DEFENSE LOGISTICS MANAGEMENT SYSTEM
(DLMS)

VOLUME 1

CONCEPTS AND PROCEDURES

March 2003

UNDER SECRETARY OF DEFENSE
ACQUISITION, TECHNOLOGY AND LOGISTICS
(LOGISTICS MATERIEL READINESS)

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VOLUME 1: CONCEPTS AND PROCEDURES

C1. CHAPTER 1

INTRODUCTION

C1.1. PURPOSE. This manual prescribes logistics management policy, responsibilities, procedures, rules, and electronic data communications standards for use in the Department of Defense (DoD), to conduct logistics operations in the functional areas of supply, acquisition (contract administration), maintenance, and finance. These data collectively comprise the Defense Logistics Management System, or DLMS, which is a process governing logistics functional business management standards and practices rather than an automated information system. The DLMS provides an infrastructure for the participatory establishment and maintenance of procedural guidance to implement the Department's logistics policy by its user community.

C1.2. SCOPE. This manual applies to the Office of the Secretary of Defense; the Military Services (Army, Navy, Air Force, and Marine Corps, including their National Guard and Reserve components, and including the U.S. Coast Guard (USCG)(both when it is and when it is not operating as a Military Service in the Navy and, by agreement with the Department of Transportation, when it is operating as a Military Service of that Department); the Chairman of the Joint Chiefs of Staff (CJCS) and Joint Staff; the Unified and Specified Commands, and the Defense Agencies; hereafter referred to collectively as the DoD Components. Additionally, the manual applies, by agreement, to other external organizational entities conducting logistics business operations with DoD including: (a) non-Government organizations, both commercial and nonprofit; (b) Federal agencies of the U.S. Government other than DoD; (c) foreign national governments; and (d) international government organizations.

C1.3. POLICY. DoD Directive 4140.1, Supply Chain Materiel Management Policy, authorizes the publication of this manual. DoD 4140.1-R, DoD Supply Chain Materiel Management Regulation, establishes a configuration control process for the DLMS and prescribes use of the DLMS to implement approved DoD policy in logistics functional areas such as cataloging, inventory management, contracting, contract administration, storage, distribution and redistribution of material, transportation and movement, maintenance, property disposal, international supply support, integrated support of weapons, and billing and collections. DoD Directive 8190.1, DoD Logistics Use of Electronic Data Interchange (EDI) Standards, assigns responsibilities for direction, management, coordination, and control of the process to replace DoD-unique logistics data exchange standards with approved EDI standards and supporting implementation conventions (ICs) for DoD logistics business transactional data exchange.

C1.4. RESPONSIBILITIES

C1.4.1. Under Secretary of Defense (Acquisition, Technology, and Logistics (USD(AT&L)). Provide policy guidance, oversee, and direct implementation of and compliance with the DLMS, except that DoD Comptroller shall be responsible for the Finance functional area addressed under Volume 5 of this manual. When carrying out their responsibility, the USD(AT&L) and the DoD Comptroller, as appropriate for their respective functional areas, shall:

C1.4.1.1. Direct or approve expansion of DLMS standards in assigned functional areas or application of DLMS standards in new functional areas.

C1.4.1.2. Provide the Defense Logistics Management Standards Office (DLMSO) with policy guidance for development, expansion, improvement, and maintenance of the DLMS.

C1.4.1.3. Review and approve DLMSO plans, priorities, and schedules.

C1.4.1.4. Resolve policy and procedural issues, which cannot be resolved within the DLMS administrative infrastructure.

C1.4.1.5. Ensure appropriate coordination with other Office of the Secretary of Defense (OSD) staff elements when DLMS policy guidance or directional memoranda affect assigned functions of these offices.

C1.4.2. Director, Defense Logistics Agency (DLA)

C1.4.2.1. Establish the DLMSO, which shall report directly to the Director, eBusiness, HQ DLA, for supervision and technical guidance.

C1.4.2.2. Provide the necessary military and civilian personnel resources.

C1.4.2.3. Provide the necessary administrative support and services, including office space, facilities, equipment, automatic data processing support, and travel expenses for DLMSO staff personnel.

C1.4.3. Director, Defense Logistics Management Standards Office. Operating under the authority of DoD 4140.1-R and DoD Directive 4140.1, serve as the primary proponent for implementing data exchanges in the logistics community and associated functional areas. This includes the development, maintenance and documentation of corporate-level policies and procedures for exchanging logistics data between DoD Components, between DoD Components and non-DoD departments and agencies, and between DoD Components and private industry. Participate in cooperative efforts with other Federal departments and agencies to develop data exchange standards. Maintain membership in external standards bodies and groups; e.g., American National Standards Institute (ANSI) chartered Accredited Standards Committee (ASC) X12 and extensible Markup Language (XML). Serve as a member of the Defense Information

Systems Agency (DISA) Center for Standards Data Administration Council. Administer the DLMS for assigned functional areas ***and*** receive policy guidance from proponent offices of the USD(AT&L) and the DoD Comptroller, ***as appropriate***. The Director, DLMSO, shall:

C1.4.3.1. Establish a formal configuration control process for the DLMS.

C1.4.3.2. Establish a Process Review Committee (PRC) composed of representatives from the DoD Components and participating external organizations for each of the DLMS functional areas: contract administration, finance, maintenance (as appropriate/required), and supply. Designate a chair for each DLMS functional area to serve as the DoD control point and chair the PRC for that functional area.

