

# U.S. Army Implementation Plan



*for*

## The Defense Logistics Management System



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16 October 2000



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# Contents

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Chapter 1 Overview .....	1-1
INTRODUCTION.....	1-1
BACKGROUND .....	1-1
PURPOSE .....	1-2
SCOPE .....	1-3
PLANNING HORIZON.....	1-3
GUIDANCE.....	1-3
OBSERVATION .....	1-4
PLAN OVERSIGHT.....	1-4
PLAN ORGANIZATION.....	1-5
Chapter 2 The Army Logistics Environment.....	2-1
CURRENT ENVIRONMENT .....	2-1
Army Transformation End State .....	2-1
Observation .....	2-2
THE ARMY DLMS OPERATING ENVIRONMENT .....	2-3
Legacy Systems.....	2-3
Significant New and Planned Systems.....	2-3
Process Improvement Initiatives .....	2-6
Ongoing EDI Initiatives .....	2-7
Chapter 3 Defense Logistics Management System Implementation Plan.....	3-1
IMPLEMENTATION STRATEGY .....	3-1
Implementation Planning .....	3-1
Planning Assumptions.....	3-2
DoD Corporate Service .....	3-3
Costs .....	3-6

---

Chapter 4 Implementation Issues.....	4-1
ISSUES .....	4-1
Transaction Technology Neutrality.....	4-1
DLMS Streamlining .....	4-2
DRID #54 .....	4-2
Data Security .....	4-2
Bandwidth .....	4-3
Vision for the Future .....	4-3
SUMMARY .....	4-4

Appendix A EDI Concept of Operation

Appendix B. Army Standard Logistics Systems

Appendix C. Costs for Standard Army Logistics Systems

Appendix D. Risk and Risk Mitigation

Appendix E. Stakeholders’ Roles and Responsibilities

Appendix F. Abbreviations

Appendix G. Army Material Command DLMS Implementation Plan

Appendix H. PEO STAMIS DLMS Implementation Plan

Appendix I. MTMC DLMS Implementation Plan

Appendix J. CASCOM DLMS Implementation Plan

## FIGURES

Figure 3-1. MILS and DLMS Transaction Conversion Requirement.....	3-4
---	-----

## TABLES

Table 2-1. Comparison of Army Logistics End States.....	2-2
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# Chapter 1

## Overview

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### INTRODUCTION

The Army is committed to *Joint Vision 2010* (JV2010), which requires integrating technological advances with the information system, logistics, and transportation technologies to provide responsive, flexible, and precise logistics support to the warfighter. The Army will use business process reengineering methods and tools and technologies to implement substantive improvements to business practices. Effectively, this commitment dictates transitioning from legacy, vertically oriented logistics systems to fully integrated information systems capable of providing the requisite data about materiel, transportation, and maintenance efficiently.

The Army is not unique in this need. Evolving mission requirements for all military services require a comparable metamorphosis. However, the absolute necessity for interoperability, at its lowest level, requires consistency in all data exchanges.

The Defense Logistics Management System (DLMS)<sup>1</sup> fulfills this requirement for both intra- and inter-service exchanges as well as exchanges made with commercial trading partners. The DLMS also serves as the baseline for refining future information exchange requirements and integrating new and evolving technologies. The system is the critical path for current information exchange, but to remain viable, it too must be flexible and responsive to evolving service business needs.

### BACKGROUND

Today, the Defense Logistics Standard Systems (DLSS) (e.g., MILSTRIP and MILSTRAP) are the underlying data formats and procedures that convey logistics data among the military services, defense agencies, civil agencies, and defense contractors. The DLSS convey logistics data for requisition and issue, inventory management, finance, transportation, discrepancy reporting, and measuring supply system performance.

The primary DLSS procedures were established beginning in the 1960s and use fixed-length record formats that are proprietary to the DoD. The DLSS were

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<sup>1</sup> The DLMS is maintained and managed by the Defense Logistics Management Standards Office (DLMSO) at the Defense Logistics Agency (DLA). DoD-wide implementation of DLMS is under the authority of the Under Secretary of Defense (Acquisition, Technology and Logistics) (USD (AT & L)).

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developed to facilitate interoperability in both inter- and intra-service and agency data exchange, and represent more than a mere set of data exchange transactions. The DLSS constitute a fundamental body of business rules, procedures, organizational responsibilities, data elements, codes, transaction formats, and performance metrics that govern today's logistics functions. Unfortunately, however, historical system development institutionalized these rules in information system source code that does not have the flexibility for changing business processes easily to meet evolving management and operational requirements. Since their development, management requirements have evolved to a more refined level rendering the DLSS incapable of supporting the information needs of the warfighter because

- ◆ the amount of data that can be conveyed is limited,
- ◆ IT operating costs are increasing because unique IT solutions must be created to compensate for requirements that cannot be accommodated by the DLSS,
- ◆ legacy system modernization is severely constrained,
- ◆ the cost and difficulty of implementing commercial third-party logistics relationships is increasing, and
- ◆ the use of commercial software applications is severely constrained.

The DLMS replaces the DLSS and represents the use of commercial standards, the American National Standards Institute's (ANSI's) Accredited Standards Committee (ASC) X12 standards for electronic data interchange (EDI). By adopting commercial standards, not only are the foregoing limitations resolved, but the Army is also better positioned to accomplish substantive process reengineering goals. In addition, the DLMS reflects the baseline set of data necessary to support information exchange technology, e.g., XML, object-oriented technology, adopted in the future by DoD. New, more sophisticated integrated software solutions are capable of dealing with a variety of exchange technologies. Therefore, the emphasis for future change can more appropriately focus on business rules, processes, and data rather than exchange technology solutions.

## PURPOSE

Department of Defense (DoD) guidance<sup>2</sup> responding to DoD Directive (DoDD) 8190.1 (formerly Defense Reform Initiative Directive (DRID) #48), described the DoD approach for migrating to using commercial information exchange standards, and required that components submit individual DLMS implementation plans within 180 days. This plan fulfills that requirement and presents the Army

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<sup>2</sup> USD (AT) letter, Subj: Adopting Commercial Electronic Data Interchange Standards for DoD Logistics Phased Implementation Plan, 14 April 2000.



strategy for transitioning from existing DoD logistics business transactions to commercial standards.

## SCOPE

The Army logistics environment is undergoing a major transformation. Consequently, numerous individual plans must be considered in describing the effect of implementing the DLMS on an overarching logistics modernization framework. The Army plan will continue to evolve and is considered a “living document.”

This Army DLMS implementation plan, at a high level, reflects Army’s plans for introducing using commercial data exchange standards as well as reengineering the overall logistics business processes. The plan identifies the key players, highlights roles and responsibilities, and presents milestones for implementing the DLMS. The initial version will describe a high-level approach. Subsequent versions will incorporate refinements to the overall Army logistics transformation process, identify solutions to open implementation issues, reference individual organizational implementation plans, and integrate the results of ongoing system development. We anticipate updating the original plan every six months and applying a set of version control procedures.

## PLANNING HORIZON

This plan will evolve to a time-phased, structured approach for managing the progress of the DLMS implementation. The timelines for the implementation will need to be coordinated and aligned with other service and agency implementation plans; development of the Army’s Planning, Programming, Budgeting and Execution System (PPBES); and internal initiatives for modernizing and replacing systems. We anticipate that the initial set of integrated timelines will be in the first plan update.

## GUIDANCE

The plan considers a variety of directives related to reengineering the overall Army logistics environment as well as DoD and Army directives about electronic business and electronic commerce (EB/EC). The key directive applicable to DLMS implementation is DoDD 8190.1, stipulates in part to:

- ◆ replace DoD-unique logistics data exchange standards with ANSI ASC X12 standards,
- ◆ make DLMS the basis for all new, replacement, and major modifications to logistics business processes,

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- ◆ program, fund, and execute implementation of DLMS through process improvements and business system upgrades,
  - ◆ modify legacy logistics business systems to employ new functionality, where cost beneficial, in order to meet the total requirements of the Departments migration to approved EDI standards,
  - ◆ determine whether legacy logistics systems need to be replaced or modified solely for the purpose of implementing commercial standards, and to
  - ◆ replace or modify automated information systems based on sound functional requirements and supporting economic justification.

Further, the plan considers discussions cited in selected external audits and reports, particularly the recent GAO report, *GAO Electronic Commercial Implementation Strategy Can Be Improved*, July 18, 2000. Particular attention has been given to harmonizing the guidance set forth in the following documents:

- ◆ Army Electronic Commerce Strategic Plan<sup>3</sup>
- ◆ DoDD 8190.2, June 23, 2000
- ◆ DoD DLMS Implementation Plan, Adopting Commercial Electronic Data Interchange Standards for Department of Defense Logistics, April 2000
- ◆ Department of Defense Strategic Plan for Electronic Commerce, May 1999
- ◆ U.S. Army Electronic Business/Electronic Commerce Implementation Plan, October 1, 1999
- ◆ U.S. Army Electronic Commerce Policy<sup>4</sup>
- ◆ DRID #54, Logistics Transformation Plans.

