction blocks at schools. While MERIT has been briefed at a variety of logistics courses (i.e., ALOC, TLOC, Maintenance Chiefs Courses, etc.), MERIT is used by more than the logistics community. Equipment readiness is a management issue and instruction should be given to all occupational fields (i.e., Tanks, Field Artillery, etc.).

5. Facilitation of MERIT Education Should Be Conducted by MCLCAT

MCLCAT should be key facilitator for the program's adoption by providing MERIT training to the fleet. This is consistent with MCLCAT's mission as a facilitator for logistics modernization.

6. Bandwidth Analysis Should Be Conducted to Decrease Time Required to Access and Load MERIT Pages

The time requirement to utilize MERIT in a deployed environment is a significant concern. Since the evaluation of bandwidth requirements was not part of our study, we

did not look at this issue further. However, it is recommended as an area for further study. If bandwidth requirements for MERIT can be reduced, it may impact its ability to be used via the NIPR network in a deployed environment, allowing users to have the same accessibility and level of detail that they are accustomed to in garrison.

7. Recommended Improvements to MERIT's Functionality

While most users have been satisfied with MERIT's functionality, some changes are recommended to improve its overall effectiveness:

- All units down to the battalion/squadron level should be represented in MERIT, to include deployed UICs.
- All TAMCNs should be incorporated into MERIT, not just the MARES reportable TAMCNs.
- Roll-up reports for the regimental-level (i.e., Regiment, MAG, IMA) should be incorporated.
- MERIT should maintain historical data on equipment transactions (i.e., maintenance status, parts status, etc.).

C. AREAS FOR FURTHER STUDY

Currently, MERIT gathers information from the many automated, stove-piped systems that make up the supply chain and provides a single portal to view this information. This ability adds substantial value since these systems do not communicate with each other, nor combine their data to provide relevant "snapshots" of maintenance and supply readiness.

This study also highlighted numerous areas that, if addressed, can broaden MERIT's application to more than just an information tool, and into a predictive tool for managing the supply chain and a decision support system (DSS) for both operational and supporting unit commanders. Two specific areas we recommend for further study are MERIT's potential as a DSS for operational and supporting unit commanders.

1. Decision Support for the Operational Commander

MERIT currently provides total asset visibility to the operational commander by showing warfighting assets (on hand quantities), accurate maintenance (R) and supply (S)

readiness rates, and which unit is best able to fight (equipment readiness), displayed via the MR rating. This form of virtual pooling speeds up the commander's decision cycle when assessing his capabilities and gives him greater flexibility when deciding what assets to commit. Additionally, the following capabilities should be considered for inclusion in MERIT, which would further enhance its ability to provide decision support to operational commanders:

- **Structured Query Reports.** A roll up of all requisitions for class IX repair parts and secondary repairables for specific operations or periods of time. This information can be used to forecast demand levels for class IX, and optimal inventory/stocking levels for both class IX and secondary repairables for future exercises, deployments, and contingencies.
- **Calculation of Stocking Levels.** Formulas could be incorporated to calculate the optimal stocking level based on variables such as:
  - Cost
  - Availability
  - Weight & cube
  - Projected environment
  - Failure rate
  - Re-supply lead time
  - Combat Replacement Factor
- **Table of Organization Data.** With usage data, MERIT could calculate projected level of:
  - Training and skill levels for required support personnel
  - Tools required for deployment
  - Space requirements for support equipment.
  - Staffing levels by military occupational specialty (MT, eng, etc.) – based on projected hours of maintenance.

2. Benefits to Supporting Units

In addition to increasing functionality for operational commanders, we have identified several areas that, if developed, can broaden the usefulness of MERIT to the item managers and/or acquisition logisticians. These areas would provide functionality

that would enable MERIT to serve as a decision support system, which improves readiness.

- MERIT should be able to calculate the MTBF for each individual PEI and major secondary repairables (transmissions, engines etc). Currently, MERIT is unable to compute an MTBF due to insufficient data. This begs the question "How do we capture appropriate data without over-burdening the operators?" One way would be to ensure serial numbers are inducted into the system either manually or with RFID when equipment enters the maintenance cycle. Additionally, appropriate base units of measurement for metric calculation must be identified (i.e., miles driven for rolling stock or operator hours for communication equipment). With this date you could then compare the manufacturer's projected MTBF to the actual MTBF and identify the "under-performing" items.
- Produce a list of "readiness degraders" for each PEI and major secondary repairables. Readiness degraders force items into a non-mission capable (NMC) status for supply or maintenance (NMCS or NMCM).
- Compare top readiness degraders with under-performing components to recommend "strong candidates" for depot level maintenance (DLM) or PBL contracts.

APPENDIX A: MATERIAL READINESS TRACKING PRIOR TO MERIT

Prior to the implementation of MERIT, the Marine Corps used various supply and maintenance management legacy systems to track the material readiness of equipment. This method had numerous detractors, such as: the legacy systems did not "talk" well to each other, the systems were updated on a weekly or monthly basis resulting in inaccurate and dated information, the output reports generated were difficult to read and understand by non-supply and maintenance personnel, systems were not "user-friendly", and extensive time was required to identify the root causes of maintenance problems from the reports.

The main computer system used for supply management is the Supported Activity Supply System (SASSY). The system used for maintenance management is the Marine Corps Integrated Maintenance Management System (MIMMS). These two systems do not interface well with each other, so supply and maintenance management personnel manually gathered required information from both to conduct weekly or biweekly reconciliation meetings. These meetings identified problems and updated statuses on maintenance and repair parts ordered. As the deputy director (Michael A. Williamson) for Studies and Analysis of Logistics Command (LOGCOM S&A) stated in an interview, "as you looked across the Marine Corps enterprise, no one was using the same information, so we couldn't really focus on fixing problems because we were focusing on reconciling data." (10)

Commanders are generally interested in information from each report. Since many of these reports are difficult to read and understand, many units generated their own database or spreadsheet to consolidate the information from the various reports into a single product. This placed additional work on the maintenance management staff to update and maintain, but gave the commander a concise report to view.

The regular reports that are routinely generated for the reconciliation meetings are listed and described below. Appendix B contains samples of each legacy system report. Appendix C contains samples of reports generated by MERIT (for comparison purposes only).

1. LM2 Report: this weekly report is the primary report used by commanders from the battalion/squadron level (lieutenant colonel) to the force level (lieutenant general) to track the maintenance readiness (And supply readiness as it relates to having the number of end items you rate) of their units. However, this report only tracks those items deemed "combat essential" by the Marine Corps, such as large weapons systems, vehicles, and some of the more complex and expensive communications systems (i.e., 7-ton medium tactical vehicle replacement (MTVR) truck, .50 caliber machine gun, and MRC-145 radio).

The format of this report is simple. It tells a commander: what he rates (I should have "this much" of a particular type of equipment), what he has (I am accountable for/own this much) and how much of his equipment is "up" or "down" (operational or deadlined). It does not track all the equipment he owns, some of which he may deem combat essential based on his mission. For example, a reconnaissance battalion commander believes that M-16 rifles and night vision equipment are combat essential based on the reconnaissance platoon's mission. However, this equipment does not appear on the LM2, nor can it be tailored to do this.

2. Daily Process Report (DPR): this daily report shows all items inducted into the maintenance cycle along with "why", "how long", "what's wrong", and "what's being done". This is the primary maintenance report that forms the basis for the LM2 and all other maintenance reports. All information inputted into MIMMS updates all the reports simultaneously.

3. Table of Authorized Material (TAM) Report: this is a weekly report (now daily in MERIT) that shows, by end item classification, all equipment (with an open maintenance record against it) inducted into the maintenance cycle and the length of time the item has been in the maintenance cycle. Its main use is to show the location of the equipment in the maintenance cycle (i.e., is it being fixed by the unit mechanics or has it been evacuated to a higher echelon/level of maintenance?).

4. Weekly Exception Report: this weekly report is a checks and balance tool for the commander. It highlights equipment that are not moving through the various stages of the maintenance cycle in a timely manner. For example, if an item requires repair parts but the order has not been placed within a specified length of time, the item will post to this report.

5. Weekly Material Report: this report shows all document (or tracking) numbers for parts on order that have not been received or cancelled. This enables a manager to focus on potential problems in either the supply system ("where is the part?") or the maintenance system ("did we receive the part and neglect to update the system?")

6. Marine Corps Readiness Equipment Module Report (MCREM): MCREM is a DOS based program that compiles (for the entire USMC) the same readiness information described above. It is published once a week by a contractor working for I&L and distributed via e-mail to interested parties.

7. Daily Transaction Listing: this daily report shows all transactions inducted into MIMMS, which updates the DPR. It shows transactions that processed with no errors, some errors, or did not process (inducted but failed to update).

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APPENDIX B: SAMPLE CURRENT READINESS REPORTS

SAMPLE LM2 REPORT

```
********************************************** ON LINE PRINTING ********************************
**                                                                                              **
**                    RECIPIENT: EBHB       GROUP ACCOUNT                                      **
**                      USER-ID: EBHB31     SUPPLY                                             **
**                                                                                             **
**                    REPORT_ID: L415W61C   MIMMS WEEKLY LM2 REPORT                            **
**                      VERSION: 20040318 170059                                               **
**  FROM HIERARCHY CODE: M14210                    FROM PAGE: 000001                          **
**     TO HIERARCHY CODE: M14210                     TO PAGE: 000004                          **
**      PAGE OUTPUT LIMIT: 000004                                                             **
**                                                                                             **
*************************************************************************************************
```

DATE: MAR 19, 2004
TIME: 092525

A4150W52 MARES LM2 UNIT REPORT MC-4431-03 DATE 04/078
1ST BN 25TH MAR UIC PAGE 1 MC PAGE 60
UIC M14210 MAJOR CMD M14000

TAM NO	TAM NOMENCLATURE	REPT AUTH	REPT POSS	EXCESS QTY	DEADLINED-EQUIP SERIAL-NO	ID-NO	ORIGINAL DATE-DL	DATE-OF PRES-COND	PRES COND	PRES EOM	PRES HOLDER	STATUS DAYS	ERO NO
A1530	AN/PPN-19(V)2	2	0		NONE REPORTED ON DEADLINE								
					REMARKS ABOUT TAM								
					040315								
					HQMC AUTH = 002								
A1935	RADIO SET, AN/MRC-138B	3	3		NONE REPORTED ON DEADLINE								
					REMARKS ABOUT TAM								
					040316								
					HQMC AUTH = 003								
A1957	AN/MRC-145	5	5		NONE REPORTED ON DEADLINE								
					REMARKS ABOUT TAM								
					040316								

						HQMC AUTH = 005
A2042	RADIO AN/PRC-138	2	2		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040316 HQMC AUTH = 002
A2065	RADIO SET AN/PRC-104	3	7	4	NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040315 HQMC AUTH = 003
A2069	RADIO SET, AN/PRC-113	3	5	5	NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040316 HQMC AUTH = 005
A2070	RADIO SET, AN/PRC-119	36	36		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040316 HQMC AUTH = 036
A2074	AN/VRC-88D	16	16		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040316 HQMC AUTH = 016
A2075	AN/VRC-89D	2	1		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040316 HQMC AUTH = 002
A2079	AN/PRC-119F	36	36		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040316 HQMC AUTH = 036
A2164	RADIO SET, AN/VRC-83	2	3	1	NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040315 HQMC AUTH = 3
A2167	RADIO SET, AN/VRC-88A	8	3		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040315 HQMC AUTH = 8

A2168	AN/VRC-89A	2	1		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040315 HQMC AUTH = 2
A2169	AN/VRC-90A	2	2		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040316 HQMC AUTH = 002
A2505	SWITCHBRD TELE, SB3614	2	2		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040316 HQMC AUTH = 002
A2542	AN/GYK-47 (V)6	2	0		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040315 HQMC AUTH = 002
A2545	AN/GYK-47 (V)7	2	0		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040315 HQMC AUTH = 002
A8100	CONTROL GROUP RADIO	17	17		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040316 HQMC AUTH = 017
B0730	MEP-16B	2	0		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040315 HQMC AUTH = 002
B1291	LTWT DECON UNIT	3	2		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040316 HQMC AUTH = 003
D1001	TRK, AMB, 4 LIT, 1 1/4T	2	1		NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040315 HQMC AUTH = 002
D1002	TRK AMB, M1035	2	3	1	NONE REPORTED ON DEADLINE REMARKS ABOUT TAM	040315

HQMC AUTH = 002

D1125	TRK HMMWV M1045/1046	8	8	NONE REPORTED ON DEADLINE								

REMARKS ABOUT TAM
040316
HQMC AUTH = 008

D1158	TRK, HMMWV M998/1038	32	32	NONE REPORTED ON DEADLINE								

REMARKS ABOUT TAM
040316
HQMC AUTH = 032

D1159	TRK HMMWV M1043/1044	11	11	NONE REPORTED ON DEADLINE								

REMARKS ABOUT TAM
040316
HQMC AUTH = 011

E0180	CIRCLE AIMING M2A2	4	4	NONE REPORTED ON DEADLINE								

REMARKS ABOUT TAM
040316
HQMC AUTH = 004

E0207	JAVELIN M98A1	8	8	NONE REPORTED ON DEADLINE								

REMARKS ABOUT TAM
040316
HQMC AUTH = 008

E0330	NIGHT VIS AN/UAS-12A	8	8	NONE REPORTED ON DEADLINE								

REMARKS ABOUT TAM
040316
HQMC AUTH = 008

E0915	SMAW	18	18	NONE REPORTED ON DEADLINE								

REMARKS ABOUT TAM
040316
HQMC AUTH = 018

E0935	LAUNCHER TOW, M220E4	8	8	NONE REPORTED ON DEADLINE								

REMARKS ABOUT TAM
040316
HQMC AUTH = 008

E0980	MACH GUN CAL 50 M2	6	6	M3013641	2498A	04/061	04/061	TRAN	3	M14210	017	AKP09

REMARKS ABOUT TAM
040316
HQMC AUTH = 006

E0989	MACH GUN 240G	29	29		U44281	9712A	04/055	04/076	NMCS	2	M14210	002	AKP00
					U53522	9712A	04/055	04/072	NMCS	2	M14210	006	AKP01
					REMARKS ABOUT TAM								
					040316								
					HQMC AUTH = 029								
E0994	MACH GUN, 40MM, MK-19	11	11		5425	8521A	04/070	04/070	NMCS	2	M14210	008	AKP37
					REMARKS ABOUT TAM								
					040316								
					HQMC AUTH = 011								
E1045	MULE AN/PAQ-3	2	1		NONE REPORTED ON DEADLINE								
					REMARKS ABOUT TAM								
					040315								
					HQMC AUTH = 002								
E1065	MORTAR 60MM M224	9	9		NONE REPORTED ON DEADLINE								
					REMARKS ABOUT TAM								
					040316								
					HQMC AUTH = 009								
E1095	MORTAR, 81MM, M252	8	8		NONE REPORTED ON DEADLINE								
					REMARKS ABOUT TAM								
					040316								
					HQMC AUTH = 008								
E1159	NIGHT VISION SIGHT	18	22	4	NONE REPORTED ON DEADLINE								
					REMARKS ABOUT TAM								
					040315								
					HQMC AUTH = 018								
E1460	RIFLE SNIPER M40A1	8	8		NONE REPORTED ON DEADLINE								
					REMARKS ABOUT TAM								
					040316								
					HQMC AUTH = 008								
E1475	RIFLE, SNIPER	2	2		NONE REPORTED ON DEADLINE								
					REMARKS ABOUT TAM								
					040316								
					HQMC AUTH = 002								
E1911	TEST SET, AN/TSM-152	2	0		NONE REPORTED ON DEADLINE								
					REMARKS ABOUT TAM								
					040315								
					HQMC AUTH = 002								