C1.4.3.3.~~4.~~ Ensure uniform implementation of the DLMS by doing the following:

C1.4.3.3.**4**.1. Review implementation dates and plans of the DoD Components and participating external organizations.

C1.4.3.3.**4**.2. Perform analysis and design functions to implement new or revised policy guidance and instructions, provided by the OSD proponent offices, and to ensure telecommunications planning is incorporated into an integrated system design.

C1.4.3.3.**4**.3. Develop and recommend, to the appropriate OSD proponent office(s), new or revised policy with supporting analysis which identifies and explains process improvements and indicates methods for accomplishing identified changes.

C1.4.3.3.**4**.4. Serve as the Department's Executive Agent for logistics data interchange as delineated in DoD Directive 8190.1.

C1.4.3.3.**4**.5. Develop, publish, and maintain the DLMS manual and related DLMS publications consistent with **DoD 5025.01-M, DoD Directives Program**.

C1.4.3.3.**4**.6. Develop and evaluate proposed DLMS changes (PDCs) and coordinate them with the DoD Components and participating external organizations. Provide a copy of all PDCs to the appropriate OSD proponent office. For management control and prioritization purposes, information exchange requests are included under change processing procedures.

C1.4.3.3.**4**.7. Review, evaluate, and recommend improvements to curricula of DoD Components and participating external organizations' training schools offering DLMS-related courses.

C1.4.3.3.4.8. Assist DoD Components and participating external organizations in resolving problems, violations, and deviations that arise during operations and are reported to the functional area PRC chair. Refer unresolved matters to OSD proponent offices with analysis and recommendations for resolution and corrective action.

C1.4.3.3.4.9. Make available semiannually as a minimum, to Deputy Undersecretary of Defense (Logistics & Materiel Readiness) [DUSD(L&MR)] and to other DoD Components, a status review of all DLMS revision proposals that have not been approved for publication or, that if approved, have not been implemented. The status review is available from the DLMSO website at Uniform Resource Locator (URL) http://www.dla.mil/j-6/dlmso.

C1.4.3.3.4.10. Review and coordinate with the DoD Components, and participating external organizations, all requests for system deviations and exemptions and make applicable recommendations to the OSD proponent office based on fact-finding status or analysis of accompanying justification.

C1.4.4. Heads of DoD Components and Participating External Organizations. Designate an office of primary responsibility for each DLMS functional area identified in section C1.3 to serve as the control point for that functional area. Identify to the DLMSO the names of the primary and alternate PRC representatives for each functional area who will:

C1.4.4.1. Serve as members on, and fulfill the responsibilities of, the PRC for that function.

C1.4.4.2. Provide the DoD Component's or external organization's position on DLMS matters and have the authority to make decisions regarding procedural aspects.

C1.4.4.3. Ensure continuous liaison with the DLMS functional area PRC chair and with other DoD Components and participating external organizations.

C1.4.4.4. Submit to the Director, DLMSO, or appropriate PRC chair as DLMS PDCs, all proposed changes affecting logistics business processes irrespective of the Electronic Business (EB)/Electronic Commerce (EC) methods employed following the procedures in Chapter 5 and Appendix 1 of this volume. When requested by the DLMS PRC, perform the initial evaluation of PDCs that originate within the DoD Component or participating external organization and return such proposals with the evaluation results.

C1.4.4.5. Perform the initial evaluation of all suggestions originating within the DoD Component or participating external organization. For suggestions considered worthy of adoption, submit a PDC to the DLMS PRC chair for processing in the normal

manner. The originator's PRC representative shall determine any awards using normal DoD Component or participating external organization procedures.

C1.4.4.6. Develop and submit to the functional area administrator a single, coordinated DoD Component or participating external organization position on all PDCs within the time limit specified. When a PDC affects multiple DLMS functional areas, the control point for the PRC identified in the proposal shall submit the single coordinated response.

C1.4.4.7. Accomplish internal training to ensure timely and effective implementation and continued operation of the approved DLMS. Review, evaluate, and update, at least annually, curricula of internal training programs to ensure adequacy of training. Furnish a copy of initial and revised training curricula to the DLMS functional area PRC chair.

C1.4.4.8. Implement the approved DLMS and changes thereto. Provide the functional area PRC chair semiannual status information concerning implementation of approved changes. Report Control Symbol (RCS): DD-A&T(AR) 1419 applies for this requirement. Report status information as of 1 May and 1 November of each year for each approved change. Begin reporting the first period following publication of the approved DLMS change. Stop reporting after identifying the approved change when the change is fully implemented. In the final report, cite the DoD Component or participating external organization implementing publication(s) and change number(s), and identify the operating system or subsystem involved. Attach a copy of the publication change if the DLMSO is not on automatic distribution for the publication, or provide electronically. Send the reports to the DLMS functional area PRC chair by 30 May and 30 November of each year.

C1.4.4.9. Ensure that operating activities supporting a DLMS functional area comply with the requirements and procedures published in the DLMS manual.

C1.4.4.10. Continually review and revise internal procedures to correct misinterpretation and eliminate and prevent duplication of records, reports, and administrative functions related to the DLMS.