## OBSERVATION

Technology and software have been refined and have matured significantly since the DLMS was originally developed. For this reason, the Army plans to capitalize on these improvements and move toward a shared data environment for all logistics functions. Similar activity also is under way in other DoD services and agencies.

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<sup>3</sup> DISC4 Electronic Commerce Office, Army Electronic Commerce Strategic Plan, March 10, 1998.

<sup>4</sup> Caldera, Louis, "U.S. Army Electronic Commerce Policy." HQDA Ltr 25-99-1. October 15, 1999.

These circumstances are opportunities that did not exist when the original DLMS was developed. Thus, the capabilities resulting from the Army's current business process reengineering initiatives may not align completely with the existing DLMS. Army system developers will avoid conflicts when possible, but will error on the side of technology and reengineered processes when conflicts occur. The Army will expect DLMSO to update the DLMS to keep pace with advancements in technological capabilities and evolving data requirements.

## PLAN OVERSIGHT

Oversight for the Army DLMS implementation plan is the responsibility of the following office:

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## PLAN ORGANIZATION

The remainder of this plan is organized as follows:

- ◆ *Chapter 2* describes the desired Army logistics end state and the current logistics reengineering initiatives.
- ◆ *Chapter 3* describes the Army's DLMS implementation strategy.
- ◆ *Chapter 4* discusses implementation issues of the existing DLMS implementation direction.
- ◆ *Appendix A* is an initial concept of operations applicable to the overall DLMS implementation plan.
- ◆ *Appendix B* lists standard logistics systems associated with this initiative.
- ◆ *Appendix C* identifies the costs anticipated for implementing this initiative.
- ◆ *Appendix D* discusses risk and risk mitigation for the initiative.
- ◆ *Appendix E* is reserved for identifying key stakeholders, their roles and responsibilities, and applicable actions and milestones.

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- ◆ *Appendix F* is a list of abbreviations, acronyms, and definitions.
  - ◆ *Appendix G* is reserved for the U. S. Army Materiel Command (USAMC) implementation plan.
  - ◆ *Appendix H* is reserved for the Program Executive Officer, Standard Management Information Systems (PEO STAMIS) implementation plan.
  - ◆ *Appendix I* is reserved for the Combined Arms Support Command (CASCOM) implementation plan.
  - ◆ *Appendix J* is reserved for the Military Traffic Management Command (MTMC) implementation plan.

# Chapter 2

## The Army Logistics Environment

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### CURRENT ENVIRONMENT

Unprecedented demands for constrained resources, accelerating technology advances, and mandates for extraordinary reductions in response times are dictating dramatic change across all aspects of today's business landscape. Likewise, virtually all areas of defense operations are experiencing fundamental change. Successfully achieving desired objectives will require restructuring operational concepts, business processes, information management systems, and technical architectures.

### Army Transformation End State

The Army has embraced the mandate for change and is seeking to meet a most ambitious vision. As stated by General Eric Shinseki, Army Chief of Staff, "We will aggressively reduce the logistics footprint and replenishment demand. This will require us to

- ◆ control the number of vehicles deployed;
- ◆ leverage reach back capabilities and communications;
- ◆ invest in a systems approach to weapons and equipment we design;
- ◆ seek logistics reductions through common platforms, chassis, and caliber; and
- ◆ revolutionize the way in which we transport and sustain people and materiel."<sup>1</sup>

Ultimately, the end state will be a seamless, interoperable, logistics information system that is web-based, operates in a shared data environment, and provides integrated combat service support (CSS) information to the Army and joint war-fighter for timely and confident decision making. Table 2-1 amplifies this vision and is a comparison of the current and desired Army logistics end state.

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<sup>1</sup> Extracted from "CS/CSS Transformation" Briefing by MG Charles Mahan.

Table 2-1. Comparison of Army Logistics End States

Objective	Today	Future
Logistics systems	Fragmented, stovepipe, limited knowledge, hierarchical, heavy demands on strategic lift.	Integrated with visibility across supply chain. Able to manage and use real-time data. Predictive, anticipatory. Based on warfighter/customer requirements.
Deployment process	Heavy forces within weeks, light forces within days. Slow, inflexible planning based on inaccurate data. Well developed for sea state 1 or 2 over the shore.	On the ground, ready to fight within 96 hours. Planning process rapid and flexible. Bypass ports with over-the-shore capability at least sea state 3.
Logistics footprint	Large and fixed.	Small, dispersed, mobile, distribution based.
Logistics integration	Inefficient functional stovepipes.	Single system, fully integrated, seamless, efficient over the full life cycle.
Product support reengineering	Managing supplies. Heavy organic support. Unique DoD practices. DoD supply system.	Managing suppliers. Competitive sourcing; contractors on the battlefield. Best commercial practices. Expand prime vendor, develop virtual prime vendor concepts.
Logistics information	Functional stovepipe standard systems. Information not a corporate asset. Follows hierarchical structure. Not shared. Primarily a batch-processing environment.	Web-based, single source of data. ERP system-based. Information services. Collaborative. Linked to Command and Control.

Source: Army Strategic Logistics Plan, *Enabling Strategic Responsiveness through a Revolution in Military Logistics*, 11 May 2000.

To achieve the desired objectives, changes are under way to establish a single Army logistics manager, eliminate “stovepipe” processes and organizations, redesign and reduce the logistics deployable footprint and manage it through distribution, and transition to a single stock fund environment.

## Observation

The implications to Army logistics management for this level of change are far-reaching and profound. The Army recognizes that the DLMS is a crucial link for supporting the extended and iterative steps necessary to achieve the desired level of change, i.e., the business process reengineering and data requirements on which the new logistics architecture will be built. However, a clear need exists for

continued vigilance and flexibility to ensure the DLMS also aggressively pursues a transformation path to a higher level of best business practices.

## THE ARMY DLMS OPERATING ENVIRONMENT

The DoD Y2K database was used to establish the baseline of Army legacy systems assessed for DLMS implementation. Legacy systems that are not MILS or MILS-like were considered as not applicable to this plan and have been removed from further consideration. We added significant ongoing business process reengineering projects and significant new or planned system development initiatives to arrive at the initial compendium of tasks in this plan.

### Legacy Systems

Appendix B describes the significant legacy systems we identified during our initial review. For each system, we have identified plans for modernizing or replacing them, plans for making them DLMS capable, interface systems, and an estimated capability date.

The Army is developing an overall timeline for the program that will reflect critical milestones and performance links for all the systems involved. In addition, cognizant organizations will be developing individual implementation plans that will be used to guide the development and fielding of the systems. We anticipate that this information will be available for the first update to the plan (See Appendixes G through K).

### Significant New and Planned Systems

#### GLOBAL COMBAT SUPPORT SYSTEM - ARMY

The end-state of the Global Combat Support System Army (GCSS-Army) will be a seamless, interoperable, real-time logistics information system. This system will be web-based, operate in a shared data environment, and provide integrated CSS information to the Army and joint warfighter for timely and confident decision-making. With full support of the DLMS, development covers the spheres Retail/Tactical and Wholesale/Strategic.

#### RETAIL/TACTICAL

This is the Army's objective logistics automation system. It supports the CSS functions of manning, arming, fixing, fueling, moving, and sustaining soldiers and their systems. It will be the Army's seamless, integrated, modular, and interactive CSS information management and operations system at all force support levels.<sup>2</sup>

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<sup>2</sup> Army (GCSS-Army) Operational Requirements Document (ORD) Global Combat Support System, July 31, 2000.

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Development and fielding of the retail/tactical portion is being accomplished through the normal acquisition management life cycle process. This acquisition category (ACAT) 1 program spans through FY 2004. Thirteen Legacy Logistics STAMIS baselines are being transformed from a multiple stovepipe and non-integrated environment to a seamless, integrated, interactive and modern web-based environment.

In the shared data environment, it will provide the Army commander with access to integrated, joint information to support planning, and provide joint systems with timely and accurate information from Army databases and inter-service support capabilities.

Key operational capabilities will incorporate

- ◆ automated source data-entry devices, distributed databases, and multitask processing, streamlined CSS business practices to reduce the proliferation of automated information systems (AIS), same data inputs, and duplicative tasks;
- ◆ shared standardized data;
- ◆ horizontal and vertical access to more information across the total CSS structure; and
- ◆ communications initiated from within functional applications.

#### WHOLESALE/STRATEGIC

This non-material development provides a commercially out-sourced Information Technology (IT) Service. The Wholesale Logistics Modernization Program (WLMP) is a Business Process Reengineering (BPR) and Enterprise Resource Planning (ERP)<sup>3</sup> initiative for the modernization of the two largest wholesale logistics systems, the Commodity Command Standard System (CCSS) and the Standard Depot System (SDS).

In the shared data environment, it will provide the Army commander with access to integrated joint information to support planning. It will also provide joint sys-

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<sup>3</sup> ERP refers to the automated business information systems currently used by commercial manufacturing and service-sector organizations. ERP systems now are being adopted and implemented throughout DoD and the civilian agencies. ERP systems provide a fully integrated and optimized approach for developing systems and are an enabling mechanism that forces the transformation from traditional stovepipe functional orientations to horizontal, fully integrated process-oriented enterprises.



tems with timely and accurate information from Army databases and inter-service support capabilities.