E1912 FIELD TEST SET TOW 2 0 NONE REPORTED ON DEADLINE

REMARKS ABOUT TAM

040315

HQMC AUTH = 002

TOTALS FOR THIS UIC ARE 351 336 9 QTY DL = 4

```
////////////////////////////////////////////////////////////
/  PACING ITEM READINESS                                   /
/                                                          /
/ S  RATING  EQUALS    .0  PERCENT                         /
/ R  RATING  EQUALS    .0  PERCENT                         /
////////////////////////////////////////////////////////////
```

```
////////////////////////////////////////////////////////////////////
/  END ITEM READINESS                                              /
/                                                                  /
/ S  RATING  EQUALS  93.2  PERCENT                                 /
/ R  RATING  EQUALS  98.8  PERCENT                                 /
////////////////////////////////////////////////////////////////////
```

* - PACING ITEM
** - LOCALLY REPORTABLE ITEM

$$\text{S RATING} = \frac{\text{POSS - EXCESS}}{\text{AUTH}}$$

$$\text{R RATING} = \frac{\text{POSS - D/L}}{\text{POSS}}$$

SAMPLE DAILY PROCESS REPORT

```
********************************************** ON LINE PRINTING ********************************
**                                                                                              **
**                    RECIPIENT: EBHB       GROUP ACCOUNT                                      **
**                      USER-ID: EBHB31     SUPPLY                                             **
**                                                                                             **
**                    REPORT_ID: L415D31D   MIMMS DAILY PROCESS REPORT (ORGANIC)               **
**                      VERSION: 20040318 163046                                               **
**  FROM HIERARCHY CODE: 1ST BN 25TH MAR          FROM PAGE:      000001                      **
**       TO HIERARCHY CODE: 1ST BN 25TH MAR          TO PAGE:      000005                      **
**         PAGE OUTPUT LIMIT: 000004                                                           **
**                                                                                             **
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DATE: MAR 19, 2004
TIME: 092320

A4150D32 DAILY PROCESS REPORT FOR MAJCMD 4TH MARDIV UNIT 1ST BN 25TH MAR
03/18/04 (4078) PAGE: 1

SHOP SECTION 1 SUB-SHOP A

ERO	TAM	ID	SERIAL #		CAT	RDD	PRI	NSN-IN-MAINT	NOMEN		DCD	DRIS	EOT		
AWTG-STAT	OWNER	JOB-STATUS	PARTS	CHARGE	ECH	QTY	X-EROS	MARES/DATE	DEFECT		DDL	DIS	ST/HOLDER		
	RCVD	DOCUMENT #		U/I	QTY	PRI		PART-NSN	PART-NAME	STAT	DATE	DIC/EXC	NMCS	LKH	ADV
AK102	D0475	09947A	225		K		13	5180-01-216-8655	HMMV TOOL KIT			4072	D		
	14210	4075-EVC HECH		0.00	2	1			TEDD-ALGN		6	66666			

A4150D32 DAILY PROCESS REPORT FOR MAJCMD 4TH MARDIV UNIT 1ST BN 25TH MAR
03/18/04 (4078) PAGE: 1

SHOP SECTION 5 SUB-SHOP 5

ERO	TAM	ID	SERIAL #		CAT	RDD	PRI	NSN-IN-MAINT	NOMEN		DCD	DRIS	EOT		
AWTG-STAT	OWNER	JOB-STATUS	PARTS	CHARGE	ECH	QTY	X-EROS	MARES/DATE	DEFECT		DDL	DIS	ST/HOLDER		
	RCVD	DOCUMENT #		U/I	QTY	PRI		PART-NSN	PART-NAME	STAT	DATE	DIC/EXC	NMCS	LKH	ADV
AK000	D0000	00000D	0		S		13	0000-00-000-0000	SHOP OVERHEAD			4056	D		
	14210	4058-SHT PART		0.00	1	1			NMAJ-RPLC		22				
		80220-4061-6001		DR	2	13		6850-01-441-3223	ANTIFREEZE		B	065	AS1	S9G	AT

	R-4070	80220-4061-6002	GL	2	14	9150-01-102-9455	BRAKE FLUI	5	063	AS1	S9G	AT
		80220-4061-6003	DR	2	14	9150-01-152-4119	LUBRICATIN	BV	065	AE1	S9G	AT
		80220-4061-6004	CN	2	14	9150-01-035-5393	LUBRICATIN	5	064	AS1	S9G	AT
	R-4070	80220-4061-6005	CN	2	14	9150-01-197-7692	GREASE,AUT	5	063	AS1	S9G	AT
		80220-4061-6006	DR	2	14	9150-01-114-9968	HYDRAULIC	B	064	AS1	S9G	AT
	R-4070	80220-4061-6007	KT	8	14	2815-01-492-3214	PARTS KIT,	5	064	AS1	S9C	AT
		80220-4061-6008	KT	7	14	2815-01-492-5709	PARTS KIT,	B	066	AS1	S9C	AT
AK001 C7073	10025A	14211015	S		14	4910-01-238-8115	TOOL SET COMMO		4068	D		
	14210	4072-SHT PART	0.00	1	1		NMAJ-SL-3AP	10				

SHOP SECTION 6 SUB-SHOP R

ERO TAM	ID	SERIAL #		CAT	RDD	PRI	NSN-IN-MAINT	NOMEN		DCD	DRIS	EOT
AWTG-STAT OWNER	JOB-STATUS	PARTS	CHARGE	ECH	QTY	X-EROS	MARES/DATE	DEFECT		DDL	DIS	ST/HOLDER
	RCVD	DOCUMENT #	U/I	QTY	PRI		PART-NSN	PART-NAME	STAT	DATE	DIC/EXC	NMCS LKH ADV
AKP36 E0960	08671A	011019		P		09	1005-01-127-7510	M249 AUTO WPN			4070	D
	14210	4072-SHT PART	0.00	2	1			WPNS-CBB		8		
		4072-SHT PART										

SHOP SECTION 6 SUB-SHOP T

ERO TAM	ID	SERIAL #		CAT	RDD	PRI	NSN-IN-MAINT	NOMEN		DCD	DRIS	EOT
AWTG-STAT OWNER	JOB-STATUS	PARTS	CHARGE	ECH	QTY	X-EROS	MARES/DATE	DEFECT		DDL	DIS	ST/HOLDER
	RCVD	DOCUMENT #	U/I	QTY	PRI		PART-NSN	PART-NAME	STAT	DATE	DIC/EXC	NMCS LKH ADV
AKP03 E1441	05538C	6043335		P		09	1005-01-128-9936	M16A2 RIFLE		4062	4062	D
	14210	4076-SHT PART	0.00	2	1			WPNS-CBB		16	16	
		4070-INS PRGS										
		80220-4071-6002	EA	5	13		5305-01-134-3622	SCREW,INDE				AT
AKP04 E1154	10271A	31696		P		09	5855-01-432-0524	AN/PVS-14			4062	D
	14210	4070-EVC HECH	0.00	2	1		QO842 QO856	FCON-CBB		16	70694	
		4070-INS PRGS										
AKP05 E1152	09500A	12261		P		09	5855-01-228-0937	AN/PVS-7B		4062	4062	D

		14210	4070-EVC HECH 4070-INS PRGS	0.00	2	1			FCON-CBB	16	16	70694				
AKP06	E1152	09500A	0		S		13	5855-01-228-0937	AN/PVS-7B		4058	D				
		14210	4070-SHT PART 4065-AWTG INS	0.00	1	10			FCON-SL-3AP	20						
			80220-4063-6004	EA	10	13		5855-01-246-8265	BATTERY CA	5	065	AS1	S9E	AT		
			80220-4063-6005	EA	10	13		5330-00-729-4992	O-RING	H	065	AS1	S9I	AT		
			80220-4063-6006	EA	8	13		5855-01-246-8273	EYECUP	H	066	AS1	S9E	AT		
			80220-4063-6007	EA	5	13		5855-01-398-4284	CASE,INFRA	5	066	AS1	S9E	AT		
AKP07	E1158	05975D	0		S		13	5855-00-629-5334	AN/PVS-4		4058	D				
		14210	4070-SHT PART 4065-AWTG INS	0.00	1	10			FCON-CBB	20						
			80220-4063-6001	EA	2	13		5965-01-444-1216	ADAPTER,HE	BB	069	AE1	B16	AT		
			80220-4063-6002	EA	10	13		6160-01-444-1208	COVER,BATT	BB	069	AE1	B16	AT		
			80220-4063-6003	EA	10	13		5330-00-822-3691	O-RING	5	065	AS1	S9I	AT		

ERO	TAM	ID	SERIAL #	CAT	RDD	PRI		NSN-IN-MAINT	NOMEN	DCD	DRIS	EOT		
AWTG-STAT	OWNER	JOB-STATUS	PARTS	CHARGE	ECH	QTY	X-EROS	MARES/DATE	DEFECT	DDL	DIS	ST/HOLDER		
	RCVD	DOCUMENT #		U/I	QTY	PRI		PART-NSN	PART-NAME STAT	DATE	DIC/EXC	NMCS	LKH	ADV
AKP00	E0989	09712A	U44281	M		09		1005-01-359-2714	MACH GUN M240G	4055	4055	D		
	14210	4076-SHT PART 4058-INS PRGS		0.00	2	1		LC-S2/4076	WPNS-CBB	23	23			
	R-4070	80220-4061-6016		EA	4	09		5315-01-409-0136	PIN,SPRING	H	064	AS1	S9I	AT
		80220-4061-6017		EA	1	09		1005-01-408-5435	LATCH BIPO	BB	063	AE1	S9G	AT
		80220-4061-6018		EA	4	09		5360-01-408-5998	SPRING,HEL	BB	063	AE1	S9I	AT
	R-4070	80220-4061-6019		EA	4	09		5315-01-251-9723	PIN,STRAIG	H	063	AS1	S9I	AT
	R-4070	80220-4061-6020		EA	4	09		5360-01-251-9699	SPRING,FLA	BA	063	AE1	S9I	AT
AKP01	E0989	09712A	U53522	M		09		1005-01-359-2714	MACH GUN M240G	4055	4055	D		
	14210	4072-SHT PART 4058-INS PRGS		0.00	2	1		LC-S2/4072	WPNS-CBB	23	23			
		80220-4061-6009		EA	4	09		5315-01-251-9723	PIN,STRAIG	H	063	AS1	S9I	AT

		R-4070	80220-4061-6010	EA	4	09		5360-01-251-9699	SPRING,FLA	BA	063	AE1	S9I	AT		
		R-4070	80220-4061-6012	HD	1	09		5315-00-058-6044	PIN,SPRING	H	064	AS1	S9I	AT		
		R-4070	80220-4061-6013	EA	1	09		5315-01-034-1580	PIN,STRAIG		063	AS1	S9I	AT		
		R-4070	80220-4061-6014	EA	1	09		1005-01-033-3629	SLIDE,CHAR	H	064	AS1	B14	AT		
AKP09	E0980	02498A	M3013641	M		09		1005-00-322-9715	MACH GUN 50 CA 4061 4061			D				
		14210	4070-EVC HECH 4061-AWTG EVC	0.00	2	1	QO120	LA-T3/4061	WPNS-CBB	17	17 70694					