C1.4.4.11. Furnish to the appropriate functional area PRC chair copies of supplemental and internal procedures, and changes thereto, related to operation of the DLMS.

C1.4.4.12. Report to the functional area PRC chair problems, violations, and deviations that arise during system operations.

C1.4.5. Process Review Committees. The PRCs are joint forums for each of the DLMS functional areas--contract administration, finance, maintenance, and supply--responsible for development, expansion, improvement, maintenance (as

required/appropriate), and administration of the DLMS. This volume contains appendices that list functional area PRC representatives. The DLMS PRCs shall:

C1.4.5.1. Be administered/controlled by the DLMS PRC for the functional area.

C1.4.5.2. Consist of representatives from the DoD Components and participating external organizations.

C1.4.5.3. Meet at least quarterly, and more frequently, as needed. The PRC shall, whenever practicable, announce the meeting and identify the agenda items 30 calendar days in advance of the meeting. The PRC shall also issue fully documented minutes of these proceedings to each participating DoD Component or external organization, and the appropriate OSD proponent office, within 30 calendar days after the meeting.

C1.4.5.4. Review and resolve comments on PDCs, deviations, and waivers, or other problems and violations, and provide recommendations for implementation or disapproval. Refer any action that the PRC cannot resolve to the appropriate OSD proponent office. Disapprove proposed DLMS changes by unanimous agreement of the PRC.

C1.4.5.5. Ensure uniform and effective implementation of DLMS requirements by:

C1.4.5.5.1. Reviewing supplemental procedures and/or implementing procedures issued by the DoD Components and participating external organizations to ensure conformance with the approved DLMS.

C1.4.5.5.2. Conducting periodic evaluations to determine effectiveness of DoD/DLMS policies, procedures, and standards.

C1.4.5.5.3. Conducting reviews, through on-site visits, of selected DLMS operational areas to determine conformance with, and evaluate the effectiveness of, DLMS requirements and to interpret or provide clarification of DLMS procedures.

C1.4.5.5.4. Reporting findings and recommendations of evaluations and reviews, with comments of the DoD Components and participating external organizations concerned, to the appropriate OSD proponent office.

C1.4.6. DLMS Enterprise Service Provider (ESP). DAASC is the ESP for implementing DLMS data transmission requirements and shall execute system modification taskings from DLMSO. DAASC is the central node for all DLMS transactions. DoD Components shall route all DLMS transactions to DAASC. DAASC shall provide telecommunications support, archiving and storage, translation services, conversion processes, and other services to support DoD Component implementation

of DLMS. DAASC is designated as the DoD provider of corporate services in support of all emerging EB technologies, not just EDI. DAASC, as the corporate community service provider and as the Department's central point for providing supply-chain information, shall capture required data and produce the end-to-end metrics necessary for achieving the key objectives required to improve logistics support to the customer. DAASC is also the DoD central node for development of DLMSO-approved mapping and conversion processes. DAASC implements Approved DLMS Changes (ADCs) and ensures that all modifications are incorporated into the translation rules and records.

C1.5. IMPLEMENTATION

C1.5.1. Scope of DLMS. The DLMS supplements to Federal ICs, and procedures prescribed herein, shall be implemented uniformly between DoD Components and other participating external organizations and at all levels within each DoD Component.

C1.5.2. DoD Component Use. DoD Components shall give priority to development and implementation of DLMS requirements before the development and implementation of intra-DoD Component requirements.

C1.6. DLMS DEVIATIONS OR WAIVERS

C1.6.1. Submission. DoD Components and participating external organizations shall not request DLMS deviations or waivers solely to accommodate existing internal systems and procedures or organizational environments. When requesting deviations or waivers, DoD Components and participating external organizations shall submit them following the guidelines in Chapter 5 in this volume.

C1.6.2. Review. The functional area PRC chair shall consider requests for DLMS deviations or waivers when the requestor demonstrates that the system cannot provide a workable method or procedure or cannot accommodate interim requirements.

C1.7. REQUIREMENTS FOR NEW OR REVISED DLMS PROCEDURES

C1.7.1. Use of DLMS Standards and Procedures. DoD Components shall use standards and procedures prescribed by the DLMS when undertaking development of new or revising existing logistics systems. If a DoD Component or other participating external organization requires changes to or expansion of the existing DLMS to accommodate technological innovations planned for new system designs, they shall submit PDCs with full justification and explanation of the intended use following the instructions in Chapter 5 in this volume.

C1.7.1.1. DLMS Enhancements. The DLMS procedures and the supporting DLMS Supplements (DSs) identify DLMS enhancements which may not have been implemented by all DLMS trading partners or within legacy systems. Therefore, data associated with an enhancement transmitted within a DLMS transaction may not be received or understood by the recipient's automated processing system. Additionally,

DLMS procedures may not have been developed to support the data exchange. Components wishing to implement DLMS enhancements must coordinate with DLMSO prior to use. DoD Components are encouraged to submit a PDC reflecting required business rules.

C1.7.1.2. Future Streamlined DLSS Data. The DLMS procedures and the supporting DSs identify DLSS data targeted for elimination under a full DLMS environment. This data is often referred to future streamlined data. This data is retained within DLMS during a transition period when many trading partners employ legacy systems or cannot move to full DLMS capability. DoD Components wishing to eliminate streamlined data must coordinate with DLMSO prior to doing so. Components are encouraged to submit a PDC reflecting any revised business rules associated with such termination.