Specific WLMP goals are to

- ◆ modernize logistics by identifying and adopting best business practices and the information technology that supports those processes;
- ◆ transfer, from government to contractor, the responsibility for sustaining the current Commodity Command Standard System (CCSS), Standard Depot System (SDS), and other transferred systems and subsystems;
- ◆ integrate the WLMP with the retail/tactical force support modules, the Single Stock Fund (SSF), and other significant initiatives to achieve seamless Army logistics;
- ◆ provide modernized data processing; and
- ◆ enable logistics managers to access accurate product data (created using automatic identification technology (AIT) applications), wherein WLMP maintains a national perspective of all uniquely identified products.

#### TRANSPORTATION COORDINATOR'S AUTOMATED INFORMATION FOR MOVEMENT SYSTEM II

The Transportation Coordinator's Automated Information for Movement System II (TC-AIMS II) is a DoD-directed initiative. TC-AIMS II will be an integrated system for managing transportation information about routine deployment, sustainment, and redeployment and retrograde operations by providing the same shipment policies and procedures in peace and war and for both active and reserve forces. The system will be integrated with unit-, installation-, and depot-level supply systems to manage inbound and outbound shipments, documentation, and requisition information. TC-AIMS II functionality will be reflected in four releases. The system is not yet EDI capable but will meet all future information requirements.

#### LOGISTICS INTEGRATED DATA BASE

The Logistics Integrated Data Base (LIDB) is a major reengineering initiative to integrate logistics data into one relational database. The LIDB stores wholesale and retail historical information and provides real-time status of Army readiness, requisition, supply, maintenance, and asset information to customers worldwide. LIDB is being built using commercially developed software that permits incremental build, test, and implement phases.

LIDB development is closely coordinated with GCSS-Army to ensure a single vision, product, and database for use in meeting customer requirements. LIDB is

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capable of receiving and sending EDI transactional data to any EDI-capable trading partner. Further, LIDB is a viable source of EDI translation services based upon overall architecture decisions.

## WORLDWIDE PORT SYSTEM

Worldwide Port System (WPS) expedites the timely and orderly processing of cargo for both sustainment and unit movement that is shipped through DoD common-user water ports. WPS exchanges a number of standard DLMS transactions and system-unique transactions developed for specific interfaces. WPS also has a direct operational mission and deploys to austere operational environments where interfacing systems are located in proximity to each other. Currently, deploying EDI translation capability to all of these “tactical” systems is not realistic or cost effective.

The WPS is an evolving system that is scheduled for a major enhancement (WPS-Enhanced) in the fourth quarter of 2002. While maintaining its core functionality, the enhancement will address known deficiencies, more fully comply with the DoD joint technical architecture, and provide an opportunity to implement EDI initiatives when the interfacing systems are capable.

## Process Improvement Initiatives

The following initiative is representative of the extraordinarily complex set of projects designed to redefine Army logistics. It has a significant effect on the final structure, functionality, and scope of the system development initiatives described above. In turn, comparable initiatives will affect the scope of business processes and data requirements covered by the DLMS. Many issues remain unanswered. Each subsequent plan update will identify resolved issues, as appropriate, and their implications for DLMS implementation.

## SINGLE STOCK FUND

The SSF is an initiative to reengineer inventory management and associated financial processes throughout the Army. SSF will consolidate management of current wholesale, theater, corps or installation, and division-authorized stockage list inventories into a seamless logistics and financial system, creating a single virtual supply and maintenance organization. SSF is a co-partner with the Integrated Sustainment Maintenance (ISM) program. It will be the source for unserviceable products (i.e., those requiring overhauls) for national maintenance activities.

SSF is merging wholesale and retail elements of the Army Working Capital Fund (AWCF) and Supply Management Army (SMA) below departmental level into a single nationally managed fund. This merger will streamline operations that have caused numerous inefficiencies, including multiple points of sale and credit, mul-

multiple ledgers/billing accounts, and duplicative automated systems managing the same inventory.<sup>4</sup>

The business rules under the SSF concept will be incorporated into the functionality of the WLMP.

## Ongoing EDI Initiatives

The Army has numerous EDI-related process improvement initiatives ongoing across the functional area disciplines. The project described below is indicative of the work being done in the logistics community. EDI initiatives will be inventoried in a subsequent plan update.

### DoD E-MALL TACOM PILOT

The Tank Automotive and Armaments Command (TACOM) sponsors a series of EB/EC programs, including several EDI programs for direct vendor delivery, depot replenishment, and commercial system lifetime support. The TACOM Pilot is one segment of the Army corridor in DLA's DoD Electronic Commerce Mall (DoD E-Mall). The target for rolling out this project is November 2000. In addition, TACOM provides a Web EC service that is an innovative and convenient way to bring suppliers the benefits of EDI with the accessibility of the World Wide Web.

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<sup>4</sup> <http://www.army.mil/ssf/index.html>

# Chapter 3

## Defense Logistics Management System Implementation Plan

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### IMPLEMENTATION STRATEGY

*Army's strategy for reengineering existing logistics capabilities is based on replacing existing legacy systems with modern, state-of-the-art, fully integrated commercial software.*

The Army believes that the most successful approach to this strategy means adopting, as much as possible, the business rules and practices embodied in the software suite. Otherwise, efforts to tailor software to meet unique business requirements dramatically escalates software development and modification costs, prolongs the implementation timeline, and places successful implementation at risk.

The DLMS must meet this same criteria by ensuring that all information exchange requirements are consistent with software business process and business rule logic. If not, adopting the DLMS could impose a requirement to adapt software logic to comply with that of the DLMS. Accordingly, Army will ensure compatibility between ongoing software implementation and DLMS requirements.

For logistics systems that we do not anticipate undergoing substantive change, Army will carefully assess a business case for the future need of such software and the implications of introducing DLMS capability. Emphasis will be on minimizing the introduction of DLMS capability to these systems.

Given the numbers of different systems and organizations involved, DLMS implementation will require a long-term phasing. Also, a number of implementation-related issues will need to be clarified and coordinated across the entire DoD-user community. We address these issues in Chapter 4.

### Implementation Planning

The requirement for implementing DLMS in logistics systems has been provided to all system management and development organizations. This plan constitutes the overall strategy for achieving the objective. Individual component implementation plans are being developed for each affected system. We will incorporate the implementation plans in the first update of this plan.

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## Planning Assumptions

Clearly, transitioning to an information exchange strategy that can meet today's and tomorrow's operational and support requirements is needed. However, as can be seen from the complexity and scope of the foregoing discussion of the Army logistics transformation, developing a DLMS implementation plan cannot be considered in isolation. Reinventing DoD business practices is producing voluminous levels of guidance that could conflict with DLMS guidance. For example, DRID #54, Logistics Transformation Plans, requires fielding Web-based shared-data environment systems for DoD by fiscal year (FY) 2004.

Thus, a DLMS implementation strategy must be comprehensive and consistent with *all* policy guidance. The Army is assessing this guidance and plans to summarize the results as they affect DLMS implementation in a subsequent revision to the plan.

The absence of definitive Army positions on all DLMS implementation issues should not delay developing a high-level plan. Therefore, we have adopted the following planning assumptions:

- ◆ The plan will be developed in two phases. Phase 1 will identify a high-level implementation strategy and will address specific mission-critical and mission-essential systems. Phase 2, to be reflected in subsequent plan revisions, will detail the implementation strategy and address all remaining logistics systems.
- ◆ For planning, developing data exchange requirements that support the business process and that are *neutral* to a data exchange technology (e.g., MILS, EDI, eXtensible Markup Language (XML), object-oriented technology) is desirable.
- ◆ Only Army standard systems will be included in the initial version of the plan. All other unique systems (e.g., those unique to Army Reserve, MACOMs, etc.) will be considered in subsequent plan iterations.
- ◆ Systems that do not use MILS or MILS-like transactions will not be included in the plan. This includes systems and system interfaces that exchange data internally in Army-only "flat file" or other comparable formats.
- ◆ A system that transfers information "outside Army systems" is considered to be one that communicates with other Army systems or non-Army systems via a third party entity, e.g., the Defense Automated Addressing System Center (DAASC).

- ◆ Systems that transfer information only “within Army systems” will not be considered in the initial version of the plan. Those systems will be considered separately, as necessary, in a later version of the plan.
- ◆ DAASC will continue to maintain a support capability, providing transactional conversion between MILS and DLMS formats throughout the entire transition. DAASC also will provide EDI translation services that can augment Army translation capability, if needed. (The Army and DAASC will discuss specific arrangements for fees for services separately.)
- ◆ The current DLMS transactions contain numerous redundant and unnecessary data requirements resulting from the requirement to convert between MILS and DLMS over some interim implementation period. DLMSO will produce future versions of the DLMS that dramatically reduce both the data content and transactional requirements to be consistent with streamlined DoD business processes and adopted software solutions.
- ◆ Existing DLMS data and enhancements will be reassessed in the context of ERP requirements to validate a continuing need for the proposed functionality and to ensure compatibility with ERP capabilities.
- ◆ DLMSO will initiate a review of potential alternative technologies for data exchange and develop target mapping solutions for any supported capability, e.g., XML, HTML, Web forms.