AKP12	E1460	05539B	221510	N		14		1005-01-035-1674	SNIPER RIFLE		4061	D				
		14210	4062-AWTG EVC	0.00	2	1			WPNS-ASPM	17						
AKP13	E1460	05539B	224124	N		14		1005-01-035-1674	SNIPER RIFLE		4061	D				
		14210	4062-AWTG EVC	0.00	2	1			WPNS-ASPM	17						
AKP14	E1460	05539B	224131	N		14		1005-01-035-1674	SNIPER RIFLE		4061	D				
		14210	4062-AWTG EVC	0.00	2	1			WPNS-ASPM	17						
AKP15	E1460	05539B	221442	N		4		1005-01-035-1674	SNIPER RIFLE		4061	D				
		14210	4062-AWTG EVC	0.00	2	1			WPNS-ASPM	17						
AKP37	E0994	08521A	5425	M		09		1010-01-126-9063	MK 19 40MM MAC	4070	4070	D				
		14210	4072-SHT PART	0.00	2	1		LA-S2/4072	WPNS-CBB	8	8					
AKP38	B0472	01518A	0	N		14		1385-00-212-4591	DEMO EQP IND		4071	D				
		14210	4072-INS PRGS	0.00	2	3			WPNS-SL-3AP	7						

SAMPLE TABLE OF AUTHORIZED MATERIAL REPORT

********** ON LINE PRINTING **********

RECIPIENT: EBHB GROUP ACCOUNT
USER-ID: EBHB31 SUPPLY

REPORT_ID: L415W21B MIMMS WEEKLY TAM REPORT (OWNING UNIT)
VERSION: 20040312 163124
FROM HIERARCHY CODE: 1ST BN 25TH MAR FROM PAGE: 000001
TO HIERARCHY CODE: 1ST BN 25TH MAR TO PAGE: 000004
PAGE OUTPUT LIMIT: 000004

DATE: MAR 15, 2004
TIME: 084932

PROGRAM A4150W21 MIMMS FIELD MAINTENANCE SUBSYSTEM FOR 4TH MARDIV
1ST BN 25TH MAR WEEKLY OWNING UNIT MAINTENANCE TAM REPORT ON 12 MAR 2004 PAGE 0104

TAM	OWNER	CLOSE SERIAL-NO	ID-NO	FLAG	NOMENCLATURE	QTY	PRI	CAT	ECH	DEFECT	JOB-STATUS	NPI	RDD	DDL	DIS	ML-IND	ERO
B0472	14210	0	01518A		DEMO EQP IND	03	14	N	2	WPNS-SL-3AP	4072-INS PRGS			0	1		AKP38

PROGRAM A4150W21 MIMMS FIELD MAINTENANCE SUBSYSTEM FOR 4TH MARDIV
1ST BN 25TH MAR WEEKLY OWNING UNIT MAINTENANCE TAM REPORT ON 12 MAR 2004 PAGE 0105

TAM	OWNER	CLOSE SERIAL-NO	ID-NO	FLAG	NOMENCLATURE	QTY	PRI	CAT	ECH	DEFECT	JOB-STATUS	NPI	RDD	DDL	DIS	ML-IND	ERO
C7073	14210	14211015	10025A		TOOL SET COMM	01	14	S	1	NMAJ-SL-3AP	4072-SHT PART	*		0	4		AK001

PROGRAM A4150W21 MIMMS FIELD MAINTENANCE SUBSYSTEM FOR 4TH MARDIV
1ST BN 25TH MAR WEEKLY OWNING UNIT MAINTENANCE TAM REPORT ON 12 MAR 2004 PAGE 0106

TAM	OWNER	CLOSE SERIAL-NO	ID-NO	FLAG	NOMENCLATURE	QTY	PRI	CAT	ECH	DEFECT	JOB-STATUS	NPI	RDD	DDL	DIS	ML-IND	ERO
D0000	14210	0	00000D		SHOP OVERHEAD	01	14	S	1	NMAJ-RPLC	4058-SHT PART			0	16		AK000

TAM	OWNER	CLOSE SERIAL-NO	ID-NO	FLAG	NOMENCLATURE	QTY	PRI	CAT	ECH	DEFECT	JOB-STATUS	NPI	RDD	DDL	DIS	ML-IND	ERO
E0960	14210	011019	08671A		M249 AUTO WPN	01	09	P	2	WPNS-CBB	4072-SHT PART	*		0	2		AKP36
E0980	14210	M3013641	02498A		MACH GUN 50 C	01	09	M	2	WPNS-CBB	4070-EVC HECH			11	11	LAT3	AKP09
E0989	14210	U44281	09712A		MACH GUN M240	01	09	M	2	WPNS-CBB	4058-INS PRGS			17	17	LAM2	AKP00
E0989	14210	U53522	09712A		MACH GUN M240	01	09	M	2	WPNS-CBB	4072-SHT PART			17	17	LCS2	AKP01
E0994	14210	5425	08521A		MK 19 40MM MA	01	09	M	2	WPNS-CBB	4072-SHT PART	*		2	2	LAS2	AKP37
E1152	14210	0	09500A		AN/PVS-7B	10	14	S	1	FCON-SL-3AP	4070-SHT PART			0	14		AKP06
E1152	14210	12259	09500A		AN/PVS-7B	01	06	P	3	WPNS-CBB	4070-WIR SUB			59	59		QO818
E1152	14210	12261	09500A		AN/PVS-7B	01	09	P	2	FCON-CBB	4070-EVC HECH			10	10		AKP05
E1152	14210	12261	09500A		AN/PVS-7B	01	06	P	3	FCON-CBB	4069-WIR SUB			0	6		QO857
E1152	14210	35414	09500A		AN/PVS-7B	01	06	P	3	WPNS-CBB	4055-WIR SUB			59	59		QO820
E1152	14210	36234	09500A		AN/PVS-7B	01	06	P	3	WPNS-CBB	4070-WIR SUB			61	59		QO819
E1154	14210	31696	10271A		AN/PVS-14	01	09	P	2	FCON-CBB	4070-EVC HECH			0	10		AKP04
E1154	14210	31696	10271A		AN/PVS-14	01	06	P	3	FCON-CBB	4070-SHT PART			0	6		QO856
E1158	14210	0	05975D		AN/PVS-4	10	14	S	1	FCON-CBB	4070-SHT PART			0	14		AKP07
E1441	14210	6043335	05538C		M16A2 RIFLE	01	09	P	2	WPNS-CBB	4070-INS PRGS			10	10		AKP03
E1460	14210	221442	05539B		SNIPER RIFLE	01	14	N	2	WPNS-ASPM	4062-AWTG EVC			0	11		AKP15
E1460	14210	221510	05539B		SNIPER RIFLE	01	14	N	2	WPNS-ASPM	4062-AWTG EVC			0	11		AKP12
E1460	14210	224124	05539B		SNIPER RIFLE	01	14	N	2	WPNS-ASPM	4062-AWTG EVC			0	11		AKP13
E1460	14210	224131	05539B		SNIPER RIFLE	01	14	N	2	WPNS-ASPM	4062-AWTG EVC			0	11		AKP14

SAMPLE WEEKLY EXCEPTION REPORT

********** ON LINE PRINTING **********
**
** RECIPIENT: EBHB GROUP ACCOUNT **
** USER-ID: EBHB31 SUPPLY **
**
** REPORT_ID: L415W21B MIMMS WEEKLY MIANTENANCE EXCEPTION REPORT **
** VERSION: 20040312 163141 **
** FROM HIERARCHY CODE: 1ST BN 25TH MAR FROM PAGE: 000001 **
** TO HIERARCHY CODE: 1ST BN 25TH MAR TO PAGE: 000001 **
** PAGE OUTPUT LIMIT: 000001 **
**

DATE: MAR 15, 2004
TIME: 085710

A4150W25 WEEKLY EXCEPTION REPORT FOR MAJCMD 4TH MARDIV UNIT 1ST BN 25TH MAR
ERO PREFIX = AK 12 MAR 04 (4072) PAGE: 1

1. EROS IN JOB STATUS 02 (INS PRGS) OVER 10 DAYS:

   AKP00-4058

2. EROS IN JOB-STATUS 24 (UNIT-RCL) OR 25 (SHT PART) WITHOUT VALID SUPPLY DOCUMENTS:

   AKP36-25-4072 AKP37-25-4072 AK001-25-4072

3. EROS/SUPPLY DOCUMENTS WITH SASSY EXCEPTIONS/REJECTIONS:

4. EROS WHICH EXCEED THE CRITERIA FOR DEADLINED DAYS:

5. SECONDARY-REPARABLE EROS WHICH EXCEED THE CRITERIA FOR DEADLINED DAYS:

6. EROS WHICH EXCEED THEIR RDD:

7. EROS WHICH EXCEED THE ORF EXCHANGE DATE:

8. EROS COMPLETED MORE THAN 10 DAYS:

9. EROS AWAITING DISPOSITION INSTRUCTIONS IN JOB-STATUS 37 (WIR SUB) OVER 30 DAYS:

10. EROS IN JOB-STATUS 13 (RPR COMP) OR 37 (WIR SUB) WITH OUTSTANDING SUPPLY DOCUMENTS:

11. EROS WHICH ARE CAT CODE M OR PRIORITY 06 AND IN ONE OF THE FOLLOWING JOB-STATUSES FOR OVER 10 DAYS: 02 (INS PRGS), 12 (RPR PRGS), 23 (SHT TEST), 26 (SHT SPAC), 27 (SHT TECH), OR 40 (SHT FUND):

AKP00-02-4058

12. EROS WHICH ARE NOT CAT CODE M OR PRIORITY 06 AND IN ONE OF THE FOLLOWING JOB-STATUSES FOR OVER 30 DAYS: 02 (INS PRGS), 12 (RPR PRGS), 23 (SHT TEST), 26 (SHT SPAC), 27 (SHT TECH), OR 40 (SHT FUND):

13. EROS WITH DISPOSITION INSTRUCTIONS EXCEEDING COMPLETION CRITERIA (30 DAYS CONUS/60 DAYS NON-CONUS):

14. EROS WITH A NO CLOSE FLAG:

SAMPLE WEEKLY MATERIAL REPORT

********** ON LINE PRINTING **********

RECIPIENT: EBHB GROUP ACCOUNT
USER-ID: EBHB31 SUPPLY

REPORT_ID: L415W21C MIMMS WEEKLY MATERIAL REPORT
VERSION: 20040312 163128
FROM HIERARCHY CODE: 1ST BN 25TH MAR FROM PAGE: 000001
TO HIERARCHY CODE: 1ST BN 25TH MAR TO PAGE: 000001
PAGE OUTPUT LIMIT: 000001

DATE: MAR 15, 2004
TIME: 085149

PGM=A4150W22 MIMMS FIELD MAINTENANCE SUBSYSTEM FOR 4TH MARDIV
WEEKLY MATERIAL REPORT ON 12 MARCH 04(4072) FOR 1ST BN 25TH MAR PAGE: 098

NATIONAL-STOCK-NUM	DOCUMENT-NUMBER	UI	QTY	PRI	ADV	NMCS	LKH	STAT	DATE	TYPE	D-ST	PART-NAME	ERO
6850-01-441-3223	80220-4061-6001	DR	2	13	AT	S9G		B	65	AS1	7	ANTIFREEZE	AK000
9150-01-152-4119	80220-4061-6003	DR	2	14	AT	S9G		BV	65	AE1	7	LUBRICATIN	AK000
9150-01-035-5393	80220-4061-6004	CN	2	14	AT	S9G	5		64	AS1	8	LUBRICATIN	AK000
9150-01-114-9968	80220-4061-6006	DR	2	14	AT	S9G		B	64	AS1	8	HYDRAULIC	AK000
2815-01-492-5709	80220-4061-6008	KT	7	14	AT	S9C		B	66	AS1	6	PARTS KIT,	AK000
5315-01-251-9723	80220-4061-6009	EA	4	09	AT	S9I		H	63	AS1	9	PIN,STRAIG	AKP01
1005-01-408-5435	80220-4061-6017	EA	1	09	AT	S9G		BB	63	AE1	9	LATCH BIPO	AKP00
5360-01-408-5998	80220-4061-6018	EA	4	09	AT	S9I		BB	63	AE1	9	SPRING,HEL	AKP00

5965-01-444-1216	80220-4063-6001	EA	2	13	AT	B16		B	69	AE1	3	ADAPTER,HE	AKP07
6160-01-444-1208	80220-4063-6002	EA	10	13	AT	B16		BB	69	AE1	3	COVER,BATT	AKP07
5330-00-822-3691	80220-4063-6003	EA	10	13	AT	S9I	5		65	AS1	7	O-RING	AKP07
5855-01-246-8265	80220-4063-6004	EA	10	13	AT	S9E	5		65	AS1	7	BATTERY CA	AKP06
5330-00-729-4992	80220-4063-6005	EA	10	13	AT	S9I		H	65	AS1	7	O-RING	AKP06
5855-01-246-8273	80220-4063-6006	EA	8	13	AT	S9E		H	66	AS1	6	EYECUP	AKP06
5855-01-398-4284	80220-4063-6007	EA	5	13	AT	S9E	5		66	AS1	6	CASE,INFRA	AKP06

SAMPLE DAILY TRANSACTION LISTING REPORT