C1.7.1.3. DLMS Field Size. The DSs identify ANSI X12 field sizes and some field size constraints existing under the DLSS. Many DLMS trading partners operating within a legacy system will not be able to support the DLMS expanded field size. Components desiring to implement an expanded field size under DLMS must be aware that the conversion process to the DLSS can not accommodate the larger fields. Components must coordinate with DLMSO prior to use and may submit a PDC to adjust a field size to a recommended length.

C1.7.2. Submission of New Data Elements. Data elements employed in DoD-wide, inter-DoD Component and participating external organization logistics systems/authoritative issuances that have not been standardized under DoD Directive 8320.2, Data Sharing in a Net-Centric Department of Defense shall be submitted as proposed DoD logistics standards following procedures developed under the authority of DUSD(L&MR). DoD logistics standard data elements shall be used in design and upgrading of:

C1.7.2.1. DoD-wide and inter-DoD Component automated logistics systems and authoritative issuances.

C1.7.2.2. DoD Component systems and issuances.

C1.8. DISTRIBUTION OF THE MANUAL

C1.8.1. DLMS Manual. The DLMS manual is published electronically. No hard-copy document is available. The manual is available from DLMSO Home Page (http://www.dla.mil/j-6/dlmso) under the header "Manuals." Any further distribution will be accomplished within each DoD Component or external organization based upon approved distribution data generated through their internal publication channels.

C1.8.2. Changes. DLMS changes are published electronically and are available on the DLMSO Home Page (http://www.dla.mil/j-6/dlmso) under the header "Process Changes."

C1.9. HOW TO USE THE DLMS MANUAL

C1.9.1. Structure of The Manual

C1.9.1.1. Manual Layout. The DLMS manual consists of front matter and four volumes: Volume 1, Concepts and Procedures; Volume 2, Supply Standards and Procedures; Volume 4, Acquisition (Contract Administration); Volume 5, Finance.

C1.9.1.2. Front Matter. The front matter contains an overall Table of Contents (applicable to the entire manual); a consolidated single set of References, Terms, Definitions, Acronyms, and Abbreviations listings for the entire manual; and appendices on logistics data administration and management including data interoperability, instructions for acquiring access to the DLMS DoD standards databases; special guidance which applies to all DLMS supplements to Federal implementation conventions and applicable Federal implementations; and both functional and technical information that is relatively stable and applicable to the DLMS as a whole.

C1.9.1.3. Volumes. Each volume of the DLMS manual contains its own Table of Contents of procedural chapters with listings of figures, and tables. DLMS supplements to Federal ICs that explain the use of the DLMS standards for the functions addressed by that chapter are available on left hand navigation menu of the DLMSO Home Page (http://www.dla.mil/j-6/dlmso) under the header "IC Supplements". Each volume may also contain appendices for related data that apply to multiple chapters in the volume; however, use of any of the functional area volumes requires simultaneous access to the DLMS manual “front matter” – i.e. references, terms and definitions, acronyms, and abbreviations.

C1.9.2. Numbering System

C1.9.2.1. Chapters. Chapter numbers are in sequence and section numbers are in sequence within the chapter beginning C1, C2, and so forth.

C1.9.2.2. Subsections. Subsection numbers contain additional decimals and sequential numbers, e.g., C1.3, C1.3.2.

C1.9.3. Page Numbering. All page numbers are in the center at the bottom of the page. Numbers for preliminary pages, or front matter (Foreword, Table of Contents, References, Terms and Definitions, and Acronyms/Abbreviations) are consecutive lower case Roman numerals (e.g., Foreword i; Table of Contents iii). Numbers for text pages are Arabic numerals consisting of the chapter number followed by the page number within the chapter (e.g., C10-1 is chapter 10, page 1; C3-32 is chapter 3, page

32). Page numbers, for appendices to the volume, cite only the appendix number and the page number within the appendix (e.g., AP3-3 is appendix 3, page 3). The same appendix numbering system applies to each volume.

C2. CHAPTER 2
BUSINESS CONCEPTS

C2.1. OVERVIEW

C2.1.1 Defense Logistics Management System. The DLMS provides standard procedures and data formats to link the various component organizational elements of the Defense Logistics community including: inventory control points (ICP)s, distribution depots, maintenance depots, transportation nodes, and end users in posts, camps, stations, ships, and with deployed units. The DLMS not only addresses the different functional processes of logistics but, also provides standards for interchange of data across the Military Services, Defense agencies, other Federal agencies, foreign national governments, international government organizations, and with nongovernment participants. As other ***Electronic Business (EB)*** methods emerge, DLMS will incorporate these new capabilities into the Department's logistics business processes, as appropriate.

C2.1.2. Purpose. This chapter provides an overview of some of the technologies and procedures that all participants must implement to employ the DLMS across the range of participating organizations. This chapter also provides a road map to other parts of the manual for details of specific topics.

C2.2. TRANSACTION FLOW

C2.2.1. Transactions. The DLMS provides descriptive procedures, transactions, and data formats for computer-to-computer communications. The transactions initiate a logistics action (e.g., requisition an item; authorize a funds transfer; ship an item, etc.). The transactions are structured and formatted to be computer processable without human intervention.