## DoD Corporate Service

Wherever possible, Army will leverage common corporate services provided by the DoD.

## TRANSLATION SOFTWARE AND SERVICES

Army has made no decisions about selecting EDI translation software targeted to support DLMS implementation. Future decisions will require assessing the projected logistics architecture; ERP capabilities to accommodate multiple data exchange formats and technologies; the marketplace software capabilities, including more robust “any-to-any” mapping software; and the need for unit-level or geographic translation support requirements.

Fundamental to any translation support requirement are issues about centralized verses point-to-point translation, intra- and inter-service exchange requirements, private-sector exchange requirements, third-party servicing requirements, security requirements, end-to-end transactional integrity, audit trails, and archiving requirements. Appendix A contains an initial set of operating concepts that address many of these issues as they relate to DLMS implementation.

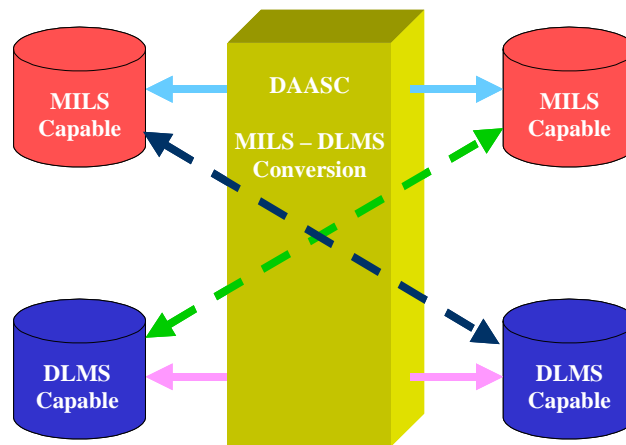
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## TRANSACTION CONVERSION SUPPORT

Implementing DLMS in phases is highly likely and represents a proactive strategy as the Army assesses the rapid evolution in information technology and transmission protocols. Implementation phasing (e.g., either by organizational capability, functionality development, or both) will require exchanging transactions between organizations that have EDI capability and organizations that do not have EDI capability. Where similar capabilities exist, the information should transfer with no difficulty. However, if dissimilar capabilities exist, some level of transaction conversion between DLMS (e.g., EDI) and MILS formats will be required (See Figure 3-1).

In these instances, the Army will use DAASC capabilities rather than pursue a service-level solution.

*Figure 3-1. MILS and DLMS Transaction Conversion Requirement*



## SERVICE-UNIQUE DATA AND TRANSACTION ELIMINATION

The evolution of the DLSS provided an opportunity to supplement standard DoD transactions and processes with service-unique transactions and service-unique data conveyed within standard DoD transactions. DLMS development specifically excluded including service-unique data.

The Army logistics community, in conjunction with DLMSO, has initiated a review to identify all unique transactions, data elements, codes, and business rules and to assess their continued need for existing and future logistics modernization initiatives. The vast majority of Army-unique requirements can be accommodated by existing DLMS or ASC X12 EDI capabilities. Where a need to retain this functionality exists, Army will propose adopting the requirement as part of the DoD standard business process. If no need remains, Army will eliminate the requirement.

## MILS-LIKE TRANSACTIONS NOT ADDRESSED BY THE DLMS

Army is aware of several DoD business areas responsible for developing and maintaining MILS-like transactions that do not now fall in the scope of the DLMS, i.e., cataloging, DAASC inquires, and DoD Activity Address Directory (DODAAD) maintenance. Each of these transactions uses a Document Identification Code (DocID Code) and fixed record layout as the basis for defining transaction functionality and data content. These transactions have some relationship to the overall logistics process, and may be applied against the same business applications.

The significance to this discussion is the efficiency of application processing logic developed to support DLMS transaction processing. DLMS logic is based on transaction functionality. The MILS-like transactions generally follow a DocID Code processing logic. Requiring multiple transaction-processing logics in any business application creates a potential for processing inefficiency, or could require developing middleware solutions to facilitate the process. Thus, the harmonization of those methods used to convey all DoD logistics information would be highly beneficial for all users.

## TESTING

In most instances, the DLMS will be implemented as part of the overall modernization of the legacy system or replacement initiative. Because system modernization and development reflects the execution of Army business rules and procedures, one key ingredient will be the identification of necessary data requirements for any business transactional exchange. Individual system developer contractors will test the integration to assess interoperability with all Army infrastructures before fielding the system as an integral software development function. No known external interface requirements will be necessary for this aspect of testing.

External interface requirements, compliance with telecommunications standards and protocols, and successful transaction delivery for all transactions exchanged outside Army will require integration testing with both DAASC and a range of trading partners. Army will coordinate directly with DAASC and its trading partners, as required, to ensure the complete and consistent exchange of information.

All testing will ensure that mandatory data requirements maintain software and application integrity during detailed testing plans implemented system-by-system, application-by-application, and interface-by-interface.

Metrics will be developed to support the testing process to assess implementation progress and viability.



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## TRAINING

The objective of developing any new system should be to minimize the requirement for detailed user knowledge. Minimum user interface with as much background processing logic as possible will facilitate system fielding requirements.

DLMS implementation should be transparent to the end-user of any application. Army personnel should only require training about business rules, procedures, and data requirements. Since transitioning the system design and maintenance to a contractor, training system developers and system analysts about EDI technology and techniques is now a contractor requirement and will be done accordingly. However, to the extent that revised business processes involve some level of explanation, the Army will ensure that all necessary assistance is provided.

## Costs

Appendix C provides current cost projections of implementing DLMS.

# Chapter 4

## Implementation Issues

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### ISSUES

The DLSS evolved from a recognized need to standardize processes and provide the framework for military service interoperability. Given the degree of logistics transformation throughout the defense enterprise, the military services and defense agencies must coordinate closely to avoid the inefficiencies of the past.

The Army endorses using a process that assesses continuously and is accountable for satisfying the needs of the defense enterprise. We recognize that planning and implementation issues will arise and that they must be resolved quickly and thoughtfully to maintain a sound and consistent implementation strategy.

This chapter describes an initial series of issues that must be clarified by the DLMS implementation community. Subsequent plan revisions will augment these issues and provide any available status on their resolution.

### Transaction Technology Neutrality

EDI represents a significant tool for information exchange. Industry and the federal government have a substantial investment in EDI infrastructure and processes and are committed to using commercial standards. Industry and government cannot, and will not, indiscriminately abandon EDI as a primary enabler for conducting electronic business and electronic commerce in the near term.

Comparably, industry will not ignore using new and evolving technologies when they support market-oriented objectives. DoD naturally should follow the same path. However, DoD should keep one major issue in the forefront in these deliberations—the use of a “standards-based” approach<sup>1</sup>. Otherwise, the economics of multiple methods and information exchange scenarios becomes completely unmanageable almost immediately.

Today’s ERP systems are capable of dealing with virtually any information exchange technology, whether it is MILS, EDI, XML, Web forms, proprietary file formats, or internal ERP formats. Thus, the issue quickly evolves to one of data

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<sup>1</sup> In many instances, alternative technologies may not be recognized as a national or international *standard*. However, the popularity or general acceptability of the technology may be so great that it represents a *de facto* standard. The current discussion emphasizes a recommendation that DoD adopt a single method or structure for all data exchanges using that technology. Such action negates the need for either the DoD or its trading partners to develop multiple ways for conducting the same business functions.

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content and data mapping rather than conveyance technology. The discussions surrounding a Web-based approach are positive and responsive to the warfighter requirement. But, so too are the requirements positive and responsive for efficient business-to-business (B2B) exchanges that exclude human intervention.

To best use the opportunities from an ERP environment, the Army recommends that DLMS implementation use a “technology neutral” solution. In the interim, before the implementation begins, every effort should be made to determine all acceptable exchange technologies, to aggressively develop individual sets of data exchange “standards” that reflect the DLMS data requirements, and to widely announce the capability for using any authorized exchange medium that may evolve.

## DLMS Streamlining

The current version of DLMS does not diverge substantively from existing DLSS requirements and business rules. Using commercial EDI standards and being able to convey new and different data requirements do represent a substantial step forward in meeting management and operational information needs. However, the DLMS and the current documentation do align very closely with current DLSS policy, primarily because of the anticipated transaction conversion requirement.

As new systems are being developed, a streamlining of the original DLMS data and transactions must take place. This requires that Army new development and major legacy renovations identify all DLMS data requirements supporting a “future state” now to permit efficient system planning, development, and implementation.

## DRID #54

The full impact of DRID #54 on DLMS implementation is still being assessed. The Army will discuss the issue further at a more appropriate time. For the moment, the Army recommends that a coordinated service and agency strategy related to DRID #54 direction be prepared for DLMS implementation.