```
********************************************** ON LINE PRINTING ********************************
**                                                                                              **
**                  RECIPIENT: EBHB       GROUP ACCOUNT                                       **
**                    USER-ID: EBHB31     SUPPLY                                              **
**                                                                                              **
**                  REPORT_ID: L415D31A   MIMMS DAILY TRANSACTION LISTING (ORGANIC)            **
**                    VERSION: 20040312 163039                                                  **
**  FROM HIERARCHY CODE: 1ST BN 25TH MAR                FROM PAGE:      000001                **
**       TO HIERARCHY CODE: 1ST BN 25TH MAR             TO PAGE:        000001                **
**        PAGE OUTPUT LIMIT: 000001                                                             **
**                                                                                              **
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DATE: MAR 19, 2004
TIME: 092050

PROGRAM A4150D31 MIMMS FIELD MAINTENANCE SUBSYSTEM FOR 4TH MARDIV
DAILY TRANSACTION LISTING ON 18 MARCH 04 (4078) FOR 1ST BN 25TH MAR (ORGANIC) PAGE 001

```
      1       2       3       4       5       6       7       8     E R R O R   C O D E S
12345678901234567890123456789012345678901234567890123456789012345678901234567890********************************

----------------------TRANSACTIONS PROCESSED WITH NO ERRORS----------------------
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TAKP04QO8564078 F70694

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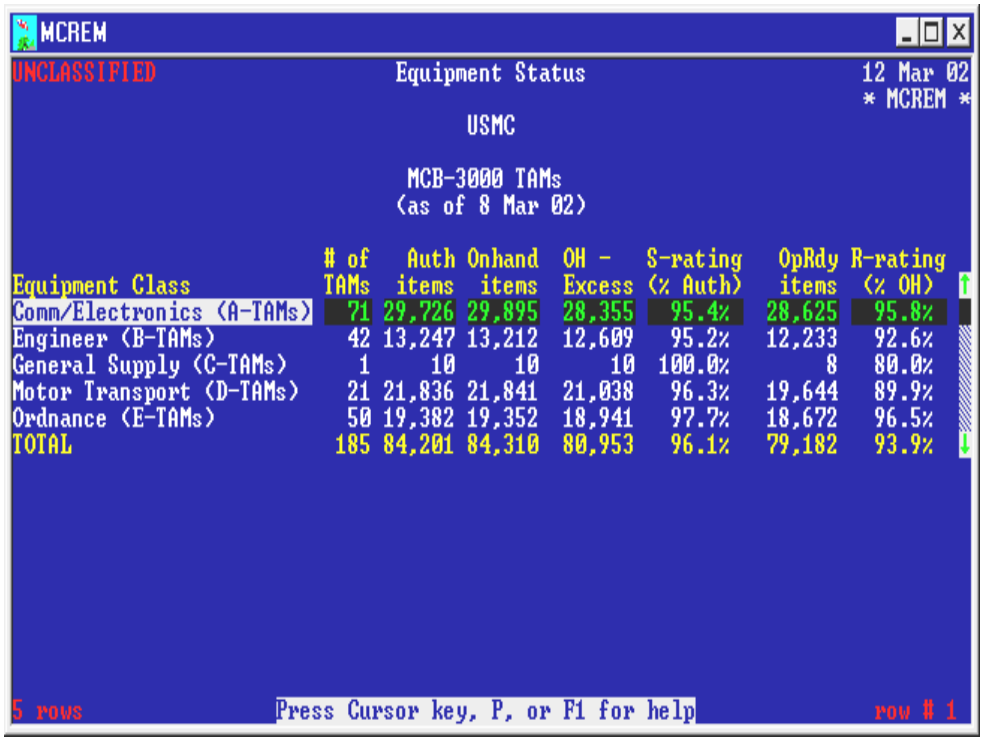
SAMPLE MARINE CORPS EQUIPMENT READINESS MODULE REPORT



MCREM

UNCLASSIFIED — Equipment Status — 12 Mar 02

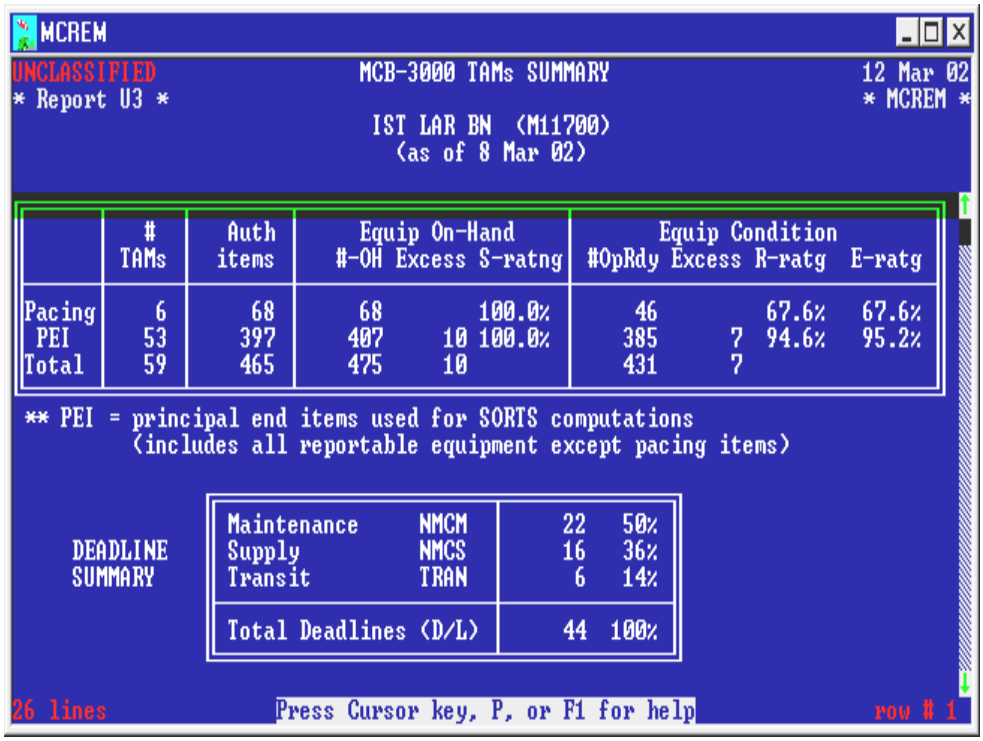
* MCREM *

USMC

MCB-3000 TAMs
(as of 8 Mar 02)

Equipment Class	# of TAMs	Auth items	Onhand items	OH - Excess	S-rating (% Auth)	OpRdy items	R-rating (% OH)
Comm/Electronics (A-TAMs)	71	29,726	29,895	28,355	95.4%	28,625	95.8%
Engineer (B-TAMs)	42	13,247	13,212	12,609	95.2%	12,233	92.6%
General Supply (C-TAMs)	1	10	10	10	100.0%	8	80.0%
Motor Transport (D-TAMs)	21	21,836	21,841	21,038	96.3%	19,644	89.9%
Ordnance (E-TAMs)	50	19,382	19,352	18,941	97.7%	18,672	96.5%
TOTAL	185	84,201	84,310	80,953	96.1%	79,182	93.9%

5 rows — Press Cursor key, P, or F1 for help — row # 1



MCREM

UNCLASSIFIED — MCB-3000 TAMs SUMMARY — 12 Mar 02

* Report U3 * — * MCREM *

IST LAR BN (M11700)
(as of 8 Mar 02)

	# TAMs	Auth items	Equip On-Hand #-OH	Excess	S-ratng	Equip Condition #OpRdy	Excess	R-ratg	E-ratg
Pacing	6	68	68		100.0%	46		67.6%	67.6%
PEI	53	397	407	10	100.0%	385	7	94.6%	95.2%
Total	59	465	475	10		431	7		

** PEI = principal end items used for SORTS computations
(includes all reportable equipment except pacing items)

DEADLINE SUMMARY

Maintenance	NMCM	22	50%
Supply	NMCS	16	36%
Transit	TRAN	6	14%
Total Deadlines (D/L)		44	100%

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APPENDIX C: SAMPLE MERIT READINESS REPORTS

SAMPLE MERIT LM2 REPORT

UNCLASSIFIED

MEF Code	MEF Name	Pace Item	TAMCN	ID	Nomenclature	WSDC	Serial Number	UIC	Date Dead-lined	Status Date	Status Type	Days In Status	Echelon of Maint	Present Holder	ERO/ WON
4	IV Reserves	NO	E0980	2498A	Machinegun, .50 CalBrowning, M2	VDM	1359142	M14210	04061	04061	TRAN	7	3	M14210	**AKP08**
4	IV Reserves	NO	E0980	2498A	Machinegun, .50 CalBrowning, M2	VDM	M3013641	M14210	04061	04061	TRAN	7	3	M14210	**AKP09**
4	IV Reserves	NO	E0980	2498A	Machinegun, .50 CalBrowning, M2	VDM	1865953	M14210	04061	04061	TRAN	7	3	M14210	**AKP10**
4	IV Reserves	NO	E0980	2498A	Machinegun, .50 CalBrowning, M2	VDM	308283	M14210	04061	04061	TRAN	7	3	M14210	**AKP11**
4	IV Reserves	NO	E0989	9712A	Machinegun, 7.62mm, M240G	58M	U44281	M14210	04055	04055	NMCM	13	2	M14210	**AKP00**
4	IV Reserves	NO	E0989	9712A	Machinegun, 7.62mm, M240G	58M	U53522	M14210	04055	04055	NMCM	13	2	M14210	**AKP01**

SAMPLE MERIT PARTS REPORT

UNCLASSIFIED

NSN	Nomenclature	SOS	Float Item	SMRC	CEC	Num of Reqs	Total Qty	High Days	Low Days	Mean Days
1005010333629	SLIDE,CHARGER	B14	NO	Z	5	1	1	7	7	7
1005014085435	BIPOD,MACHINE GUN	S9C	NO	Z	5	1	1	7	7	7
5315000586044	PIN,SPRING	S9I	NO	Z	5	1	1	7	7	7
5315010341580	PIN,STRAIGHT,HEADED	S9I	NO	Z	5	1	1	7	7	7
5315012519723	PIN,STRAIGHT,HEADLE	S9I	NO	Z	5	2	8	7	7	7
5315014090136	PIN,SPRING	S9I	NO	Z	5	1	4	7	7	7
5360012519699	SPRING,FLAT	S9I	NO	Z	5	2	8	7	7	7
5360014085998	SPRING,HELICAL,TORS	S9I	NO	Z	5	1	4	7	7	7

SAMPLE MERIT READINESS REPORT

UNCLASSIFIED

MEF	MSC	MSC Name	UNIT	UNIT Name	PACE ITEM	TAMCN	WSDC	Remarks	Authorized	Possessed	Excess	Deficiency	Dead-lined	S	R	MR
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A1530	5HM	NO	2	2	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A1935	DLM	NO	3	3	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A1957	4RM	NO	4	4	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2042	8TM	NO	0	0	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2065	EDM	NO	7	7	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2069	DMM	NO	5	5	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2070	2ZM	NO	36	36	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2074	2ZM	NO	16	16	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2075	2ZM	NO	1	1	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2079	6YM	NO	36	36	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2164	2ZM	NO	1	1	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2167	2ZM	NO	11	11	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2168	2ZM	NO	1	1	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2169	2ZM	NO	2	2	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A2505	GFM	NO	2	2	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	A8100	8QM	NO	17	17	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	B0730	KHM	NO	0	0	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	YES	B1291	37M	NO	1	1	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	D1001	QPM	NO	0	0	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	D1002	QQM	NO	3	3	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	D1125	QRM	NO	8	8	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	D1158	SFM	NO	12	12	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	D1159	QSM	NO	12	12	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E0180	UHM	NO	2	2	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E0330	UPM	NO	6	6	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E0915	UAM	NO	18	18	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	YES	E0935	XRM	NO	6	6	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E0980	VDM	NO	6	6	0	0	4	100%	33%	33%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E0989	58M	NO	29	29	0	0	2	100%	93%	93%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E0994	UBM	NO	12	12	0	0	0	100%	100%	100%

IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E1045	V8M	NO	1	1	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E1065	V9M	NO	9	9	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	YES	E1095	B3M	NO	8	8	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E1159	WLM	NO	22	22	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E1911	XPM	NO	0	0	0	0	0	100%	100%	100%
IV Reserves	M14000	FOURTH MARDIV	M14210	1ST BN 25TH MAR	NO	E1912	XSM	NO	0	0	0	0	0	100%	100%	100%
GRAND TOTAL					NO			NO	299	299	0	0	6	100%	98%	98%

SAMPLE MERIT HISTORICAL REPORT

1ST BN 25TH MAR (M14210)

(UNCLASSIFIED)

Year	Month	S	R	MR
2003	**Mar**	**91%**	**97%**	**88%**
2003	**Apr**	**95%**	**99%**	**94%**
2003	**May**	**95%**	**97%**	**93%**
2003	**Jun**	**95%**	**97%**	**93%**
2003	**Jul**	**99%**	**97%**	**96%**
2003	**Aug**	**99%**	**97%**	**96%**
2003	**Sep**	**99%**	**96%**	**95%**
2003	**Oct**	**99%**	**97%**	**96%**
2003	**Nov**	**99%**	**96%**	**96%**
2003	**Dec**	**99%**	**97%**	**96%**
2004	**Jan**	**100%**	**100%**	**100%**
2004	**Feb**	**100%**	**100%**	**100%**

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APPENDIX D: MERIT RELEASES

Version 1.1.1.0 released in July 2003:

- Daily readiness.
- Owning unit maintenance TAM report.
- DLA WEBCATS interface.
- Tabular sorting feature.
- User account management.
- Parts on order view by requisition.
- Email alert feature.
- Allowance/possessed comparison.
- Display RM4 remarks.
- Expanded search feature.

Version 1.2.0.0 released on 28 August 2003 (12):

- Daily Readiness: readiness (MARES/LM2) numbers will now be calculated daily and will correspond with the daily supply and maintenance data.
- Owning Unit Maintenance TAM Report: an owning unit TAMCN report is available for all TAMCNs (not just MCBul 3000) with open maintenance records in MIMMS.
- DLA WEBCATS Interface: a hyperlink (out of MERIT to DLA's WEBCATS system) is available for parts research for those TAMCNS that are NMCS and waiting for NSNs where DLA is the source of supply.
- Tabular Sorting Feature: the tabular sorting feature has been enhanced to allow sorting on all column headers and indicator of which column is sorted.
- Parts on Order View by Requisition: the "all parts on order for a TAMCN" screen can now be expanded to show individual document numbers.
- E-mail Alert Feature: users can set up an e-mail alert feature based on their MyMerit profile to get automatic notification when the readiness of TAMCNs they are interested in tracking crosses a threshold they set.
- Allowance/Possessed Comparison: a hyperlink is now available when the supply authorized and possessed quantities do not match the

MARES/LM2 authorized and possessed quantities. A single screen displays the records from both systems along with the RM4 remarks in one tailored view.

- Display RM4 Remarks: where RM4 remarks are present, a hyperlink to see them is now an option.
- Expanded Search Feature: search feature was expanded to include searching by ERO, NSN, serial number or TAMCN report.

Version 1.2.1.0 released on 1 October 2003 (13):

- News Ticker: provides capability to display text in a scrolling ticker across the top of the tabular pages.
- Dynamic Menus: reduces Main Menu items by providing multiple menu selections from main menu options.
- Scroll option with Static Headers: provides user with option to keep column headers stationary while scrolling through data in the tabular views.
- Historical ERO view by TAMCN/Serial Number: provides a view of historical EROs for a specific TAMCN/Serial # combination.
- TAMCN by Owning Unit Report: allows the user to view all Units with an open ERO (work order) for a specific TAMCN utilizing the Search Option.
- SASSY/LM2 Auth/Allow Comparison: enhances the Authorization/Allowance recon feature to include a roll-up comparison (differences are hyperlinked) at each organizational level.
- Color code deadlines in Excel downloads: colors are utilized on the LM2 Deadline view to better describe ERO relationships (MIMMS/MARES). These colors will now be visible when the deadline page is exported to an excel spreadsheet.
- Drill-Up capability: provides the capability to drill up through the MERIT Tabular views via a link at the top of each page.
- Deadline discrepancy feature: display discrepancies when the reported deadlines (EROs) in MARES do not match the deadlines in MIMMS.
- Revamped Search page: incorporates graphical map view to the search page replacing the drop down selections.
- Customize email alert: allows user to select a different threshold (S, R, and MR) for each TAMCN included in their MyMerit Portfolio.
- “Forgot my password” feature: provides an online option to request a new password.

- MARES/MIMMS deadline date difference: provides a view of EROs when the deadline date is not the same in MARES and MIMMS (from hyperlink on deadline page).
- MARES/MIMMS serial number difference: provides a view of EROs when the serial # is not the same in MARES and MIMMS (from hyperlink on deadline page).
- Mouse-over Status Codes: provides description of status codes (mouse-over) on pages ANLZ-PART-2 and ANLZ-PART-3.

Version 1.2.2.0 released on 29 October 2003 (14):

- Expanded E-mail Alert: feature expanded to include the organizational levels. MERIT automatically generates an e-mail to your outlook account based on TAMCNs you select and criteria you set. Allows user to select a different threshold (S, R, and MR) for each TAMCN included in their MyMerit Portfolio.
- DAASC Inquiry: link now allows access without requiring a password when entered via MERIT.
- Search Modifications: added an option for tabular lookup values or graphical look up values to the search page. Added the MyMERIT portfolio as a source of TAMCNs on the graphical search lookup feature.
- News Ticker: provides capability to display text in a scrolling ticker across the top of the tabular pages. Ticker is customizable to include (header/body/ hyperlink) capability.
- Dynamic Menus: reduces Main Menu items by providing multiple menu selections from main menu options.
- Scroll Option with Static Headers: provides user with option to keep column headers stationary while scrolling through data in the tabular views.
- Historical ERO view by TAMCN/Serial Number: provides a view of historical ERO's for a specific TAMCN/Serial number combination.
- TAMCN by Owning Unit Report: allows the user to view all Units with an open ERO (work order) for a specific TAMCN utilizing the Search Option. This includes non-reportable TAMCNS.
- SASSY/LM2 Authorization/Allowance Comparison: enhances the authorization/ allowance recon feature to include a roll-up comparison (differences are hyperlinked) at each organizational level.
- Color Code Deadlines in Excel Downloads: colors are utilized on the LM2 Deadline view to better describe ERO relationships

(MIMMS/MARES). These colors will now be visible when the deadline page is exported to an excel spreadsheet.

- Drill-Up capability: provides the capability to drill up through the MERIT tabular views via a link at the top of each page.
- Deadline discrepancy feature: display discrepancies when the reported deadlines (EROs) in MARES do not match the deadlines in MIMMS.
- Revamped Search page: incorporates graphical map view to the search page replacing the drop down selections.
- "Forgot my password" feature: provides an online option to request a new password.
- MARES/MIMMS deadline date difference: provides a view of EROs when the deadline date is not the same in MARES and MIMMS (from hyperlink on deadline page).
- MARES/MIMMS serial number difference: provides a view of EROs when the serial number is not the same in MARES and MIMMS (from hyperlink on deadline page).
- Mouse-over Status Codes: provides description of status codes (mouse-over) on pages.

Version 1.2.3.0 released on 28 January 2004 (15):

- Readiness Rating Calculation: new rules put in place for calculating S, R, and MR across TAMCNs. This prevents excesses in one TAMCN from covering deficiencies for another TAMCN during all multi-TAMCN rollups.
- Organizational Readiness Maps: provides graphical rollup views of USMC organizations across TAMCNs at the USMC, MSC and Unit levels.
- UIC/AAC to DoDAAC Link: a link to the DLA DoDAAC lookup is now available from the Search page. Also, the Activity Address Code on page ID-REM-1 is hyperlinked to the DoDAAC lookup.
- MyMERIT portfolio filtering on Tabular views: when viewing Tabular information the user may choose to view only the information for the TAMCNs in their MyMerit portfolio by selecting the "MyMERIT" icon in the upper right corner of the page.
- MyMERIT Portfolio TAMCNs include in Search feature: user can include all of the TAMCNs in their Portfolio simultaneously when using the Readiness search feature on the Search page.

- Filter by Major Essential Equipment (MEE): user can filter the "TAMCN" readiness maps to view only those TAMCN's designated as MEE and the "Organization" readiness maps to view only those Units reporting at least one of the MEE TAMCN's.
- TAMCN Readiness Summary Page: the Readiness Summary Page provides pertinent readiness information "At a Glance" for each of the Marine Corps MARES Reportable TAMCNs. The Page is available from the mouse-over menu on the TAMCN Readiness Map.
- Deficiency column on Tabular views: the one column excess display using a + or - to indicate whether the quantity is an excess or deficiency has been replaced with two columns, one for excess quantities and one for deficit quantities.