C2.2.2. Defense Automatic Addressing System Center. The DAASC acts as a central node for all DLMS transactions. The transactions will flow from the originator's computer to the DAAS. The DAAS will edit the transaction for correct format, retain an image in an interactive data base for user access, and route the transaction to the correct recipient. The receiving computer will process the transaction and initiate the appropriate logistics action. This action will frequently result in generation of additional DLMS transactions to other systems and/or responses back to the originator via DAAS.

C2.2.3. Transaction Gateway. The DAASC will also act as the gateway for DLMS transactions to be routed to and from Foreign Military Sales (FMS)/Security Assistance ***(SA)*** customers and contractor participants.

C2.3. DATA REQUIREMENTS AND FORMATS

C2.3.1. General Information. The DLMS uses ANSI ASC X12 transactions for EDI. EDI is widely used in the private sector to conduct business operations, and also between industry and the Government in acquisition, transportation, finance, and other functional areas. The DLMS extends this electronic connectivity to internal DoD logistics operations. The DLMS will also be expanded to include other ***emerging EB*** methods as they are standardized and approved for ***use by the Department of Defense***.

C2.3.1.1. Electronic Data Interchange Standards. The ANSI ASC X12 EDI standards define transaction sets that communicate business information. A transaction set may be considered the equivalent of a business form (e.g., a purchase order, an invoice, or a requisition). The DLMS uses approximately 40 of the more than 100 transaction sets available in the ANSI ASC X12 standards. Several ANSI ASC X12transaction sets used by the DLMS were developed specifically for DoD usage; however, most applications use existing commercial transaction sets.

C2.3.1.2. Transaction Sets. Transaction sets consist of a group of segments in a specified order. Segments consist of one or more data elements, also in a specified order. The ANSI ASC X12 standards define the general data characteristics and formats. ***DLMS supplements[1](DSs)*** to Federal ICs define the specific data formats to be used in DLMS transactions and also define usage requirements (mandatory or optional) for transactions. Except for the communications supplements in this chapter, ***DSs*** are grouped by logistics functional area in subsequent volumes of this manual. Component application systems shall conform to the requirements specified in those ***DSs***.

C2.3.2. Editing

C2.3.2.1. General. Data contained in DLMS transactions must be both complete and accurate for the receiving computer systems to process . The following paragraphs define some principles for maintaining accurate data within the DLMS for all participants.

C2.3.2.2. Edit at Origin. DLMS procedures provide for recipients to edit and, if necessary, reject transactions back to the sender. To minimize the expense and delay involved in processing erroneous transactions, originating activities should apply the maximum amount of editing and validation upon their own transactions prior to transmission. Outbound transactions must meet all the requirements specified in the ***DSs***. Components may also apply more stringent or specific edit requirements as meets their needs on outbound transactions.

[1] ***DLMSO has developed Extensible Markup Language (XML) schemas for use in DoD logistics that represent DLMS supplements to Federal ICs for ANSI X12 based EDI transactions. These files can be found on the DLMSO website.***

C2.3.2.3. Use Data Only as Defined. Data elements shall carry ONLY the data specifically defined in the ***DSs***. Capabilities exist to support DoD Component-unique data. However, DoD Components shall submit proposed DLMS changes, following the Chapter 5 requirements, to address any planned use.

C2.3.3. Error Processing

C2.3.3.1. General. When the ***DSs*** are completely incorporated into the DoD logistics business processes, much of the data currently contained in the DLSS transactions will be unnecessary. It is anticipated that legacy systems, that currently require the exchange, will have been replaced and new business rules will have been established that will make the DLSS data superfluous. It is also recognized that the DLMS implementation will require the continued use of the DLSS 80-character transaction formats to satisfy DoD Component legacy application systems employing the DLSS as their baseline. Current DLSS error notification processes will continue until ***the Department of Defense*** has totally implemented DLMS.

C2.3.3.2. Transaction Set (TS) 997 – Functional Acknowledgement. This TS is used by the DLMS when the TS contains an error which violates rules of ANSI ASC X12 syntax. The TS 997 may also be used to acknowledge receipt of the transaction set without error as agreed to between trading partners; but, only between ***the Department of Defense*** and a commercial trading partner. Use of TS 997 is discussed in Chapter 6 and DLMS appendix 1.

C2.3.3.3. ***DLMS Supplement 824R*** – ***Reject*** Advice. This ***DS*** is used when the translator receives a transaction that contains an ***functional*** error that violates the ***DSs and are covered by DLMS status transactions***. The ***DS 824R*** is generated as an exception by DAAS ***and DoD Component application programs*** to convey information to the sender's application process. Originating sites shall possess technical and procedural means to receive the application device, correct errors, and retransmit appropriate data. Use of ***DS 824R*** is discussed in ***Chapter 7.***

C2.3.4. Change Control. DAASC is the designated activity to perform change management for the translator used in converting DLSS to DLMS or DLMS to DLSS. DAASC will upgrade the translator as logistics data requirements change and the DLMS is updated to reflect the changes. Chapter 5 discusses the guidelines for maintaining DLMS standards and conventions and defines the procedures for processing and recording proposed DLMS changes.

C2.3.5. Enveloping. The DLMS supports the bundling of multiple groups of data, referred to as enveloping. Specifically, multiple transactions can be bundled into a single DLMS transaction set. Multiple transaction sets of a similar type can be placed in a single functional group, and multiple functional groups can be placed in a single interchange group. The DLMS use of envelopes is consistent with ANSI ASC X12.6 standards. Refer to Chapter 6 for the details of DLMS envelope usage.