## Data Security

With rare exception, neither Army logistics information systems, logistics databases, nor DLSS transmissions have ever been classified. However, security safeguards have always been used in an attempt to maintain appropriate levels of accountability, availability, access control, confidentiality (where appropriate), integrity, and non-repudiation according to the criticality of the mission or the sensitivity of the information.

In a recent report about the state of the DoD’s Electronic Commerce Implementation Plan, the General Accounting office noted that “The Department has not yet...fully implemented essential security measures that are needed for electronic

commerce.”<sup>2</sup> However, the implications for DLMS information exchange remain under review.

The Army will review all appropriate security requirements for sending DLMS transmissions. However, the Army considers all logistics transactions to be unclassified, and will not add any security requirements that do not exist today.

## Bandwidth

Despite the technological advances and cost reductions throughout the telecommunications environment, the availability of sufficient bandwidth to meet all necessary logistics transaction exchanges is a constant concern. Using many information exchange technologies, EDI and XML included, requires transmitting a much expanded data stream. The use of data security mechanisms also dramatically affects the transmission size.

Readily available data-compression techniques can offset parts of this requirement. However, process simplification and data streamlining often are overlooked aspects of data exchange. With the DLMS, numerous redundant data elements are conveyed in each transaction that follows an initiating transaction in the logistics business process flows. This circumstance arose from the original DLSS technology limitations and remains today because the effect of eliminating transactional data in the legacy system environment has never been assessed fully. Thus, another opportunity exists to further streamline DLMS information exchange requirements.

## Vision for the Future

Today’s vision is tomorrow’s reality, and all too frequently tomorrow arrives before it is expected. As the Army pursues the ERP solution, we also will seek to continuously refine the efficiency of our business processes by applying best business practices. The expectation that the Army would rely increasingly on commercial ventures for vendor-managed inventories, expanded use of direct vendor delivery and prime vendor concepts, real-time point-of-sale information exchange, and pushed inventory levels is not unrealistic.

These enhancements require a comparable refinement of the information exchange requirements that will take place between the Army and its various trading partners. Therefore, the Army supports developing a DLMS maintenance environment that anticipates change and provides a responsive, time-sensitive capability to satisfy evolving business needs.

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<sup>2</sup> General Accounting Office, *Electronic Commerce Implementation Strategy Can Be Improved*, July 18, 2000.

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## SUMMARY

The Army has embraced the longstanding need to transform DoD logistics business processes into an integrated, visible, real-time, end-to-end supply chain environment that can greatly improve warfighter support. Comparably, the Army appreciates the complexity of replacing deeply ingrained legacy systems that have worked so well for many years.

Today's technology advances offer many more opportunities to move toward those objectives exemplified in the DLMS. However, no single entity can implement the DLMS in isolation. Close coordination among all DoD organizations involved in redefining the logistics process is required to ensure achieving the business needs of the defense enterprise.

# Appendix A

## EDI Concept of Operation

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### INTRODUCTION

From a business process perspective, implementing the DLMS will not change the intrinsic functionality of the logistics data exchange. The process participants also will remain the same. These participants will continue working together, both within and across component boundaries, but they will exchange an increasing amount of data. Also, the changing relationships, responsibilities, and capabilities brought on by the changes throughout the logistics enterprise will restructure how the organizations will operate together.

From a technical perspective, the DLMS procedures and manuals will continue to provide the business rules and data formats for inter-component logistics operations. However, new logistics information systems, restructured data content, and flexible communications alternatives will alter how organizations exchange data.

This appendix discusses the initial Army perspective for operating concepts to be used for implementing DLMS. However, ongoing design and operational change likely will affect the final concept structure. Each plan revision will update the content of this section as required.

### GENERAL OPERATING PRINCIPLES

The new capabilities for exchanging and accessing data brought about by the DLMS provides the Army with an opportunity to revise fundamental principles and assumptions about the data sent and received by computers. The following basic principles will guide Army modernization initiatives and institutionalize DLMS capabilities.

#### Compliance

In implementing the DLMS, the Army will comply with all applicable federal, DoD, and Army logistics and financial management policies.

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## Standardization and Streamlining

The Army seeks to manage logistics more responsively and efficiently by standardizing and eliminating redundant and unnecessary information exchange. Specifically, the Army will maintain a strong advocacy for the following:

- ◆ *Single set of business processes.* The Army will seek to apply DLMS functionality to all material commodities. Where exceptions exist, every effort will be made to include the necessary functionality in the DLMS procedures before developing operating practices unique to the Army.
- ◆ *Eliminate Army-unique transactions, data elements, and code lists.* The Army will analyze existing MILS-like, Army-unique logistics management transactions, data elements, and code lists. The objective of the end state is to eliminate all Army-unique transactions. Functionality that is comparable with DLMS functionality will be consolidated in the DLMS. New functionality will be sponsored for incorporation in the DLMS.
- ◆ *Eliminate unnecessary data.* Large amounts of data are unnecessarily repeated in both MILS and DLMS transactions that are generated in response to an original transaction, e.g., status following a requisition. In addition, unnecessary functionality is maintained in both MILS and DLMS transactions and data requirements.<sup>1</sup> These situations arose because of deficiencies in technology, systems, and processes over the lifespan of the DLSS that produced an inability to easily modify logistics applications. Modernization is an opportunity to better design the required functionality in operating systems and eliminate the need to use transactional exchange as a compensating mechanism for system inefficiencies.
- ◆ *Data classification.* Initial planning will consider all DLMS-related information as unclassified.

## Data Quality

The Army seeks to ensure that data exchanged throughout the logistics enterprise is as complete and accurate as possible. The responsibility for data quality resides with the originator. Data quality should include functional correctness (i.e., accurate data, correct usage, timely data, acceptable values or ranges, and data performs correctly in a receiving application) and syntactical correctness (e.g., correct format, presence or absence, and correct fit-to-data schema).

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<sup>1</sup>One example is the requirement to include all requisition data in a follow-up transaction so the processing application can treat the follow-up as an original requisition if that application has no record of the original requisition transaction. Such a requirement could eliminate the non-critical data requirements for a follow-up transaction if the logistics system were capable of providing end-to-end integrity for all transactional exchanges and confirming the receipt of the transaction to the originator of a transaction.

Delays in providing materiel support to the warfighter that are caused by inaccurate, incomplete, misinterpreted, or misrouted transactions are to be avoided under all circumstances. The following principles will be applied to all future systems development and implementation initiatives:

- ◆ *Edits at origin.* For outbound transactions, sites originating logistics transactions will validate and edit data before transmitting it to the logistics system. Extensive editing and checking routines should be designed into system development and modernization initiatives.
- ◆ *Edits at destination.* For inbound transactions, sites receiving logistics transactions will syntactically validate only mandatory data considered essential to processing the transaction successfully. All transactions determined to be syntactically acceptable for processing to the business application will be edited for compliance with applicable business rules. The Army encourages that business rule validation be restrained to only the data considered critical to processing the requirement correctly or expeditiously. Unnecessarily complex or redundant validations (e.g., 100 percent of data) are discouraged. All appropriate deviations from business rules (e.g., rejection, process with a known error, and query the originator for additional information) will be processed in accordance with DoD or Army logistics policy guidance.
- ◆ *Database integrity.* No known errors will be introduced into an Army logistics database.
- ◆ *Error correction.* Because responsibility for data quality resides at the source, the source will correct all errors that must be corrected to properly process a transaction.
- ◆ *Eliminate third-party processing.* Historically, DoD logistics data have been analyzed, validated, and corrected by third-party sources, primarily because modifying logistics information systems could not be accomplished easily. New development and system modernization initiatives should ensure that the responsibility for data quality and completeness is established at the originating point, thereby eliminating the need for relying on third-party service providers at interim processing points.



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- ◆ *Use data only as defined.* Limitations of DLSS transaction space have fostered the use of data fields for purposes other than as originally intended. This limits interoperability and leads to misinterpretation of data and processing errors. Subsequent replacement data exchange technologies do not suffer from this space limitation. Therefore, all data and data formats will be used as defined in the DLMS procedures.
  - ◆ *Metrics.* The Army will establish metrics centrally that measure (1) the implementation of DLMS across the Army and (2) the level of customer service performance of DLMS implementation throughout the logistics supply chain.

## TRANSACTION PROCESSING

A complete migration strategy is still being considered and will evolve as the Army reaches other decisions about the logistics system. However, the following discussion describes the high-level flow of data from the originating application system through the translation to the recipient.

### EDI Implementation Guidelines

The Army will comply with all appropriate direction cited in the *Federal Implementation Guidelines for Electronic Data Interchange*, latest revision. This guidance includes direction about using EDI control structures, transaction addressing practices, transaction acknowledgement, and security structures.

### Initiator Processing

When a transaction is ready for processing, the necessary data will be extracted from the logistics application, routed through the logistics infrastructure, and prepared for translation, as necessary. An EDI translator will transform the data into DLMS EDI transactions and continue to move it through the overall infrastructure.

The internal transaction routing in the Army could be done by using an internal file format with conversion to a DLMS format taking place at a single site when the transaction is routed outside the Army logistics environment. However, the final decision is pending until other logistics system decisions are made.