- Filter by Deficiency on Readiness Maps: allows the user to view only those TAMCNs where at least one unit is reporting a deficiency (TAMCN Readiness Maps) or to view only those organizations reporting at least on TAMCN deficient (Organization Readiness Maps).
- UND A/B List: lists Documents by UND A & B for each open ERO and is available from the link on the TAM Report page.
- Combat Essentiality Code to Parts on Order View: the Combat Essentiality Code (CEC) was added to the NSN page on the Parts on Order View.
- Printer Friendly capability: information on Tabular views can now be printed within the margins o the printer page.
- Filters by Current Information: allows the user to filter out the gray (History) cells when viewing the Readiness Maps.
- Color code for Deadline link: the hyperlinks to deadlines in the Tabular views will be colored red when any ERO for the deadlines is (1) not a category M in MIMMS, (2) not in MIMMS, or (3) closed in MIMMS. This indicates that the readiness being reported in MARES / LM2 may not be in sync with MIMMS.
- Type Unit Code (TUC) added: the TUC has been added to the bottom table on page ID-COM-2A, which displays the Units, assigned to the selected MSC.

Draft version 1.2.4.0 (ATLASS II+) (16):

- Search Capability on MERIT Home Page: move the search button (or add another one) to the home page as an option for entering MERIT.
- Rating Consistency: consistently use same order for MR, R and S on all displays.

- Organizational Readiness: create Organizational Readiness Summary page.
- MERIT Data/Pages Classification: indicate that MERIT data/pages are UNCLASSIFIED.
- Configurable External Links: make external links configurable to be routed to internal page for SIPRNET deployment.
- Personal Profile Information Update: allow users to update more of their own personal profile information.
- Readiness Page Image Size: reduce image size on TAMCN Readiness Summary Page.
- ATLASS II+
- Export to Excel Capability: add "export to Excel" capability to page ANLZ-ERO-1 with Parts Tab Open.
- Organizational Historical View Chart: create new Historical View Chart by organization.
- TIGER User Creation: add automatic user creation for new TIGER users.
- Password Change for TIGER Users: remove the code that requires users to change their password every 90 days from the TIGER SSO users only.
- User Logon Search: add search for all users who have not logged on.
- Search Results Screen Excel Capability: add Excel download capability to the user search results screen.
- Deleted User Tracking: track who deleted a user in the system.
- Search Users by Roles: add user search by roles.
- News Ticker Change Tracking: capture who last changed (and when) the news ticker.
- Background Task Scheduling: total redesign/re-implementation for background task scheduling (for tasks such as deleting old users, email alerts, etc.).
- MERIT Email Redesign: total redesign/re-implementation to how MERIT sends out emails; now use JSP rather than hard-coding; let user select plain text versus HTML email.
- Browser Caching: better enable browser caching.
- News Ticker Upgrade: upgrade to News Ticker release 2.2 (10/29/03) .
- Tomcat Upgrade: upgrade to Tomcat 5.0.19.

- Jakarta Upgrade: upgraded several Jakarta open source libraries (POI 2.0, ORO 2.0.8, HttpClient 2.0, FileUpload 1.0, Collections 3.0 and Codec 1.2).
- Library of Shared Code: create shared code as a library called "Chassis".
- Sortable Column Headers: custom tag for sortable column headers.

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APPENDIX E: SURVEY PARTICIPANT DEMOGRAPHICS

Survey Respondents by Occupational Field, MOS, and Rank

OccFld	MOS	Descriptive Title	Total	%	Officer	SNCO	NCO	Marine
01XX	**Personnel and Administration**		**1**	**0.4%**				
	0180	Adjutant			1			
03XX	**Infantry**		**4**	**1.7%**				
	0302	Infantry Officer			3			
	0311	Rifleman					1	
04XX	**Logistics**		**60**	**25.4%**				
	0402	Logistics Officer			20			
	0411	Maintenance Management Specialist				20	15	5
06XX	**Command and Control Systems**		**3**	**1.3%**				
	0602	Command and Control Systems Officer			2			
	0656	Tactical Network Specialist					1	
08XX	**Field Artillery**		**4**	**1.7%**				
	0802	Field Artillery Officer			4			
11XX	**Utilities**		**1**	**0.4%**				
	1142	Electrical Equipment Repair Specialist				1		
13XX	**Engineer, Construction, Facilities, and Equipment**		**12**	**5.1%**				
	1302	Combat Engineer Officer			2			
	1310	Engineer Equipment Officer			5			
	1345	Engineer Equipment Operator				1		
	1349	Engineer Equipment Chief				2		
	1371	Combat Engineer				1		
	1391	Bulk Fuel Specialist					1	
18XX	**Tank and Assault Amphibious Vehicle**		**3**	**1.3%**				
	1802	Tank Officer			1			
	1803	Assault Amphibious Vehicle (AAV) Officer			1			
	1833	Assault Amphibious Vehicle (AAV) Crewman				1		
21XX	**Ground Ordnance Maintenance**		**16**	**6.8%**				
	2102	Ordnance Officer			4			
	2110	Ordnance Vehicle Maintenance Officer			2			
	2111	Small Arms Repairer/Technician				1	1	1
	2120	Weapons Repairer Officer			1			
	2131	Towed Artillery Systems Technician				1		
	2146	Main Battle Tank (MBT) Repairer/Technician				1		

	2171	Electro-Optical Ordnance Repairer					1	1
	2181	Senior Ground Ordnance Weapons Chief				2		
28XX	**Ground Electronics Maintenance**		**33**	**14.0%**				
	2802	Electronics Maintenance Officer			4			
	2805	Data/Communications Maintenance Officer			6			
	2822	Electronic Switching Equipment Technician				2	1	
	2831	AN/TRC-170 Repairer					2	
	2834	Satellite Communications (SATCOM) Technician				2		
	2844	Ground Communications Organizational Repairer						1
	2846	Ground Radio Intermediate Repairer						1
	2862	Electronics Maintenance Technician				6	2	
	2891	Electronics Maintenance Chief				6		
30XX	**Supply Administration and Operations**		**26**	**11.0%**				
	3002	Ground Supply Officer			8			
	3010	Ground Supply Operations Officer			2			
	3043	Supply Administration and Operations Clerk				9	4	2
	3051	Warehouse Clerk					1	
35XX	**Motor Transport**		**21**	**8.9%**				
	3510	Motor Transport Maintenance Officer			9			
	3521	Automotive Organizational Mechanic					2	
	3529	Motor Transport Maintenance Chief				9		
	3537	Motor Transport Operations Chief				1		
59XX	**Electronics Maintenance**		**6**	**2.5%**				
	5902	Electronics Maintenance Officer (Aviation)			1			
	5910	Aviation Radar Maintenance Officer			3			
	5939	Aviation Radio Technician				1		
	5993	Electronics Maintenance Chief				1		
60XX	**Aircraft Maintenance**		**1**	**0.4%**				
	6002	Aircraft Maintenance Officer			1			
70XX	**Airfield Services**		**3**	**1.3%**				
	7002	Expeditionary Airfield & Emergency Services Officer			1			
	7011	Expeditionary Airfield Systems Technician				1		
	7051	Airfield Rescue and Firefighting Specialist				1		
75XX	**Pilots and Naval Flight Officers**		**1**	**0.4%**				

	7562	Pilot CH-46 Qualified			1			
96XX	**Special Education Officer**		**1**	**0.4%**				
	9662	Material Management Officer			1			
99XX	**Identifying and Reporting MOSs**		**3**	**1.3%**				
	9904	Colonel, Logistician			2			
	9906	Colonel, Ground			1			
CIV	**Civilians**		**37**	**15.7%**				
		Total	**236**		**86**	**70**	**32**	**11**
		Percent			**36%**	**30%**	**14%**	**5%**

Survey Respondents by Billet

Primary Billet	Qty
Account Manager, Marine Corps	1
Acquisition	2
Acquisition Logistician	2
Action Officer	2
Air Control Officer	1
Airfield Services Chief	1
Analyst	11
ARFF Chief	1
Armory Chief	1
Assistant Chief of Staff, G-4	1
Battery Commander	1
Chief Information Officer	1
Commanding Officer	4
Commodity Manager	2
Communications Electronics Maintenance Chief/Officer/Coordinator	10
Communications Officer	1
Customer Service	1
DASF Clerk/NCO	3
Deputy Head	3
DLA Customer Service Representative	1
Electronics Maintenance Chief/Officer	4
Engineer Equipment/Operations Chief	2
Expeditionary Airfield Officer	1
Expeditionary Power Logistician	1
Facilities Operations Officer	1
Fielding and Projects Coordinator	1
G-5 Planner	1
Head	3
Liaison Officer	1
Logistics/Assist Logistics Officer/Chief/Manager	6
Maintenance/Assistant Maintenance Chief/Officer	12
Maintenance Information System Coordination Officer	1
Maintenance Management Chief/Officer	43
Maintenance Management Clerk/NCO	4
Maintenance Management Instructor	1
MAL NCO	1
Manager	2
MERIT Program Administrator	1
Middle Management	1
MIMMS Clerk/NCO	8
Motor Transport Chief/Officer	5

Motor Transport Maintenance Chief/Officer	7
OIC/Assistant OIC	2
Operations Officer	3
Optics Technician	1
Ordnance Clerk/Chief/Officer	4
Ordnance Maintenance Chief	2
Ordnance Vehicle Maintenance Manager	1
Platoon Commander	4
Process and Performance Management	1
Program Manager/Deputy Program Manager	3
Project Officer	11
Quality Control	1
Radar Maintenance Officer	1
Radio Repair Section NCOIC	1
Readiness	4
Section Head	2
Shipping and Receiving Chief	2
SMU Liaison	1
SORTS NCO	1
Source Management	1
Specialist	11
Superintendent of Readiness	1
Supply Chief/Officer	13
Team Leader	2
Test Billet	1
Warranty Coordinator, Engineer Equipment	1
Total	**232**

Survey Respondents by Unit

Unit	Qty
11th Marines, 1st MarDiv, I MEF	4
14th Marines, 4th MarDiv, MARFORRES	1
15th MEU, I MEF	1
1st Bn, 11th Marines, 1st MarDiv, I MEF	4
1st Bn, 14th Marines, 4th MarDiv, MARFORRES	2
1st CEB, 1st MarDiv, I MEF	1
1st Force Recon Company, I MHG, I MEF	1
1st FSSG, I MEF	1
1st Maint Bn, 1st FSSG, I MEF	1
1st MarDiv, I MEF	5
1st MarDiv, I MEF, Iraq	
1st MAW, III MEF	1
1st Radio Bn, MARFORPAC	1
3d Radio Bn, MARFORPAC	2
1st Tank Bn, 1st MarDiv, I MEF	1
2d ANGLICO, II MHG, II MEF	1
2d LAAD Bn, MACG 28, 2d MAW, II MEF	1
2d MACE, II MEF	1
2d MAW, II MEF	1
2d Medical Bn, 2d FSSG, II MEF	1
2d Tank Bn, 2d MarDiv, II MEF	1
2d TSB, 2d FSSG, II MEF	1
3d AABN, 1st MarDiv, I MEF	4
3d Bn, 12th Marines, 3d MarDiv, III MEF	1
3d LAR Bn, 1st MarDiv, I MEF	1
3d MarDiv, III MEF	1
3d Marines, 3d MarDiv, III MEF	1
3d MRB, 3d FSSG, III MEF	4
3d Recon Bn, 3d MarDiv, III MEF	1
3d TSB, 3d FSSG, III MEF	1
3rd Bn, 1st Marines, 1st MarDiv, I MEF	1
4th Eng Maint Bn, 4th FSSG, MARFORRES	1
4th FSSG, MARFORRES	2
4th Maint Bn, 4th FSSG, MARFORRES	1
4th Marines, 3d MarDiv, III MEF	2
4th MAW, MARFORRES	1
4th MEB (AT), MARFORLANT	2
4th Tank Bn, 4th MarDiv, MARFORRES	1
5th Bn, 10th Marines, 2d MarDiv, II MEF	1
5th Bn, 11th Marines, 1st MarDiv, I MEF	3

5th Bn, 14th Marines, 4th MarDiv, MARFORRES	1
5th Marines, 1st MarDiv, I MEF	1
6th ESB, 4th FSSG, MARFORRES	1
7th ESB, 1st FSSG, I MEF	2
8th Comm Bn, II MHG, II MEF	1
8th ESB, 1st FSSG, I MEF	1
9th Comm Bn FWD, I MHG, I MEF, Camp Fallujah, Iraq	2
9th Comm Bn, I MHG, I MEF	5
9th ESB, 3d FSSG, III MEF	2
TECOM, MCCDC	1
BSSG 1, 1st FSSG, I MEF	3
Combat Assault Bn, 3d MarDiv, III MEF	1
CSSB 1, 1st FSSG, I MEF	1
CSSB 10 (CSSG 1), 1st FSSG, I MEF	3
CSSB 12, 1st FSSG, I MEF	2
CSSC 134, CSSG 15, 1st FSSG, I MEF	2
CSSD 36, 3d FSSG, III MEF	1
CSSG 11, 1st FSSG, I MEF	1
CSSG 15 (Supply Bn), 1st FSSG, I MEF	1
DLA	3
HQBN, MAGTFTC	2
H&S Bn, 2d FSSG, II MEF	2
H&S Bn, 3d FSSG, III MEF	1
HQBN, 1st MarDiv, I MEF	7
HQBN, 1st MarDiv, I MEF, Camp Blue Diamond, Iraq	
HQBN, 2d MarDiv, II MEF	1
HQBN, 3d MarDiv, III MEF	4
HQMC	6
HQSVC Bn, 1st FSSG, I MEF	3
I MEF	5
I MHG, I MEF	1
II MEF	4
II MHG, II MEF	1
III MEF	7
LOGCOM	12
MACG 18, 1st MAW, III MEF	1
MACS 2, MACG 28, 2d MAW, II MEF	2
MACS 4, 4th MAW, MARFORRES	1
MARCORSYSCOM	33
MARFORCENT	2
MARFORCENT, Djibouti	
MARFORLANT	1
MARFORRES	3
Marine Corps Operational Test & Evaluation Activity (MCOTEA)	1

MASS 2, MACG 18, 1st MAW, III MEF	2
MCB Camp Pendleton	1
MCB Quantico	1
MCCES, MAGTFTC (MCAGCC)	1
MCLB Albany	2
MCLCAT	2
MCTSSA	3
MLE (1st ANGLICO), I MHG, I MEF	1
MSE, 3d FSSG, III MEF	1
MSSG 13, 1st FSSG, I MEF	1
MSSG 15, 1st FSSG, I MEF	2
MTACS 18, MACG 18, 1st MAW, III MEF	1
MTACS 38, MACG 38, 3d MAW, I MEF	1
MWCS 18, MACG 18, 1st MAW, III MEF	1
MWHS 1, 1st MAW, III MEF	2
MWSG 17, 1st MAW, III MEF	3
MWSG 37, 3d MAW, I MEF	1
MWSS 272, MWSG 27, 2d MAW, II MEF	1
MWSS 371, MWSG 37, 3d MAW, I MEF	1
MWSS 372, MWSG 37, 3d MAW, I MEF	2
Supply Bn, 2d FSSG, II MEF	1
Supply School, TECOM, MCCDC	1
The Basic School, TECOM, MCCDC	1

APPENDIX F: SURVEY

Official Survey
Naval Postgraduate School
Office of Institutional Research
Monterey, CA 93943

MERIT Survey

The purpose of the survey is to determine the strengths and weaknesses of MERIT in areas of usage, user-friendliness, benefits, and overall satisfaction. This feedback will be provided to the MERIT program office and will also provide a resource for future developers of decision support systems in the Marine Corps. The survey consists of 22 questions and should require less than 30 minutes to complete. The point of contact for this survey is Captain J. W. Grooms II at jwgrooms@nps.edu.

Thank you for your participation.

1. What is your rank?

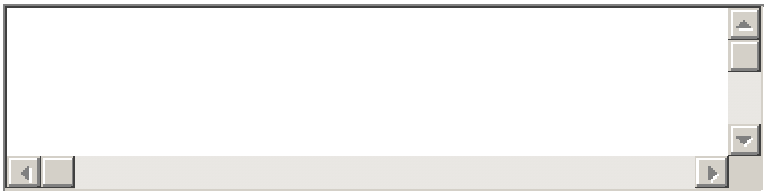
- ☐ Private (E1)
- ☐ Private First Class (E2)
- ☐ Lance Corporal (E3)
- ☐ Corporal (E4)
- ☐ Sergeant (E5)
- ☐ Staff Sergeant (E6)
- ☐ Gunnery Sergeant (E7)
- ☐ Master Sergeant (E8)
- ☐ First Sergeant (E8)

- ☐ Master Gunnery Sergeant (E9)
- ☐ Sergeant Major (E9)
- ☐ Warrant Officer (WO1)
- ☐ Chief Warrant Officer 2 (WO2)
- ☐ Chief Warrant Officer 3 (WO3)
- ☐ Chief Warrant Officer 4 (WO4)
- ☐ Second Lieutenant (O1)
- ☐ First Lieutenant (O2)
- ☐ Captain (O3)
- ☐ Major (O4)
- ☐ Lieutenant Colonel (O5)
- ☐ Colonel (O6)
- ☐ Brigadier General (O7)
- ☐ Major General (O8)
- ☐ Lieutenant General (O9)
- ☐ Civilian

2. What is your primary military occupational specialty (MOS)?

3. What unit (battalion/squadron, group/regiment, MEF) are you currently with?

4. What billet(s) are you currently filling that requires you to work with equipment readiness information?



5. How long have you been using MERIT?

- ☐ Not applicable
- ☐ Less than 1 month
- ☐ 1 - 3 months
- ☐ 3 - 6 months
- ☐ 6 - 9 months
- ☐ 9 - 12 months
- ☐ More than 1 year

6. On average, how often do you access MERIT?

- ☐ Never
- ☐ Monthly
- ☐ Twice a month
- ☐ Weekly
- ☐ Twice a week
- ☐ Daily

7. When accessed, what is the average amount of time you spend in MERIT?

- ☐ Not applicable
- ☐ 0 - 30 minutes
- ☐ 31 - 60 minutes
- ☐ 61 - 90 minutes

- [ ] 91 - 120 minutes
- [ ] More than 2 hours

8. While deployed, have you ever used MERIT?

- [ ] Not applicable
- [ ] Yes
- [ ] No

9. Using MERIT during deployments was beneficial.

- [ ] Not applicable
- [ ] Strongly disagree
- [ ] Somewhat disagree
- [ ] Neutral
- [ ] Somewhat agree
- [ ] Strongly agree

10. What features of MERIT are you aware of? (check all that apply)

- [ ] MyMERIT profile (portfolio equipment tracking)
- [ ] E-mail alerts (i.e. for S, R, and MR thresholds)
- [ ] "Forgot my password" (request new password)
- [ ] Export reports to Excel
- [ ] Organizational summary report
- [ ] Parts on order (i.e. view by requisition)
- [ ] Maintenance TAMCN report (currently in maintenance)
- [ ] Daily readiness report (i.e. by TAMCN, UIC, commodity, etc.)
- [ ] Deadline report page
- [ ] TAMCN readiness summary page (MARES reportable TAMCNs)

- ☐ Display RM4 remarks
- ☐ Readiness rating calculation (S, R, and MR)
- ☐ Organizational readiness maps (graphical/color coded rollup view)
- ☐ UND A/B documents list
- ☐ Deadline discrepancies between MARES and MIMMS (for date, ERO, serial #)
- ☐ Allowance/possessed comparison (MARES/SASSY mismatch)
- ☐ Show excess/deficient equipment (tabular view)
- ☐ Historical maintenance/readiness data (i.e. EROs for specific TAMCN/serial #)
- ☐ Charting features (graphs, tables)
- ☐ Tabular sorting
- ☐ Mouse-over status codes
- ☐ Filter by mission essential equipment (MEE)
- ☐ Filter by current information
- ☐ Drill-up capability (through tabular view)
- ☐ DODAAC link/search (from Search page)
- ☐ News ticker
- ☐ DLA WEBCATS interface
- ☐ Search (by ERO, NSN, serial #, TAMCN)
- ☐ "Printer friendly" capability
- ☐ Type Unit Code (TUC) - displays units assigned to selected MSC

11. What features of MERIT do you routinely use? (check all that apply)

- ☐ MyMERIT profile (portfolio equipment tracking)
- ☐ E-mail alerts (i.e. for S, R, and MR thresholds)
- ☐ "Forgot my password" (request new password)
- ☐ Export reports to Excel

- [ ] Organizational summary report
- [ ] Parts on order (i.e. view by requisition)
- [ ] Maintenance TAMCN report (currently in maintenance)