C2.4. COMMUNICATION REQUIREMENTS

C2.4.1. Telecommunication Networks. The method for conveying DLMS transactions from one activity to another will be by DoD and Federal electronic telecommunications networks. The preferred method will be determined by agreement between the trading partners recognizing that DAASC will usually be one of the trading partners. The Defense Integrated Services Network (DISN) will be the dominant communications path.

C2.4.2. Common Communications Approach. Participating activities must all jointly use a common communications approach. Chapter 6 of this volume and DAASC procedures define specific communication requirements. The following lists some highlights of the key communications requirements:

C2.4.2.1. Transmit through the DISN or other approved alternatives.

C2.4.2.2. Use the compression algorithms as defined by DAASC.

C2.4.2.3. Transaction set syntax and content shall be in accordance with ANSI ASC X12.6 standards and the implementation conventions/***DSs*** defined in this manual.

C2.4.2.4. Transactions shall generally not be encrypted; however, they may be encrypted under specific DoD Component or national command structure policy or directive. Any use of encryption must be coordinated with DAASC.

C2.4.2.5. Component activities shall maintain copies of all transmissions for at least 1 week, and shall be able to retransmit them at the request of the receiving party. DAASC shall retain a copy of all receipts and transmissions. The length of the retention periods will vary by the specific transaction set. DAASC procedures define the retention period for each type of transaction set.

C2.4.2.6. DLMS transactions are variable length and in many cases have no practical maximum size. However, for transmission purposes, there will be an overall

maximum size imposed for transaction sets and transmission envelopes (see Chapter 6[2]).

C2.4.3. Technical Solutions. DoD Component activities shall have the discretion to determine the technical means for achieving the formats defined above. However, DoD Components are encouraged to use a standard EDI translator to convert from their internal system files to the DLMS standards.

C2.5. DAASC OPERATIONS

C2.5.1. Functions. The DAASC is central to all DLMS operations. It performs numerous corporate functions for DLMS operations including:

C2.5.1.1. Performing basic edits and returning any transactions with errors back to the originator.

C2.5.1.2. Archiving all received and transmitted messages, to ensure retransmission capability in the event the original message was lost due to computer or telecommunications failure.

C2.5.1.3. Generating images, as required.

C2.5.1.4. Holding or forwarding transactions per DoD Component profile for the recipient.

C2.5.1.5. Executing "suppress" or other national command directives.

C2.5.1.6. Loading transaction data into the Logistics On-Line Tracking System (LOTS).

C2.5.1.7. Coordinating and providing DoD management information on supply system performance evaluation.

C2.5.1.8. Performing additional functions for requisitioning including rerouting requisitions to the correct source of supply (SOS).

C2.5.1.9. Rerouting other documents using DoD Component rules and records as appropriate.

C2.5.1.10. Evaluating the "to" address capability for receiving transactions in EB versus DLSS format.

C2.5.1.11. Converting transactions from DLSS to DLMS and from DLMS to DLSS, as required.

[2] Temporary restrictions at the data element level may be imposed on translation requirements to the previous fixed-length formats.

C2.5.2. DLMS Enterprise Service Provider (ESP). DAASC is the central node for DLMS technical and operations support and shall maintain activity profiles recording EDI capability, compression techniques, encryption techniques, communications media, and other address data of the DoD Components.

C3. CHAPTER 3

LOGISTICS DATA MANAGEMENT

C3.1. DoD DATA ADMINISTRATION. DoD data administration policy, as prescribed by DoD Directive (DoDD) 8320.1, DoD Data Administration, requires all DoD Components to implement data administration aggressively in ways that provide clear, concise, consistent, unambiguous, and easily accessible data DoD wide, thereby minimizing the cost and time required to transform, translate, or research differently expressed but otherwise identical data.

C3.2. DoD LOGISTICS DATA ADMINISTRATION POLICY. DoD Logistics data administration policy is committed to full compliance with the overall DoD policy. In compliance with the requirements specified in the DoD Directive cited above, it is DoD Logistics policy to:

C3.2.1. Standardize and register data elements to meet the requirements for data sharing and interoperability between and among logistics information systems.

C3.2.2. Use applicable DoD, Federal, national, and international standards before creating new logistics standards.

C3.2.3. Promote standardization of logistics data elements within the DoD logistics community consistent with requirements for sharing data.

C3.2.4. Establish the logistics community approach to managing data as a corporate asset that functions as a critical element in accomplishing the logistics mission.

C3.2.5. Establish the roles and responsibilities for management of logistics data at all organizational levels including, but not limited to, the role of the DoD Logistics Functional Data Administrator (FDAd).

C3.2.6. Augment and amplify DoD data administration policy and procedures in support of the Global Combat Support System (GCSS) vision of interoperability.

C3.2.7. Develop and publish appropriate operational guidance for all DoD Components and information technology support elements that provide, maintain, or use logistics data or perform logistics related activities.