The Army will apply the following general guidelines:

- ◆ Transactions will be grouped by transaction recipient.
- ◆ Maintaining a transaction audit trail from point of origination to recipient is desirable. Therefore, opening any logistics interchanges by any third-party service providers for editing, validating, or other processing is

strongly discouraged. If asset visibility information is required, interchange imaging techniques should be used.

- ◆ Initiating systems will archive sent interchanges for 90 days.
- ◆ Initiators will create additional copies for recipients not previously specified in DAASC routing direction.
- ◆ The Army will specify the handling practices for enhanced data while operating in a mixed DLSS-DLMS environment.

## Transaction Processing

Final decisions about intermediate, or third-party, processing for logistics interchanges, including DAASC, are still being considered pending final Army decisions about the logistics system. However, initially, the following capabilities are desired:

- ◆ Receive inbound interchanges and archive them for 90 days.
- ◆ Provide a store and forward function for all inbound interchanges.
- ◆ Make an image of all inbound interchanges for incorporating in the DAASC Logistics On-Line Tracking System (LOTS).
- ◆ Route all interchanges onto the designated interchange recipient.
- ◆ Forward interchanges outside the DoD telecommunications network to civil agencies, commercial third-party service providers, and specified trading partners.

For the interim, the Army may require that DAASC translate between an Army “user defined file” (UDF), e.g., flat file, or DLSS structure format and a DLMS format. Final decisions about this service depend on pending implementation decisions. Subsequent plan updates will provide specific requirements.

## Receiver Processing

Recipients will receive inbound transactions, translate them into an acceptable application input format, and route them to logistics business applications for processing. The Army desires that the interchange originator receive an acknowledgment of inbound interchanges.

## Telecommunications

Currently, no decisions about telecommunications use are available.

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## Conversion Processing

Requirements for converting between DLSS and DLMS formats are still being considered. However, we anticipate that DAASC will play a critical role in the final decisions.

## Translation Software

The EDI translation software used depends on a series of decisions about the overall Army logistics architecture, ERP system capabilities, end user capabilities, transaction routing, and commercial software capabilities. This matter is still being considered and will be discussed in subsequent plan revisions.

## WEB OPERATIONS AND OTHER TECHNOLOGIES

As indicated early in the plan, we anticipate that multiple data exchange technologies, including Web-enabled exchange, must be supported in the future. Thus, all future operating concepts must be neutral to the exchange technology. Also, consistency in data content must be maintained regardless of the exchange technology.

Currently, DLMSO only supports a single new exchange technology, i.e., EDI. The Army, however, is actively pursuing the web-based requirements of DRID #54. Where DLMS does not support the DRID #54 requirements, the Army will take a proactive approach in identifying specific enhancements to DLMS capabilities.

## SUMMARY

This concept of operations will evolve as the Army reaches decisions about future logistics architecture and operating structures.

# Appendix B

## Army Standard Logistics Systems

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The following tables identify the Army systems agencies are reviewing for applicability to DLMS implementation planning. The tables identify the component responsible for the system, whether it is a legacy system or new development, the replacement system, estimated date of completion or implementation, whether it will comply with DLMS, and the known system interfaces.

As information is validated and defined, the information in this appendix will be refined. Information in this plan will be updated in April.

Table B-1. Army Materiel Command (AMC)

Component	Name	Acronym	Legacy system	Being replaced by	New development	Estimated date	Will it be DLMS compliant?	Interfaces
<b>New Systems</b>								
AMC	Wholesale Logistics Modernization Program	WLMP	no		New Development	2QFY02	yes	This system will interface with all of the systems that CCSS and SDS currently interface with today. The exact interfaces of the fielded WLMP system is to be determined.
AMC	Global Combat Support System-Army <sup>1</sup>	GCSS-A	no		New Development			
AMC-LOGSA	Logistics Integrated Data Base	LIDB	no		New Development	4QFY01	yes	
<b>Processes</b>								
AMC	Single Stock Fund	SSF	no		New Development	2001	yes	DAAS, SARSS, CCSS, MIDDLEWARE,
AMC	(DoD E-Mall Tank Automotive and Armaments Command Pilot	TACOM-Pilot			New Development		yes	
<b>Legacy</b>								
AMC-AMCLGLI	Executive Management Information System	EMIS	yes	GCSS-Army Integrated Material Manager / Management Module (IMM/MGT)		9/1/04	IEEE Std 1042-1987, IEEE Guide to Software Configuration Management (ANSI)	CCSS, SARSS, SAMS1, SAMS I/TDA, AMDF, CDDB, AMMMIS
AMC-CCSLA	Army COMSEC Commodity Logistics Accounting Information Management System	ACCLAIMS	yes	WLMP		3QFY03	Yes	
AMC-CECOM	Corporate Contract	CC			New Development	2QFY01	yes	
AMC-CECOM	Direct Vendor Delivery/Just In Time Delivery/EDI	DVD/JJIT/EDI			New Development	2QFY01	yes	
AMC-ILSC	Standard Depot System	SDS	yes	WLMP				
AMC-OSC	Automated Demand Ammunition Processing	ADAP	yes	WLMP		3QFY03	yes	
AMC-OSC	Army War Reserve Deployment System	AWRDS	yes	WLMP		3QFY03	yes	
AMC-OSC	Conventional Ammunition Packaging & Unit Load Data Index	CAPULDI	yes					
AMC-OSC	Explosives Safety Information Data Base	ESIDB	yes					
AMC-OSC	Headquarters Applications System	HAS	yes	WLMP		3QFY03	yes	
AMC-OSC	Joint Hazard Classification System	JHCS	yes					
AMC-OSC	Joined Industrial Operations System	JIOS	yes	WLMP		3QFY03	yes	
AMC-OSC	Munitions Items Disposition Action System	MIDAS	yes					
AMC-OSC	Manufacturing Resource Planning II—Cincom Control	MRP II	yes				yes	

<sup>1</sup> See PEO STAMIS and WLMP for details.

Table B-1. Army Materiel Command (AMC)

Component	Name	Acronym	Legacy system	Being replaced by	New development	Estimated date	Will it be DLMS compliant?	Interfaces
AMC-OSC	Navy Ammunition Catalog Data	NAVY	yes				yes	

Table B-1. Army Materiel Command (AMC) (Continued)

Component	Name	Acronym	Legacy system	Being replaced by	New development	Estimated date	Will it be DLMS compliant?	Interfaces
AMC-OSC	Visibility Information Storage Tool for Ammunition	VISTA	yes				yes	
AMC-OSC	Worldwide Ammunition Reporting System	WARS	yes	WLMP/GCSS-A		3QFY03	yes	
AMC-OSC	Munitions Transportation Management System	MTMS	yes		Modernization	1QFY01	yes	
AMC-LOGSA	Depot Supply Performance Report	304-RPT	yes					
AMC-LOGSA	Army Central Logistics Data Base	ACLDB	yes	LIDB		FY01		
AMC-LOGSA	Army Master Address System	AMADS	yes	LIDB		FY01		
AMC-LOGSA	Army Oil Analysis Program	AOAP	yes					
AMC-LOGSA	Army Order of Precedence	AOP	yes	LIDB		4QFY00		
AMC-LOGSA	Army Price Challenge Program	APCP	yes	LIDB		FY01		
AMC-LOGSA	Automatic Return Items List	ARIL	yes	LIDB		FY01		
AMC-LOGSA	Army War Reserve Automation Process—PLUS	AWRAP PLUS	yes					
AMC-LOGSA	Continuing Balance System Expanded	CBS-X	yes	LIDB		FY01		
AMC-LOGSA	Central Demand Data Base	CDDB	yes	LIDB		1QFY01		
AMC-LOGSA	Candidate Item File	CIF	yes	LIDB		FY01		
AMC-LOGSA	Cost Analysis Strategy Assessment	CASA						
AMC-LOGSA	Computerized Optimization Model for Predicting & Analyzing Support Structures	COMPASS	yes					
AMC-LOGSA	Computerized Optimization Model for Predicting & Analyzing Support Structures—LITE	COMPASS-LITE						
AMC-LOGSA	Department of the Army Master Project Code	DAMPC	yes	LIDB		FY01		
AMC-LOGSA	Central Procurement Workloading Report	DD-127	yes	LIDB		FY01		
AMC-LOGSA	Distribution Execution System	DES	yes	LIDB		FY01		
AMC-LOGSA	Discrepancy Reporting System	DIREP	yes	LIDB		FY01		
AMC-LOGSA	Defense Standard Ammunition Computer System	DSACS	yes					
AMC-LOGSA	End Item Code	EIC	yes	LIDB		FY01		
AMC-LOGSA	Equipment-Oriented Publication Data Base	EOPDB	yes	LIDB		2QFY00		
AMC-LOGSA	Equipment Release Priority System	ERPS	yes					
AMC-LOGSA	Electronic Technical Manuals On-line	ETM On-line						
AMC-LOGSA	Federal Logistics Data Base	FEDLOG	yes					
AMC-LOGSA	Force Modernization Program File	FMP	yes					
AMC-LOGSA	Force Integration	FORCE	yes					