- [ ] Daily readiness report (i.e. by TAMCN, UIC, commodity, etc.)
- [ ] Deadline report page
- [ ] TAMCN readiness summary page (MARES reportable TAMCNs)
- [ ] Display RM4 remarks
- [ ] Readiness rating calculation (S, R, and MR)
- [ ] Organizational readiness maps (graphical/color coded rollup view)
- [ ] UND A/B documents list
- [ ] Deadline discrepancies between MARES and MIMMS (for date, ERO, serial #)
- [ ] Allowance/possessed comparison (MARES/SASSY mismatch)
- [ ] Show excess/deficient equipment (tabular view)
- [ ] Historical maintenance/readiness data (i.e. EROs for specific TAMCN/serial #)
- [ ] Charting features (graphs, tables)
- [ ] Tabular sorting
- [ ] Mouse-over status codes
- [ ] Filter by mission essential equipment (MEE)
- [ ] Filter by current information
- [ ] Drill-up capability (through tabular view)
- [ ] DODAAC link/search (from Search page)
- [ ] News ticker
- [ ] DLA WEBCATS interface
- [ ] Search (by ERO, NSN, serial #, TAMCN)
- [ ] "Printer friendly" capability
- [ ] Type Unit Code (TUC) - displays units assigned to selected MSC

12. Usability describes ease of navigation through the website and logical presentation of the displays and reports. In evaluating MERIT's usability, how satisfied are you?

- ☐ No opinion
- ☐ Strongly dissatisfied
- ☐ Somewhat dissatisfied
- ☐ Neutral
- ☐ Somewhat satisfied
- ☐ Strongly satisfied

13. Accessibility describes the ability to access the website via the Internet. One aspect of accessibility is the time it takes pages to upload. In evaluating accessibility to MERIT, how satisfied are you?

- ☐ No opinion
- ☐ Strongly dissatisfied
- ☐ Somewhat dissatisfied
- ☐ Neutral
- ☐ Somewhat satisfied
- ☐ Strongly satisfied

14. What reports do you routinely use? (check all that apply)

- ☐ MERIT LM2 Report
- ☐ MERIT Parts Report
- ☐ MERIT Readiness Report (i.e. by TAMCN, UIC, Commodity, etc.)
- ☐ MERIT Historical Report
- ☐ MIMMS LM2 Report
- ☐ MIMMS Daily Processing Report (DPR)
- ☐ MIMMS Table of Authorized Material (TAM) Report

- [ ] MIMMS Daily Exception Report
- [ ] MIMMS Weekly Exception Report
- [ ] MIMMS Weekly Material Report
- [ ] MIMMS Daily Transaction Listing (DTL) Report
- [ ] SASSY Mechanized Allowance List (MAL)
- [ ] SASSY Due and Status File (DASF)
- [ ] SASSY Loaded Unit Balance File (LUBF)
- [ ] Consolidated Memorandum Receipt (CMR)
- [ ] Section Material File Report (SMFR)

15. Many units have used locally prepared ad hoc readiness reports, such as an Excel spreadsheet, Access database, or LM2 extract, etc. Has MERIT reduced your need to produce local reports and maintain local databases?

- [ ] Not applicable
- [ ] Yes
- [ ] No

16. Have you ever used MERIT to "brief" readiness from the website (as opposed to producing slides)?

- [ ] Not applicable
- [ ] Yes
- [ ] No

17. I am confident with the accuracy of the information that MERIT provides.

- [ ] No opinion
- [ ] Strongly disagree
- [ ] Somewhat disagree
- [ ] Neutral

- ☐ Somewhat agree
- ☐ Strongly agree

18. If MERIT was replaced with a different readiness information system, would you recommend that the new system adopt most, if not all of the features that MERIT provides?

- ☐ No opinion
- ☐ Strongly disagree
- ☐ Somewhat disagree
- ☐ Neutral
- ☐ Somewhat agree
- ☐ Strongly agree

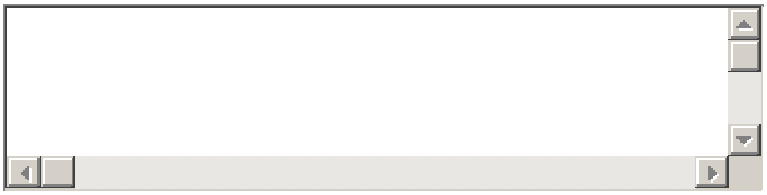
19. How would you describe your overall satisfaction with MERIT?

- ☐ No opinion
- ☐ Strongly dissatisfied
- ☐ Somewhat dissatisfied
- ☐ Neutral
- ☐ Somewhat satisfied
- ☐ Strongly satisfied

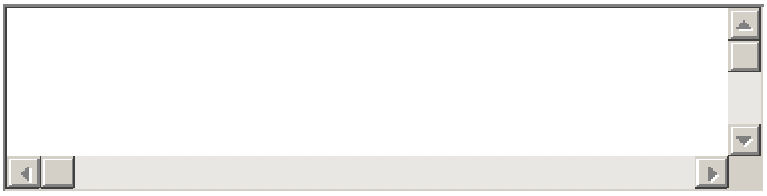
20. Do you feel that MERIT saves you time?

- ☐ Not applicable
- ☐ Yes
- ☐ No

21. Describe your greatest concern with MERIT, if any.



22. Please provide any additional comments or suggestions, as necessary.



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Office of Academic Administration, Gary Dent, Education Analyst, 656-2479 gdent@nps.edu

APPENDIX G: SURVEY STATISTICAL ANALYSIS

Question 5: "How Long Have You Been Using MERIT?"

Length of Use:	Total	Officer	SNCO	NCO & Below	Civilian
Mean	4.01	4.36	3.94	3.05	4.41
Median	4	5	4	3	5
Mode	6	6	6	2	6
Standard Deviation	1.65	1.57	1.65	1.50	1.61
Count	233	85	69	42	37

Question 6: "On Average, How Often Do You Access MERIT?"

Frequency of Access:	Total	Officer	SNCO	NCO & Below	Civilian
Mean	3.83	3.76	3.42	3.91	4.07
Median	4	4	3	4	4
Mode	2	4	2	5	4
Standard Deviation	1.51	1.45	1.44	1.60	1.54
Count	232	83	36	43	70

Question 7: "When Accessed, What Is the Average Amount of Time You Spend in MERIT?"

Session Length:	Total	Officer	SNCO	NCO & Below	Civilian
Mean	1.54	1.54	1.51	1.55	1.59
Median	1	1	1	1	1
Mode	1	1	1	1	1
Standard Deviation	0.78	0.78	0.66	0.86	0.90
Count	230	84	67	42	37

Question 9: "Using MERIT During Deployments Was Beneficial."

Benefit During Deployment?	Total	Officer	SNCO	NCO & Below	Civilian
Mean	3.77	3.89	5.00	3.40	3.50
Median	4	5	5	4	4
Mode	5	5	5	4	4
Standard Deviation	1.37	1.53	0.00	1.52	1.08
Count	35	18	2	5	10

Question 12: "In Evaluating MERIT's Usability, How Satisfied Are You?"

Satisfaction with Usability:	Total	Officer	SNCO	NCO & Below	Civilian
Mean	3.82	3.93	3.67	3.62	4.08
Median	4	4	4	4	5
Mode	4	4	4	5	5
Standard Deviation	1.12	1.02	1.13	1.19	1.19
Count	**227**	81	67	42	37

Question 13: "In Evaluating Accessibility to MERIT, How Satisfied Are You?"

Satisfaction with Accessibility:	Total	Officer	SNCO	NCO & Below	Civilian
Mean	3.87	3.85	3.70	3.88	4.22
Median	4	4	4	4	4
Mode	4	4	4	4	5
Standard Deviation	1.07	1.09	1.14	0.98	0.95
Count	**223**	79	66	41	37

Question 15: "Has MERIT Reduced Your Need to Produce Local Reports and Maintain Local Databases?"

Reduce Local Reports?	Total	Officer	SNCO	NCO & Below	Civilian
Mean	1.49	1.47	1.54	1.62	1.13
Median	1	1	2	2	1
Mode	1	1	2	2	1
Standard Deviation	0.50	0.50	0.50	0.49	0.35
Count	150	60	46	29	15

Question 16: "Have You Ever Used MERIT to Brief Readiness From the Website (As Opposed to Producing Slides)?"

Brief from MERIT?	Total	Officer	SNCO	NCO & Below	Civilian
Mean	1.67	1.68	1.70	1.75	1.48
Median	2	2	2	2	1
Mode	2	2	2	2	1
Standard Deviation	0.47	0.47	0.46	0.44	0.51
Count	187	74	56	32	25

Question 17: "I Am Confident in the Accuracy That MERIT Provides."

Confident of Accuracy:	Total	Officer	SNCO	NCO & Below	Civilian
Mean	3.45	3.59	3.31	3.51	3.29
Median	4	4	4	4	4
Mode	4	4	4	4	4
Standard Deviation	1.23	1.14	1.24	1.23	1.43
Count	221	81	65	41	34

Question 18: "If MERIT Was Replaced By a Different Information System, Would You Recommend That the New System Adopt Most, if Not All, of the Features That MERIT Provides?"

New System Have Like Features:	Total	Officer	SNCO	NCO & Below	Civilian
Mean	4.29	4.19	4.35	4.15	4.59
Median	5	4	5	4	5
Mode	5	5	5	5	5
Standard Deviation	0.87	0.96	0.81	0.90	0.66
Count	215	79	63	39	34

Question 19: "How Would You Describe Your Overall Satisfaction With MERIT?"

Overall Satisfaction:	Total	Officer	SNCO	NCO & Below	Civilian
Mean	4.06	4.08	4.06	3.81	4.30
Median	4	4	4	4	5
Mode	4	4	4	4	5
Standard Deviation	0.95	0.96	0.94	0.93	0.94
Count	230	84	66	43	37

Question 20: "Do You Feel That MERIT Saves You Time?"

MERIT Saves Time?	Total	Officer	SNCO	NCO & Below	Civilian
Mean	1.19	1.16	1.19	1.33	1.06
Median	1	1	1	1	1
Mode	1	1	1	1	1
Standard Deviation	0.39	0.37	0.40	0.48	0.25
Count	207	74	63	39	31

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APPENDIX H: SURVEY COMMENTS

Question 21: Describe Your Greatest Concern with MERIT, if Any.

- MCO 3000.11D displays the formula used to calculate readiness. A different formula is being used in MERIT. In fact, it is the same formula that is on the MIMMS LM2. HQMC needs to decide what formula will be used to brief readiness. Preferably the one on the LM2 which shows a unit's true readiness by subtracting excesses.
- The info on MERIT only reflects what's on the units report/keypunched. If their reports are wrong or doesn't reflect the right info, then MERIT is going to be wrong.
- Official HQMC or GCSS-MC endorsement would be nice!
- No one knows about it and it's hard to get help with.
- I am new to the MERIT program.
- Accuracy of information. Garbage in is garbage out.
- Need a user's manual.
- Reporting accurately.
- Aviation readiness is excluded, must have!
- My unit is not reflected in MERIT therefore it is a waste of time for me to utilize it. I have addressed this issue to merit via email, but change to knowledge has happened. My RUC is 1F4 and MCC is 21625.
- MARCORSYSCOM requires by Program Manager and Product Group view of info to support item management requirement for PMs. This service should be web service enabled so it is available to any organization that requires it.
- My main concern is the accessibility of II MEF data from ATLASS II+ being accurate in MERIT. If you try to pull up parts on order from II MEF units, it says ATLASS II+ data not available.
- Accuracy of info.
- Accessibility and accuracy. There have been times (as with all net based applications) when access was not available or when the accuracy of the data was in question. But for the most part, it is pretty reliable.
- Not as user friendly as it could be. Need to simplify menus and access features. Unsure of what half the items are on the page or how to use them.

- As a II MEF user it has assisted with looking at information as it pertains to I and III MEF. I have just started using it for II MEF data and still have some concerns with accuracy of the data provided.
- There is no way to integrate ATLASS II+ information into the MERIT system.
- Unit reporting accuracy.
- I am very happy with A2P. I am ok with MERIT - I feel that it's just for the higher HQ to look for issues before they occur. For us in the trenches - we do not need the bells and whistles... A2P is perfect for what we do down here.
- Is it accurate with LMIS?
- As with any reporting system it takes time to update and it does not reflect the most current view of the Marine Corps. Personally I have fount ERO's that I have closed weeks before still being reported on MERIT. However these problems are isolated but are bugs that should be worked out before making this the future reporting system of the Marine Corps.
- I have a concern that commanders will rely on MERIT to provide accurate data. Current operational tempo has adversely impacted accurate SASSY reporting and status of equipment on hand.
- The authorized versus on hand by TAMCN is still far off even after the HQMC directed inventory with D TAMCN. Secondly the speed that MIMMS updates are taking place is slow. I email results of pulled reports to MT officers and SNCOs on a weekly basis and still obtain feedback on EROs closed 3-4 days prior that are still active in MERIT. If you really want to get the down and dirty on this allow me to forward this to all my distribution lists. As for now I am providing the response to you only.
- Accuracy! The information viewed and received from MERIT doesn't always reflect the same information found on other information reports. Updating! The amount of time it takes for MERIT to update to the most current information. The reports I receive from MIMMS usually are more up to date than the information I receive from MERIT.
- Many times the readiness levels have not been accurate and many ERO's that were listed on MERIT as being closed still show up.
- That the functionality of MERIT will be lost when MIMMS and SASSY are replaced.
- Accuracy.
- Loss of capability when USMC migrates from legacy to GCSS MC.
- No access when the point of connectivity is inoperable. No connectivity.

- Trouble accessing by unit account, and sometimes slow to load pages.
- Future use with GCSS-MC.
- Just got access. Haven't had opportunity to fully use all features. Am concerned about accuracy as maintenance statuses are constantly changing.
- I don't feel confident that 100% of the Marine Corps' equipment has been loaded into MERIT and frequently double check to verify MERIT'S accuracy.
- Accuracy of data and compliance of the readiness calculation algorithms with Readiness MCO calculation algorithms.
- Reliability of input based on timeliness and accuracy.
- I wish that there was someway MERIT could capture data from ATLASS II+.
- Marines are trained to use DPR, DTLs, material reports, and TAM reports at the using unit level. If Marines input trash, MERIT just reflects trash in a different format. Continue 0411training push for correct input utilizing the system we have and MERIT will continue to support higher HQ with a good picture. Will not work in the filed with limited or no connection and with an unit that moves a lot.
- It is significantly important for the Corps to undergo a cultural change that will assist with MERIT becoming the "one watch" / source for materiel readiness reporting. This needs to occur with I&L leadership making MERIT the standard for such reporting, and then advertising that standard from the advocate.
- The web site is confusing I did not know that it contained all of those different abilities.
- That will build capability to point/click and determine how long equipment has been deadlined based on days for MEE and PEI. This would allow Unit/MSC/MEF to quickly see that we have equipment deadlined for 60, 90, or 300 days plus. 2. We build capability for unit commanders to point and click conduct a maintenance analysis of his unit based on proposed guidelines or criteria. 3. That MEF/MSC be able to establish email Alerts for units that fall below given criteria. Speed. 4. That not enough Unit commanders are briefed on the capability of MERIT.
- Seems to be a day behind MIMMS transactions and there is almost always a discrepancy between MERIT and MIMMS on MCGERR reportable equipment.

- That the capabilities be lost and that we go and try to reinvent the wheel. I have been doing this work for 32 years and I have seen the Marine Corps fail miserably with trying to "invent" AISs. This (MERIT) is a success that was taken off the shelf, and that should not be lost! It should be incorporated in MC GCSS.
- Time it takes to load.
- That the information units are reporting is not current. The information the units are reporting is not accurate.
- Time delay does not accurately provide the readiness status of the Battalion.
- Systems Command reports and manages readiness for the Marine Corps. They don't use MERIT for that purpose. They appreciate its usefulness but don't trust the data enough to report readiness from its data.
- Shows readiness by MEF, not Regiments.
- Does not always reflect what is shown on the LM2. This is mostly due to failure to key punch the information on time.
- Due to the location of the server and the time it takes information to reach it, the data is three days behind at times in Okinawa.
- Having to apply for different access to view parts status.
- Many of the statuses and parts do not match MIMMS Reports.
- In garrison Merit is reliable and reasonably fast in uploading. In deployed environment it is extremely slow to deliver the information. This is not a fault of the program, its just reality from the user. My only real concern with this program is it is a garbage in garbage out system. All the data still comes from MIMMS/SASSY/ ATLASS, therefore this program is redundant to the actual MIMMS/Supply clerk.
- That the program is not continually developed and changed to accommodate the end user or the individual at the using unit. To review the unit's readiness, most CO's want graphs and charts to look at their readiness, most units have to manually input this information, this is time consuming and leaves room for error. If MERIT was able to provide a brief overview of a unit's readiness to use for a CO's brief using graphs and charts a lot of time would be saved throughout the Marine Corps. The overview would need to include a chronological review of the unit's readiness, most CO's want to see how the readiness has changed over a certain period and then be provided justification why the readiness has changed (readiness drops because of: deployments, field duty, unable to get starters for a certain type of truck because the supplier went bankrupt, etc.) and then they want to easily look at how readiness has changed using some type of a graph or slide.

- Accuracy.
- Overall institution and acceptance abroad.
- The accurate interface between the databases here at Camp Lejeune and MERIT are said not to be complete. I hear that it still relies on the individual units to update the LM2 report on a regular basis in order to obtain correct information.