C3.3. BACKGROUND

C3.3.1. Focused Logistics. An information environment that is flexible, adaptable and interoperable enables the execution of the DoD Logistics Strategic Plan in support

of the Joint Vision 2020. Focused Logistics, a key concept for future joint operations, is the fusion of the elements of logistics support using information technology. It requires the timely flow of vital information between the battlefield and the sustaining base. The GCSS enables the achievement of Focused Logistics by providing improved combat support for the warfighter through integration and interoperability across combat support functions.

C3.3.2. Criticality of Accurate Information. Collecting, processing, and delivering timely and accurate information is critical to accomplishing the DoD logistics mission. The amount of data and the number of systems created to process data are expanding at the same time the role of data is changing. Traditional reports showing past activity are being replaced by active, real-time decision-making reporting structures. Manual data collection processes are being replaced by automated passive collection techniques.

C3.4. CHALLENGES PRESENTED BY GCSS. The GCSS presents new challenges to the data management community. Transitioning to an improved information environment that supports the GCSS vision requires an intensified collaborative approach to all data management initiatives. These initiatives must be undertaken with greater sensitivity to the needs of the global community, recognizing that data management is a community-wide collaborative effort incorporating both new and legacy environments.

C3.5. APPLICABILITY AND SCOPE. The procedures of this chapter apply to:

C3.5.1. All DoD Components that provide, maintain, or use logistics data.

C3.5.2. All information technology (IT) support elements that are under the control of the DoD logistics community.

C3.5.3. All data which is necessary to perform logistics and related activities.

C3.6. ROLES AND RESPONSIBILITIES. DoDD 8320.1 establishes the concept and role of the DoD Data Administrator, DoD FDAd, and the DoD Component Data Administrator (CDAd). Accordingly, the positions of the DoD Logistics FDAd and DoD Logistics Component FDAd have been created to meet that requirement.

C3.6.1. DoD Logistics Functional Data Administrator Responsibilities. The DoD Logistics FDAd is responsible for:

C3.6.1.1. Resolving data-sharing-data issues.

C3.6.1.2. Evaluating the status of data management, including data interoperability, in logistics information technology issues.

C3.6.1.3. Establishing and maintaining a capability for providing community-wide information about the logistics data infrastructure and the relationships to other information elements.

C3.6.1.4. Developing and publishing implementation memoranda for logistics data management.

C3.6.1.5. Ensuring configuration management for global logistics data assets.

C3.6.1.6. Coordinating with other functional areas to identify data interoperability opportunities.

C3.6.1.7. Ensuring that appropriate security requirements are identified for shared logistics data assets.

C3.6.1.8. Maintaining data integrity by facilitating resolution of cross-component and cross-functional data quality issues.

C3.6.1.9. Serving as the authoritative representative on all logistics functional issues affecting DoD data administration.

C3.6.1.10. Developing logical data models of logistics functional data.

C3.6.1.11. Assisting logistics functional area activities in collecting, synchronizing, and distributing functional data.

C3.6.1.12. Identifying any logistics functional data requirements not provided by the Defense Data Repository System (DDRS).

C3.6.2. DoD Component Logistics Functional Data Administrator. The DoD Component Logistics FDAds (or CDAd if no Component Logistics FDAd is designated) is responsible for:

C3.6.2.1. Providing functional representation in joint logistics efforts involving data management.

C3.6.2.2. Preparing and submitting proposed standard data.

C3.6.2.3. Coordinating proposed standard data received from the Component CDAd and the DoD Logistics FDAd.

C3.6.2.4. Planning for utilization and enhancement of the interoperable data infrastructure.

C3.6.2.5. Determining the mission requirements for synchronizing replicated data within the DoD Component.

C3.6.2.6. Ensuring that DoD Component information technology initiatives use the shared, authoritative data store.

C3.6.2.7. Ensuring configuration management for non-global logistics data assets for which the DoD Component is responsible.

C3.6.2.8. Designating and recording the authoritative store for logistics data.

C3.6.2.9. Ensuring that data security requirements, including access permissions, are defined and effectively executed.

C3.6.2.10. Ensuring data integrity by identifying and investigating data quality issues and facilitating actions to improve processes in order to resolve these issues.

C3.6.2.11. Ensuring that the design of data acquisition and maintenance processes support the requirement of data interoperability and data quality.

C3.6.3. DoD Component Data Administrator Responsibilities. Each DoD Component designates a CDAd to organize and manage a data administration program within the Component. In addition to common responsibilities described above, the CDAd is responsible for:

C3.6.3.1. Representing CDAd interests to the DoD Logistics FDAd.

C3.6.3.2. Identifying the interface between the users, data base administrators, and application developers of information systems.

C3.6.3.3. Serving as the liaison between the DoD Logistics FDAd and the DoD Component on all data management issues.

C3.6.3.4. Reviewing proposed changes to DoD standard data elements that originate within their Component and forward changes to the Logistics FDAd.

C3.6.4. DLMSO Responsibilities. The Director, DLMSO, is responsible for:

C3.6.4.1. Establishing the position of the DoD Logistics FDAd.

C3.6.4.2. Providing appropriate staffing and administrative support for the FDAd.

C3.6.4.3. Ensuring uniform implementation of DoD Logistics data administration policy and procedures by DoD Components.