AMC-LOGSA	Hazardous Materials Data System	HMDS	yes					
AMC-LOGSA	Installation Activity Code	IAC	yes	LIDB		FY01		
AMC-LOGSA	Logistics Planning Requirements Simplification System	LOGPARS	yes					
AMC-LOGSA	Logistics Planning System	LOGPLANS	yes					

Table B-1. Army Materiel Command (AMC) (Continued)

Component	Name	Acronym	Legacy system	Being replaced by	New development	Estimated date	Will it be DLMS compliant?	Interfaces
AMC-LOGSA	Logistics Support Analysis (LSE) Planning Model	LSE PIng Mdl			yes	Jul 00	yes	This system receives data downloads from LIDB and AGCCS, is not transaction-based but can send and receive X12-compliant data.
AMC-LOGSA	The Army Authorization Documentation System	LOGTAADS	yes					
AMC-LOGSA	Master Item Data Record	MIDR	yes	LIDB		2QFY00		
AMC-LOGSA	MIL-Standard & Transportation Evaluation Process	MILSTEP	yes	LIDB		2QFY00		
AMC-LOGSA	Maintenance Master Data File	MMDF	yes	LIDB		FY01		
AMC-LOGSA	Material Returns Data Base	MRDB	yes	LIDB		1QFY01		
AMC-LOGSA	Procurement Action Report	PAR	yes	LIDB		FY01		
AMC-LOGSA	Post-Fielding Support Analysis	PFSA						
AMC-LOGSA	Power Logistics	PowerLOG	yes					
AMC-LOGSA	Requisition Validation System	REQVAL	yes	LIDB		FY01		
AMC-LOGSA	Routing Indicator Code Master	RIC	yes					
AMC-LOGSA	Readiness Integrated Data Base	RIDB	yes	LIDB		FY01		
AMC-LOGSA	Receipt and Issue Transaction/Depot Workload Force	RIT/WFS	yes	LIDB		FY01		
AMC-LOGSA	Supply Bulletin 38-101 CD-ROM	SB-38-101	yes					
AMC-LOGSA	Army Adopted Items of Materiel	SB-700-20	yes	LIDB		FY01		
AMC-LOGSA	Support List Allowance Master File	SLAM	yes	LIDB		FY01		
AMC-LOGSA	Total Army Materiel Maintenance System	TAMMS	yes					
AMC-LOGSA	Total Army Materiel Maintenance System Equipment Database	TEDB	yes	LIDB		FY01		
AMC-LOGSA	Transportation Data Base	TDB	yes					
AMC-LOGSA	Unique Item Tracking	UIT	yes	LIDB		FY01		
AMC-LOGSA	Work Order Logistics File	WOLF	yes	LIDB		1QFY00		
AMC-LOGSA	Army Airlift Clearance Authority	AACA	yes	LIDB		Oct-00		
AMC-LOGSA	Army Total Asset Visibility	ATAV	yes					
AMC-LOGSA	DoD Address Directory	DODAAD	yes					
AMC-LOGSA	Logistics Intelligence File	LIF	yes	LIDB		FY01		
AMC-LOGSA	Unit Movement Visibility	UMV	yes	LIDB		FY01		
AMC-LSSC	Commodity Command Standard System	CCSS	yes	WLMP		FY02	yes	

Table B-2. Program Executive Office Standard Army Management Information Systems (PEO STAMIS)<sup>2</sup>

Component	Name	Acronym	Legacy system	Being replaced by	New development	Estimated date	Will be DLMS compliant?	Interfaces
PEO STAMIS	Joint Computer Aided Acquisition and Logistic Support	JCALs	yes		Modernization		Yes	DAAS, DOD, JOINT, Marine Corps
PEO STAMIS	Global Combat Support System-Army	GCSS-Army			New Development	2003	Yes	DAAS, STARFIARS, WLMP
PEO STAMIS	Integrated Logistics Analysis Program	ILAP	yes	GCSS-Army Integrated Material Manager / Management Module (IMM/MGT)		2003		
PEO STAMIS	Standard Army Ammunition System-Modernization	SAAS-MOD*	yes	GCSS-Army Ammunition Module (AMMO)		2003		
PEO STAMIS	Standard Army Maintenance System-1	SAMS-1*	yes	GCSS-Army Maintenance Module (MNT)		2003		
PEO STAMIS	Standard Army Maintenance System-2	SAMS-II*	yes	GCSS-Army Integrated Material Manager / Management Module (IMM/MGT)		2003		
PEO STAMIS	Standard Army Retail Supply System—Level 1	SARSS-I*	yes	GCSS-Army Supply Support Activity Module (SSA)		2003		
PEO STAMIS	Standard Army Retail Supply System—Level 2	SARSS-II*	yes	GCSS-Army Integrated Material Manager / Management Module (IMM/MGT)		2003		
PEO STAMIS	Standard Property Book System-Redesign	SPBS-R*	yes	GCSS-Army Supply Property Module (SPR)		2003	Yes	
PEO STAMIS	Unit-Level Logistics System—S4	ULLS-S4*	yes	GCSS-Army Supply Property Module (SPR)		2003		

<sup>2</sup> Asterisk denotes those systems and their variations which have been consolidated under one heading.



Table B-2. Program Executive Office Standard Army Management Information Systems (PEO STAMIS)<sup>2</sup>

Component	Name	Acronym	Legacy system	Being replaced by	New development	Estimated date	Will be DLMS compliant?	Interfaces
PEO STAMIS	Unit-Level Logistics System—Ground	ULLS-G*	yes	GCSS-Army (MNT)		2003		
PEO STAMIS	Unit-Level Logistics System—Aviation	ULLS-A*	yes	GCSS-Army (MNT)		2003		
PEO STAMIS	Transportation CoordinatorAutomated Information Management System	TC-AIMS II			New Development	2003	Yes	DAAS, Marine Corps, Air Force, Navy
PEO STAMIS	Transportation Coordinators Automated C2 Information System	TC-ACCIS	yes	TC-AIMS II		2004		
PEO STAMIS	DA Movements Management System-Redesign Block II	DAMS-R	yes	TC-AIMS II		2007		

Table B-3. Military Traffic Management Command (MTMC)

Component	Name	Acronym	Legacy system	Being replaced by	New development	Estimated date	Will be DLMS compliant?	Interfaces
MTMC	Worldwide Port System	WPS	yes		Modernization	2003	yes	GTN, ULB, TOPS, IBS, DSS, AWRDS, DAMMS, TC-ACCIS, TC-AIMS II, ETADS, MDSS2, FACTS, DSCP, DCMA, OSC
MTMC	Transportation Operational Personal Property Standard System	TOPS	Yes	Unknown		2002	yes	WPS

## Appendix C

# Costs for Standard Army Logistics Systems

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The DoD Logistics Phased Implementation Plan for adopting commercial electronic data interchange standards requires components to estimate costs and discuss the costs that will be incurred because of implementing ASC X12.

The following cost estimates are for the systems for which costs could be identified.

## GLOBAL COMBAT SUPPORT SYSTEM-ARMY (GCSS-A)

GCSS-Army has no cost submission because EDI will be implemented into the software modules as they are built, for those that require interfacing.

## WHOLESALE LOGISTICS MODERNIZATION PROGRAM (WLMP)

The cost for ANSI X12 implementation is not available because it is a part of the overall WLMP costs.

# DoD ELECTRONIC MALL TANK AUTOMOTIVE AND ARMAMENT COMMAND PILOT (DoD E-MALL TACOM PILOT)

*Table C-1. DoD Electronic Mall Tank Automotive and Armament Command Pilot  
(DoD E-Mall TACOM Pilot)*

Category	FY01 (\$000)	FY02 (\$000)	FY03 (\$000)	FY04 (\$000)	FY05 (\$000)
Hardware	0				
Software	70,000	70,000	70,000	70,000	70,000
Telecommunications	35,000	35,000	35,000	35,000	35,000
<b>System integration</b>					
Interfaces	10,000	10,000	10,000	10,000	10,000
Enhancements	200,000	200,000	200,000	200,000	200,000
<b>Program management</b>					
Coordination	75,000	75,000	75,000	75,000	75,000
Internal operations	175,000	175,000	175,000	175,000	175,000
Trading partner development	200,000	200,000	200,000	200,000	200,000
<b>Implementation support</b>					
Planning and coordination	80,000	80,000	80,000	80,000	80,000
Standards development	75,000	75,000	75,000	75,000	75,000
Implementation guidelines	6,000	6,000	6,000	6,000	6,000
Training	300,000	300,000	300,000	300,000	300,000
Trading partner expansion	325,000	325,000	325,000	325,000	325,000
<b>System maintenance</b>					
	25,000	25,000	25,000	25,000	25,000
<b>TOTAL</b>	<b>1,576,000</b>	<b>1,576,000</b>	<b>1,576,000</b>	<b>1,576,000</b>	<b>1,576,000</b>

# SINGLE STOCK FUND (SSF)

Table C-2. Single Stock Fund (SSF)