- Lack of accuracy!!!! Garbage in, Garbage out.
- Deployed accessibility requires bandwidth not currently present below the Division level.
- The allowances being reported in MERIT are often incorrect.
- I don't believe the problems that I face utilizing MERIT is MERIT's fault.
- Not too familiar with all of its functions.
- Timeliness, ERO accuracy, and ERO life.
- I have been using MERIT for quite some time and everyday I find some new tool that I can use. Maybe a tutorial program or something to that effect could be produced so that 1st time users have a better understanding of the tool and its functions.
- Current ERO's don't often show up in the system. For example, V3F20 could have been opened on 4055, but MERIT shows 5 different V3F20 ERO's from 7055-9005. Updating of current ERO listings and dropping off the older ones (keep on file, but maybe not shown unless requested specifically) would dramatically increase the value of MERIT.
- When the system is down.
- That you cannot see specific info for East Coast units that are using ATLASS. Working in a program office, we look for deadline trends related to equipment failures. With no access to ATLASS info in MERIT, we have effectively cut off a third of the USMC in the process.
- It is not real time.
- I just got access and am still looking at the different reports and learning navigation throughout the site.
- For the present, MERIT exceeds my capacity to make recommendations on how exactly to make it better.
- Not real time data. Minimum 48 hour lag in readiness. That's why units still utilize locally produced reports.
- If MERIT is tracking equipment readiness and does not track at least the readiness of tactical computer systems, I need a separate tool. If those

systems are not considered "critical," we're wasting a lot of time locally supporting overstated requirements.

- I like the features which MERIT offers. Would like to see (as described in question #18 above) many of these features incorporated into the future LM IT - GCSS MC.
- Ease of navigation to those initially unfamiliar with MERIT.
- I am in Okinawa and the time change between the States and here causes the information displayed on MERIT to be two days old. MIMMS is where our data is inputted to the system and is up dated daily.
- I have no concerns other than I wish I had this program 30 years ago.
- MERIT is great; the accessibility needs to be addressed for slower networks.
- As with any database information is only as good as the reporting unit inputs.
- The up to date information contained. I am currently in Okinawa and the information is usually outdated when accessed.
- It is still new so there is not a whole lot of historical data on equipment. I know it is hard to convert data bases and hard copies to electronic form. Also, is the whole MIMMS AIS system Marine Corps wide tied into the MERIT system or does MERIT get its information as it is given to them?
- I am not able to access certain programs from my laptop. It just simply won't show up. For instance the color table which shows the readiness of a unit by color. I haven't been able to access the units from that screen. It may just be my laptop.
- Not simplified enough, lack of training and support!
- Hardly anyone knows of it and no information is being provided on how to use it. I feel that it is a great Web site and should be used on a more consistent basis for the Battalion level.
- Confidence in the numbers. Poor data in, results in poor data reported.
- Data currency and reliability.
- Accuracy of authorized and possessed quantities.
- My concern is for timely updates/uploads to the MERIT system. The data contained in MERIT should be a real time snapshot of equipment readiness currently on hand for any given unit.
- The site is routinely a day behind CONUS. This makes it at least two days behind Fwd Deployed units. Corrections made to MIMMS reports are not always updated properly to MERIT. This also applies to MARES reports. It is used exclusively, by higher, to track readiness in theater. We already

have a few reports that do that. The DPR and LM2 provided through the FTP site is more accurate than MERIT. MERIT's nice look and "ease of use" make it attractive to those who have never read a MIMMS or MARES report. In all honesty, I only use it because I have to.

- Information is not real time here in Okinawa. CG gets briefed with week old data.
- MERIT only looks at MARES reportables even though there are many pieces of equipment that are important but are not MARES.
- Recently, myself and III MEF G-6 maintenance officer were simultaneously reviewing data displayed in III MEF, Readiness by Commodity, Comm-elect A TAMCN's, from two different geographic locations and were presented with sets of data. In particular, TAMCN's A2070-A2079 were not being displayed on my machine while he was able to view those TAMCN's at his terminal. I refreshed the view several times and finally, after 5 attempts, we both had the same view. The obvious question is, though we both could see the same view, were we both viewing complete and accurate data? The solution would be to place a checksum or some other redundancy check in the delivered data that would be verified once the record set was populated.
- Greatest concern is that it receives the necessary attention to continue improvements/enhancement while it competes and is eventually replaced with GCSS.
- My greatest concern is that when the equipment is at the IMA, it doesn't give me a linking organic ERO. So we have to cross reference the information with RMS (Readiness Management System).
- Up to this point, what I know about MERIT is strictly from trial and error. If there is information on how to use it, it has evaded me up to now. I do like the program.
- Tool has great potential to assist in preparing the user community for GCSS-MC. If MERIT would embrace the direction GCSS is going and partner with the program office, it could set the stage for our future. However, it seem stuck in the legacy world.
- Validity of data. Majority of time, operating forces double enter information so not a true reflection of asset visibility or do not update information regarding equipment status. LMIS data which is used as baseline not current impacting calculations.
- The inability to track units by Marine Corps UIC vice the "deployed" UIC.
- The biggest concern we have with MERIT in the deployed environment is the delay between when we submit our courier through MIMMS here and when the update posts in MERIT. I don't think there is much that can be done about it, but it does cause headaches when dealing with those that

don't understand that updates don't take place over night. We also initially had problems with old ERO's from OIF I popping up during OIF II because we are using the same ERO Matrix, UIC, etc.

- My greatest concern is that I suspect that MERIT is not being used at all levels within maintenance management activities.
- Confirming the integrity (currency, accuracy) of the data that are being displayed. E.g., when was the last SASSY and/or MIMMS extract?
- There are too many discrepancies with the information it provides. It still does not accurately reflect the information in MIMMS AIS.
- I am still getting the feel of the program.
- Does not reflect accurate quantities.
- That is has not been adopted by the Marine Corps as a Class I System.
- My greatest concern is getting into MERIT when it will be the only program used. I am also concerned that you cannot perform any transactions and that it does not give you up to the minute reporting like ATLASS II+. Once you can do maintenance transactions, order parts, report readiness of your unit up to the minute, and support over 4000-5000 marines, this is due to the east and west coast overlapping work schedule, then I will support this program. Until this can happen, this program is nothing more than a graphical user interface (GUI) for the PCMIMMS program.
- Why do we need MERIT? From what I understand MERIT is being develop separately from the program that is going to replace ATLASS II+ and MIMMS. Why are the capabilities of MERIT not included in the replacement program?
- Does not list non-MARES reportable items.
- Night Vision Equipment that is not in MCBUL 3000 how ever I need to know how the equipment is doing.
- I am deployed and the lag time between our courier submission and reflection on MERIT makes the information to out of date for me to use. As such I've returned to using the MIMMS prints. Prior to deployment I used MERIT almost exclusively.
- Parts on order portion of MERIT only provide using documents. Visibility of the Due Source documents would be much more useful in providing supply assistance to the MEFs in help getting parts problems resolved.
- Ability to update deadline gear when the vehicle is the SL-3 component. Often there is a disconnect between reporting correctly the deadline radio or truck. Normally it reflects an inaccurate report.

- I am concerned with its inaccuracy. There has been many occasions when we close out an Equipment Repair Order (ERO) through MIMMS and the ERO continues to be resident in MERIT. The ERO has in fact remained in MERITS for over 60 days of it after being closed. This is my biggest concern. If I cannot rely on accurate data from MERIT then the entire system is in question and loses credibility. *The only reason I use MERITS is because my commander uses it.
- It seems that most of the information is two days old. If an ERO doesn't have a DCD, the serial number shows up in that spot. If you create a TAM report, there are a lot of EROs that show up twice with different job statues. I mainly use the ERO #, DOC #, NSN search page. It takes too many pages to go through to get to that page.
- Deployed RUC is not in system. Can only look at unit from the rear.
- Too dependent on information/data being loaded from the field...the info/data I get from MERIT is as only good as the people that punch in the information.
- Validation of updated information.
- Just another report to look at. Has been useful for tracking the status of parts because I can view supply information that I usually do not have.
- Two concerns: 1. Data Validity. Within the historical data, there are many unusual events/counterintuitive observations. It would be better if one could dig into the source and reasons why the data jumped, say, changes in reporting policy or whatever. 2. Plots. The plots are difficult, if not impossible, to manipulate and download. We usually wind up reproducing the plots in Excel so we can show other types of trend lines, do other tests, etc.
- The human factor of getting timely correct information entered into the system so that MERIT reports are up-to-date and accurate.
- Accuracy of ATLASS II+ info and timely updating of information.
- Data source reliability.
- This is not a tool that helps my day to day work.
- That LM2 seems to be the boss file when it comes to Sassy MAL Allowance and LM2 Authorized. Same for on hands.
- Too much like & uses MIMMS. Need to update to a more responsive system.
- The parts on order against a group of selected EROs is rarely ever complete and has many inaccuracies. When you drill down ERO by ERO the info is accurate and reflects what is no the DPR. But as a Division supervisor, I cannot rely on MERIT to looks for parts trends because right

now the data is unreliable when aggregated. I have submitted trouble reports on these inaccuracies and don't know why they cannot be easily corrected in the Oracle Database. I just know that this potentially valuable capability remains untapped due to its inaccuracy.

Question 22: Please Provide Any Additional Comments or Suggestions, as Necessary.

- Crash down hard on the units to ensure they are follow correct procedures.
- This functionality should go into GCCS-MC.
- Don’t know how to do a lot of the options and uses available. I think this can be fixed with a user’s manual.
- We at II MEF need to apply 'MERIT-Like' readiness information to other disciplines such as medical (SAMS) and personnel (MCTFS) readiness.
- Seems like it is only valuable for the G shop levels or higher. For a Battalion or Squadron, it is just another way to view information already resident in systems that are required to be used.
- I am stationed on the west coast, so MIMMS is still being used. MERIT seems to interface better with MIMMS than ATLASS, providing more accurate data.
- Also, more Supply information as far as most current status of parts in an easy to read manner. Maybe also stockage of NSNs at the SMU for both Source of Supply and Float docs.
- My use of MERIT has been minimal due to the fact that II MEF uses ATLASS II+. Therefore, my answers in this survey are not applicable. Even though this survey is not pertinent to my daily work in maintenance, I still wanted to respond to the request for information.
- Is there training available?
- I am not familiar with the exacts on how the integration of MIMMS and MERIT is if any, but greater integration would be advisable from my view. To include but not limit to possibly keypunching threw MERIT. Units already are using electronic ERO's this would allow one standard for the tracking and actual completion of the ERO.
- Provide an interactive capability for unit Supply Officers to validate/comment on the accuracy of MERIT information per UIC/AAC. This will allow commanders to determine the level of confidence in the information presented.
- DLA and SCMC need to aggressively work all the open doc no, supply reports, as well as secondary repairable back orders. All of the MT community uses it and likes it for the most part. The fact that it updates

nearly everyday and is available worldwide thru the Internet makes it a great program. I have provided feedback over the past year plus since the MERIT started and it has continued to show improvement. The MERIT team takes the feedback they receive seriously and work it to solution very quickly.

- Still needs integration with ATLASS II+.
- Keep up the good work.
- Need to add overall USMC Readiness % to ticker tape ASAP.
- I think MERIT is a valuable tool. Unfortunately, the Command has not been able to break away from the ad hoc locally created reports. At this particular unit, this is not a significant issue due to the limited amount of equipment. The Command also does not utilize SASSY to account for on hand equipment. This reduces the impact of MERIT.
- I frequently use MERIT to check on whether a particular unit rates a piece of equipment or to determine quantities of equipment in the FSSG, for example.
- There needs to be an independent audit of the data and business rules used within MERIT to validate compliance with existing Marine Corps Readiness policy.
- I would like to be able to go beyond looking at what parts are on order for a specific ERO and also see the availability of the part in the "system".
- Additional resources need dedicated to the MERIT project to ensure the MRIPT, MERIT team, and CTC are appropriately staffed to continue with development AND sustainment of the project. Ideally, the project would have a development staff, marketing staff, sustainment staff, technical staff, assistance staff, training staff, etc. vice having the same small group of GS employees, Marines, and contractors conduct all of these functions.
- I think it would be beneficial to add a days deadlined column that shows total days the item has been deadlined in addition to the days in status and date deadlined. It would make things easier when searching for the proverbial over 30, 60 and 90 days deadlined. Thank you.
- Have a good day. I retire in 29 days. Give a bravo-zulu to the whole MERIT team.
- When teaching new Marines on how to use the system, a manual or lesson plan should be accessible for download. Should be taught at the school house at Camp Johnson.
- Great tools for someone in my billet. Allows me the ability to quickly see what is going on in units without spending hours on the phone. Give me the ability to help identify shortfalls/problems within the MT field easily.

- I never knew so many reports were accessible through MERIT, is there a tutorial on how to use the MERIT website correctly and efficiently?
- If the data was updated everyday with the previous days courier information it would be very helpful and I would probably use it more.
- A better connection between MIMMS and MERIT needs to be established.
- Merit is very useful at the Battalion level or higher. A Great tool for staff level managers and Commanders.
- A great program. Keep it! Advertise it!
- I am still waiting for IIMEF to take hold on the new system.
- Until units start reporting their information accurately, MERIT will just be another under used tool for the Marine Corps. It's only as good as the people inputting the information and right now that's suspect.
- In my opinion, the Marine Corps should modernize maintenance/supply administrative procedures by creating a single web based supply/maintenance information system. CMR, MAL and LM2 allowances should be tied to a single system. MARES reportable equipment deficiencies and excesses should be linked to WOLPH/DASF and updated as status changes. Equipment owners should have the ability to view maintenance information on equipment issued on each individual CMR/company/battalion/regiment/MSC/MEF. Simplified procedures for associating UIC to AAC need to be created. The UDP creates a requirement to manually change owner UIC for each piece of equipment in the maintenance cycle during a turnover.
- MERIT does not provide capability for the Regiments to roll-up battalion numbers. MCREM (predecessor to MERIT) provided this capability and was used extensively by most Regiments. This capability would greatly enhance MERIT as a briefing tool.
- Some time of class, manual would be useful. I'm not aware of an existing one.
- Very Useful tool, very informative, but not very "user friendly" for first time users.
- Whether we stay with MIMMS, go to ATLASS or move to an entirely new system, this type of tool needs to be retained.
- Having just signed on with MERIT, I have not yet enough experience using it to provide an accurate assessment.
- MERIT is a step in the right direction, but until we can come up with real time readiness reporting, requisition status and have it displayed at the using (lowest) unit the mission will remain unaccomplished.

- Maybe provide a tutorial. 2. Enforce MIMMS clerks to use correct X and M categories, otherwise downed vehicles do not show on LM2. This occurs frequently.
- I am currently stationed in Okinawa with III MEF G-4 Material Readiness Section. My mission includes providing readiness information to the III MEF Commanding General. MERIT is awesome tool that lets me query valuable readiness data within seconds that used to take hours sometimes days. MERIT is crucial to my mission. A couple of suggestions on your survey question 17 asks about the accuracy of MERIT. MERIT is only as accurate as the using units input is. Also, there is no question about technical support of MERIT. In III MEF if we notice a discrepancy or have a suggestion we get a phone call within hours and the support does not end to until the problem is solved. In my experience the MERIT team has awesome customer service.
- I like the way that MERIT is set up and if it were faster and up to date it would be a time saving tool for me.
- The speed at which MERIT was conceived, developed and fielded should be used as benchmark for like initiatives. One question that was not asked and should have been is how responsive the program manager/developer is to system problems, deficiencies and recommendations for improvement. For those of us who have been using MERIT, the answer would have been response has been superb. When the Marine Corps rolls out GCSS, Marines will not care what application is used to track, manage and analyze material readiness - what they will care about is functionality. The minimum that will be accepted is what functionality MERIT provides at the time of GCSS roll out.
- Create an ability to perform ad hoc reports and possibly even input.
- Even though I have been MERIT recently, I prefer the RMS instead of the MERIT. I have just about all the same capabilities, although I find myself still pulling reports to verify that it is the same.
- Good ideas become great ideas then wonderful, excellent, fantastic, and soon they are no longer ideas but reality. This will be a good tool with everyone’s help.
- Make this easier to navigate, too many fields and takes too long to train new Marines.
- Get the word out to more of the Maintenance community and get some instruction or information out on how to use it best.
- I wish there were pictures and diagrams of TAMCN's. Describe the item, size, weight, C-130/141/17/5 transportable. Currently, a person has to go to several different sources to get a complete picture of item. Many times the person desiring the information is not that familiar with it, asks several

questions about it, and usually wants to know more than just how many are on-hand or in the inventory. Not everyone knows what a D1158 is or how many different varieties there are of a HMMWV. Having a picture and some simple statistics on the item would be very helpful.

- A unit should have the ability to ask MERIT to track equipment it feels is important over and above the MARES reportables. Ultimately, I would like MERIT to track all equipment. Overall, this is an awesome system. Most people only use the basic features of MERIT because they are not knowledgeable enough on MERIT because it is so new.
- Provide an option for turning off the ticker.
- Like to see more tie-ins and expanded capabilities. For instance, look at tying in the WOLPH database and transportation tracking capability found in GTN or any of the other tracking websites.
- The guidance for future expansion of MERIT's capabilities MUST represent all logistics communities, not just the maintainers.
- It would be nice if I could set my account up, or knew how to do it if currently available, so that when I log into MERIT the system remember who I was and what I wanted to see from my last visit and just took me straight to my equipment. I haven't mastered MyMerit yet, so maybe that already is a possibility.
- Continue to build on, improve and insist on Merit being the primary source of information for MIMMS/SASSY. It would also be great if MERIT would become a source of input. i.e., Make MERIT the sole input/output mainframe for MIMMS/SASSY transactions.
- Although difficult, it would be most useful to develop the capability to track top 10 readiness drivers (CL IX and SECREPS causing most vehicle deadline days) and cost drivers (CL IX and SECREP).
- It's a nice tool, but I'm not sure that I could use it as the authoritative report tool if I were an MMO or Unit SuppO. I'd still like to have my standard reports.
- Need one system that everyone uses. Currently there are too many. Numbers in MERIT are different in LMIS, SubSystem 10, and CAPS.
- A great AIS and a great asset to maintenance, supply and logistics resource managers, leaders and clerks.
- After working with ATLASS II+ and PCMIMMC with most of my time using PCMIMMC, I prefer ATLASS II+ and would like MERIT to mirror ATLASS II+. Because that commander want that piece of equipment up as soon as possible. You should not have to write up an ERO EROSL to report and order a part at the end of the day. It is my job to place that equipment on or off deadline. The sooner I can report it as deadline, get

the parts, and report that piece of equipment back up. The sooner we can get to the fight. And that is what a maintenance program is for. Not to have someone or something slowing this process down. Not just reporting that equipment is deadlined but getting the resources to the mech and tech to get he equipment back up in the most efficient way possible. This is the reason why I hope we make it move more like ATLASS II+ and throw away most of the paperwork that slows process down that is in the PCMIMMS program.

- I would also like it easer to get info on non BUL 3000 equipment.
- I am not aware if the system could actually provide a view of a Force breakdown of those items that have low readiness, providing the drill down information of what NSNs are causing the problem. It is very time consuming to move from each individual unit to get like information. Along the same lines, have the information to be shown as a Force Level overall along with the individual unit breakdown, to provide a strategic planning tool.
- Other than the isolated situation above I fill if a daily reconciliation program was added a lot of other reports won't be needed.
- Couldn't the search drop down menu, from the main menu, list all the search options? I mean ERO #, TAM, NSN, MSC, DOC # etc.
- It would be nice to see ITV capability put into MERIT.
- I was just introduced to merit a couple weeks ago and requested/received access. At this moment all I know how to do is look up an ERO number and verify status, I do not know how to create a personalized listing of my EROs, and would like to.
- I think with more tweaking and user training it can be better utilized.
- It's a great system.
- MERIT is a GREAT program. I have been using it since I was a BETA tester while active duty. It is very user friendly and extremely useful.
- Deploy geographic zone site for reliability and speed.
- Outstanding program.
- Combine or use the applications of ATLASS II+ to a web application system such as MERIT as soon as possible, and stress to the ENTIRE Marine Corps to implement and USE! Use professional programmers to design, implement, and maintain the system.

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APPENDIX I: FOCUS GROUP AND INTERVIEW PROTOCOLS

Protocol for Maintenance Management Focus Group:

1. Tell us your name, billet and how long you have been using MERIT?
2. How did you first learn about MERIT?
3. To what extent were you or your unit directed to use MERIT?
4. Think back to when you first started using MERIT? What were your initial impressions?
5. How easy was the transition to using MERIT?
6. In what way did MERIT help you perform your duties?
7. In what way was MERIT a hindrance compared to what you used before?
8. What features of MERIT do you most like?
9. If you could change one thing about MERIT, what would it be?
10. How comfortable are you using MERIT compared to previous systems?
11. What is your overall impression of MERIT now?
12. We wanted you to help us evaluate MERIT. We want to know how well MERIT serves its purpose and if it has a viable future as the program of choice for Marine Corps readiness reporting. Is there anything we missed? Is there anything about MERIT that you want to say but did not get a chance to say?

Protocol for Supply Administration Focus Group:

1. Please tell us your name and billet.
2. Please tell us about challenges maintaining accountability of equipment?
3. Has the CIF reduced the burden to account for equipment?
4. Is it possible to update the MAL on a weekly vice monthly basis? If not, what changes must occur to update the MAL weekly?
5. Have you heard of MERIT?
6. Are you using or have you ever used MERIT? If no, why not? If yes, in what capacity?
7. What is your overall impression of MERIT?
8. What changes would have to occur for you to use MERIT on a regular basis?

Protocol for Semi-Structured Interview:

1. How easy was MERIT to use in a deployed environment?
2. Should we do away with the MIMMS LM2 report because SASSY MAL is, by order, the "boss" document?
3. How do you view LM2 and MAL discrepancies?
4. Have you noticed any issues with S-rating accuracy?
5. How does MERIT work in a deployed environment? Inducting into MIMMS, etc.?
6. Do you have any other comments?
7. Do you have any recommendations?

APPENDIX J: GLOBAL COMBAT SUPPORT SYSTEM – MARINE CORPS

"The program's importance is either above or at least on the same level with weapons systems we have coming down the road.....MV-22, Joint Strike Fighter, and Expeditionary Fighting Vehicle....."

-- Gen. Michael W. Hagee
33d Commandant of the Marine Corps

A. BACKGROUND

During Operation Iraqi Freedom (OIF) Marines provided logistic support to operational units over some of the longest communication lines in Marine Corps History. Although successful, there were numerous shortfalls which demonstrated that the Marine Corps must modernize its entire logistics network all throughout the different levels of warfare; strategic, operational and, most importantly, tactical. The Marine Corps' current logistics IT portfolio encompasses over 240 systems which are not interoperable with either each other or with other services and agencies. During OIF this resulted in a lack of total asset and in-transit visibility and an inadequate distribution system was not able to fully support the Marine Corps' core competency: maneuver warfare. As a result, the Marine Corps has established the Global Combat Support System-Marine Corps (GCSS-MC) as a program of record which is to go "lights on" by FY06. At the Strategic level GCSS-MC will provide a means to access the entire spectrum of support requirements, address current logistics information technology shortfalls, and enable enhanced logistics support for maneuver units. At the operational level GCSS-MC will provide fully interoperable, deployable and tactical logistics command, control, and execution system for all logistics functions. At the tactical level it will facilitate an end-to-end logistics process by allowing the supported unit to track requirements for goods and services from the source of supply to delivery.

GCSS-MC is laser focused on improving the tactical level of logistics. The challenge to GCSS-MC is the priority currently given to logistics. "As for this difficulty, I can attest that this is a huge enterprise integration effort that is simultaneously addressing all three components [of logistics] – technologies, processes, and

doctrine/training/organizations, etc. – in a Marine Corps that has never truly valued logistics as a MAGTF warfighting imperative and invested in it accordingly" (11).

B. GOAL OF GCSS-MC

"The goal of GCSS-MC is to provide a modern, deployable IT tools for supported and supporting units." (17) The Marine Corps is littered with stove-pipe, antiquated automated information systems (AIS) which have strived to automate the processes in use. The processes, when developed, were sufficient for the time. As time passes and technology matures, it is necessary to review the processes and ensure we have the "best process" for the time, and further, develop AIS architecture that optimizes the "best process". GCSS-MC "will be based upon the architecture that drives the development of tools that will better integrate current supply, logistics, distribution, and financial processes." (18)

C. RFID AND GCSS-MC

The underlying technology of this network is Automated Identification Technology (AIT) – Radio Frequency Identification (RFID). This technology will be optimized using an electronic product code network with 5 key components: root object naming service (ONS), local ONS, EPC information service, EPC discovery service and EPC trust service. The solution architecture that links the network will encompass the following hierarchy:

- Enterprise Applications Layer: contains security systems, warehouse management systems, and the overarching enterprise resource planning and supply chain management systems.
- AIT Integration and Infrastructure Services Layer: contains interaction services business process services, integration services and infrastructure services Data Services Layer: contains data collection, aggregation and filtering and data analysis.
- AIT hardware layer: barcode scanners, sensors and smartcards.

D. GCSS LOGISTICS CHAIN FUNCTIONS

For the Marine Corps, the logistics chain functions that would be linked via this network would be:

- Request Management: The generation and approval of supported unit demands.
- Order Management: The receipt, coordination, tasking and tracking of supported unit orders through fulfillment.
- Capacity Management: The planning of resources to fulfill customer demands.
- Production Management: The function of how customer demands are filled.
- Execution: The physical act of order fulfillment.
- Logistics Chain Planning: Planning for anticipated customer demands and establishing logistics networks.

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