Category	FY01 (\$000)	FY02 (\$000)	FY03 (\$000)	FY04 (\$000)	FY05 (\$000)
Hardware	246,000	175,000	150,000		
Software	175,000	100,000	20,000		
Telecommunications	40,000	48,000	48,000		
<b>System integration</b>					
Interfaces	70,000	300,000	100,000		
Enhancements	85,000	150,000	65,000		
<b>Program management</b>					
Coordination	30,000	60,000	80,000		
Internal operations	220,000	215,000	243,000		
Trading partner development	0	0	0		
<b>Implementation support</b>					
Planning and coordination	900,000	300,000	50,000		
Standards development	30,000	45,000	60,000		
Implementation guidelines	150,000	100,000	75,000		
Training	500,000	300,000	80,000		
Trading partner expansion	0	0	0		
<b>System maintenance</b>	475,000	300,000	170,000		
<b>TOTAL</b>	2,921,000	2,093,000	1,141,000		

# LOGISTICS INTEGRATED DATABASE (LIDB)

Table C-3. Logistics Integrated Database (LIDB)

Category	FY01 (\$000)	FY02 (\$000)	FY03 (\$000)	FY04 (\$000)	FY05 (\$000)
Hardware	230,000	230,000	0	42,000	42,000
Software	75,000	75,000	0	0	0
Telecommunications	66,000	66,000	66,000	24,911	24,911
<b>System integration</b>					
Interfaces	2,210,780	2,210,780	1,436,666	313,000	313,000
Enhancements	1,102,176	1,102,176	722,176	362,000	362,000
<b>Program management</b>					
Coordination	140,760	140,760	140,760	29,678	29,678
Internal operations	18,699	18,699	37,398	7,885	7,885
Trading partner development					
<b>Implementation support</b>					
Planning and coordination					
Standards development					
Implementation guidelines					
Training	134,000	74,585	49,000	22,000	22,000
Trading partner expansion					
<b>System maintenance</b>					
	43,000	43,000	43,000	43,000	43,000
<b>TOTAL</b>	<b>4,020,415</b>	<b>3,961,000</b>	<b>2,495,000</b>	<b>844,474</b>	<b>844,474</b>

# TRANSPORTATION COORDINATOR AUTOMATED INFORMATION MANAGEMENT SYSTEM (TC-AIMS II)

Table C-4. Transportation Coordinator Automated Information Management System (TC-AIMS II)

Category	FY01 (\$000)	FY02 (\$000)	FY03 (\$000)	FY04 (\$000)	FY05 (\$000)
Hardware		10	15	15	15
Software		100	100	20	20
Telecommunications			2	5	10
<b>System integration</b>					
Interfaces		100	100	50	25
Enhancements		20	20	25	50
<b>Program management</b>					
Coordination	50	50	50	25	25
Internal operations		10	10	5	5
Trading partner development		50	50	25	25
<b>Implementation support</b>					
Planning and coordination	25	25	25	15	10
Standards development	50	50	50	25	10
Implementation guidelines	50	50	50	25	10
Training		25	25	25	15
Trading partner expansion			10	10	10
<b>System maintenance</b>					
			5	10	20
<b>TOTAL</b>	175	490	512	280	250

# JOINT COMPUTER AIDED ACQUISITION AND LOGISTICS SUPPORT (JCALS)

*Table C-5. Joint Computer Aided Acquisition and Logistics Support (JCALS)*

Category	FY01 (\$000)	FY02 (\$000)	FY03 (\$000)	FY04 (\$000)	FY05 (\$000)
Hardware	5	10	15	15	15
Software		100	100	20	20
Telecommunications			2	5	10
<b>System integration</b>					
Interfaces		100	100	50	25
Enhancements		20	20	25	50
<b>Program management</b>					
Coordination	50	50	50	25	25
Internal operations		10	10	5	5
Trading partner development	50	50	50	25	15
<b>Implementation support</b>					
Planning and coordination	25	25	25	15	10
Standards development	50	50	50	25	10
Implementation guidelines	50	50	50	25	10
Training		25	25	25	15
Trading partner expansion			10	10	10
<b>System maintenance</b>			<b>5</b>	<b>10</b>	<b>20</b>
<b>TOTAL</b>	<b>230</b>	<b>490</b>	<b>512</b>	<b>280</b>	<b>240</b>

## WORLDWIDE PORT SYSTEM (WPS)

Table C-6. Worldwide Port System (WPS)

Category	FY01 (\$000)	FY02 (\$000)	FY03 (\$000)	FY04 (\$000)	FY05 (\$000)
Hardware	20	20	100	25	25
Software	20	20	100	10	100
Telecommunications	0	5	5	10	10
<b>System integration</b>					
Interface	250	250	250	250	250
Enhancements	20	200	250	250	250
<b>Program management</b>					
Coordination	50	50	50	50	50
Internal operations	20	20	20	20	20
Trading partner development	50	25	25	25	25
<b>Implementation support</b>					
Planning and coordination	25	25	25	25	25
Standards development	50	50	50	50	50
Implementation guidelines	10	20	50	50	50
Training		50	100	100	100
Trading partner expansion		0	25	25	25
<b>System maintenance</b>					
	0	0	100	200	200
<b>TOTAL</b>	515	735	1145	1090	1180

## TRANSPORTATION OPERATIONAL PERSONAL PROPERTY STANDARD SYSTEM (TOPS)

TOPS is a DoD-approved transportation migration system. TOPS is in the final phase of development in support of the Personal Property Movement and Storage Program managed by the U.S. Army Military Traffic Management Command. TOPS processes transportation information for moving personal property shipments of service members and DoD civilians.



There has been no funding in the POM for the DLMS implementation effort up to FY02. Several other initiatives could affect this project. TOPS may go to a Web-based environment, which could change the approach being considered. Once funds are allocated, the Joint Development Team and the General Officers Steering Committee must decide when to assign this effort and what resources can be put to work on it.

*Table C-7. Transportation Operational Personal Property Standard System (TOPS)*

Category	FY01 (\$000)	FY02 (\$000)	FY03 (\$000)	FY04 (\$000)	FY05 (\$000)
Hardware					
Software	23	23	24	25	25
Telecommunications					
<b>System integration</b>					
Interface	125				
Enhancements		40	42	45	48
<b>Program management</b>					
Coordination	20	20	25	26	27
Internal operations	50	50	45	40	39
Trading partner development	20				
<b>Implementation support</b>					
Planning and coordination	66.2	70	72	75	78
Standards development	10				
Implementation guidelines	20				
Training	5	2.5	2.5	2.5	2.5
Trading partner expansion		5	5	5	5
<b>System maintenance</b>					
<b>TOTAL</b>	<b>339.2</b>	<b>210.5</b>	<b>215.5</b>	<b>218.5</b>	<b>224.5</b>

# Appendix D

## Risk and Risk Mitigation

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### RISK IDENTIFICATION

Risk can be reduced through risk management plans and risk mitigation procedures that address external and internal organizational policies, strategies, and organizational decisions.<sup>1</sup> Although the Army recognizes that identifying and discussing risk factors is necessary for successfully implementing ASC X12 at the component level, this same focus applies at the DoD level. Resolving many issues, such as developing a DoD-wide electronic architecture, will decrease the risk that the services will develop systems and capabilities that are inadequate, redundant, or not interoperable with other component systems.

Risk mitigation is the process of identifying risks, and articulating and introducing measures to reduce levels of risk in a system. Identifying effective risk mitigation measures must accommodate several characteristics of large-scale systems: simultaneous autonomy and interdependence, intended and unintended consequences, long incubation periods during which problems can arise, and risk migration. Each of these characteristics poses difficulties with respect to risk mitigation, because each is interrelated.<sup>2</sup>

### POTENTIAL RISKS

One of the possible risks of the implementation is change management. Another risk concerns the selection of the ERP solution.

### RISK ANALYSIS

Analysis of risk factors related to implementing DLMS will be identified where possible in the April update.

- ◆ Risk impact
- ◆ Risk likelihood
- ◆ Risk consequence

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<sup>1</sup> Vlasta Molak, ed., *Fundamentals of Risk Analysis and Risk Management*. (Boca Raton: Lewis Publishers, 1997), 4.

<sup>2</sup> “Risk Management in Large Scale Systems: Lessons from High Reliability Organizations.” Martha Grabowski and Karlene Roberst. *California Management Review*, April 1996.

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- ◆ Risk cost
  - ◆ Risk options.

## RISK MITIGATION

Implementation plan risk can be controlled, reduced or eliminated by mitigating the risk. Each risk will be evaluated system by system in the plan updates.

# Appendix E

## Stakeholders' Roles and Responsibilities

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Reserved for plan update.

# Appendix F

## Abbreviations

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This appendix will be compiled after the draft plan has been staffed.

Appendix G  
U. S. Army Materiel Command - Implementation  
Plan

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Reserved for USAMC - Implementation Plan (April 2001).

# Appendix H

## PEO STAMIS - Implementation Plan

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Reserved for PEO STAMIS - Implementation Plan (April 2001).

# Appendix I

## MTMC - Implementation Plan

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Reserved for MTMC - Implementation Plan (April 2001).



# Appendix J

## CASCOM - Implementation Plan

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Reserved for CASCOM - Implementation Plan (April 2001).