C4. CHAPTER 4

ENVIRONMENTS

C4.1. GENERAL INFORMATION. The DLMS implementation architecture, a subset of the Defense Information Infrastructure (DII) and the GCSS, is based on the DII Common Operating Environment (COE) and fully complies with the DII COE standards. The DLMSO, operating under this framework, coordinates DLMS-related requirements with the DoD Component focal points and interfaces with the DAASC and the DISA to ensure that all DII COE requirements are fulfilled. The DAASC and DISA jointly maintain the Defense Electronic Business Exchange (DEBX) infrastructure. The DEBX functions as the single interface between Government and commercial trading partners while conducting electronic commerce and EDI activities. DEBX monitors interoperability, economies of scale, and compliance with standards. DEBX also provides translation and conversion services required for DLMS implementation. The DLMS implementation architecture supports both the pass-through of already translated EDI transactions as well as translation services for inbound and outbound transactions. This chapter discusses the system architectures for processing DLMS transactions. It reviews the functions of EDI translation software/hardware and their relationship to component logistics application systems. The EDI translator and other portions of the systems architecture developed for the DLMS will support other EDI applications including exchanges with industry.

C4.2. DAASC EB/EC INFRASTRUCTURE. The DAASC serves as the lead DEBX component supporting DLMS implementation. In addition to supporting the developing DLMS environment, the DAAS infrastructure has been developed to support the EDI needs of the full range of EDI transactions exchanged between DoD civil agencies, and security assistance countries and their trading partners. This infrastructure interacts with other logistics infrastructures to ensure that DoD's access needs are met, and also interacts with the DoD EB/EC infrastructure for multiple EDI efforts.

C4.2.1. Purpose. The DAAS EB/EC infrastructure was developed to meet the current and anticipated requirement for a logistics information infrastructure that can operate fully between the Government, DoD and its trading partners. The trading partners may be either internal to DoD or external commercial activities and foreign countries. The DAAS has been designed to support a wide range of emerging EB/EC business practices and interfaces. The DAAS provides EB/EC capabilities such as translation, store/forward of messages, routing, file management, recovery of transactions, and statistics generation. DAAS can also provide data encryption if required by government and/or commercial trading partners. The DAAS also provides end-to-end support of several prime vendor initiatives within the Government, functioning as a full service value added network (VAN) for military customers. The

DAAS can provide this capability to prime vendors if requested by the functional sponsor.

C4.2.2. DAAS Interfaces. The DAAS infrastructure can interact with other logistics systems to meet DoD logistics data exchange and data access needs. The DAAS interfaces enable DoD to receive, edit, route, and collect a wide range of logistics data in various electronic formats. The data are then incorporated into interactive databases that provide current information, in detailed or roll-up formats, to users at all levels of the DoD logistics process.

C4.3. TRANSLATION

C4.3.1. General Information

C4.3.1.1. Definition. Translation is the automated process of transforming component data into ANSI ASC X12 (DLMS) standards for sending and receiving data. Most translation software use "table-driven" routines to process regardless of the actual application being processed. Specific action is taken by the program depending on the data being processed and the particular tables associated with the transaction set.

C4.3.1.2. Translation Software. Components may use any desired means to translate component data to the DLMS format. The DLMS standards apply to the transaction sets that result from the DoD Component processing and not how a program is designed, nor how it operates. Many commercial software packages exist which provide "core translation" and other related functions that are designed to support different EDI environments. The translation software decision to "make or buy" must consider many factors, however the availability of relatively inexpensive proven commercial software packages should make development unnecessary. EDI software should be managed as "system software" not as "application software."

C4.3.1.3. Processing. Another factor in determining an architecture for DLMS and EDI translation processing is the number, size, and placement of translators. Translators may be placed at each site processing DLMS transactions or established at regions to serve a number of sites. Making this determination will require a detailed analysis of transaction volumes processed by each participating site, and translation software, hardware, and communications costs.

C4.3.1.4 Capabilities. DAASC, in its role as the ***ESP*** for DLMS and as a DoD distribution point for EDI communications with industry, maintains an extensive capability to translate between EDI formats and other file structures. As required, the DAASC ***shall*** provide translation between DLMS and Component UDF formats; between multiple versions of the ASC X12 standards; and between other EDI formats, such as Extensible Markup Language (XML). In addition, the DAASC ***shall*** support translation between DLSS and DLMS formats referred to as “conversion.

C4.3.1.5. Transition Conversion Requirements. During a transition period of indeterminate length, the DoD will operate in a mixed DLSS/DLMS environment. The DAAS will provide conversion processing between the standard DLSS formats and the DLMS to support this transition. DLSS to DLMS conversion tables have been developed that allow for the conversion of data from DLSS to DLMS, and vice-versa. The conversion tables enable logistics business to be conducted in both environments. In order to facilitate the conversion, DAASC uses a commercial "any-to-any" mapping software package that supports a robust conversion. The Components are able to use their current format, either DLSS or DLMS, to initiate a transaction. DAASC incorporates and maintains a profile of each organization and specifies whether the organization is operating in DLSS, DLMS, or both. The DLSS data elements are retained in the DLMS to support the conversion. However, DLMS enhanced data may not be supported in legacy or transitioning systems, so coordination with DLMSO is required prior to implementation of DLMS enhancements.

C4.3.2. Translation Architecture

C4.3.2.1. Minicomputer/Microcomputer Front End. This computer serves as a front-end processor to the host system which may be a type of mainframe, minicomputer, a series of microcomputers, or any combination of machines and component application systems. The translation software (to/from DLMS) resides within the microcomputer.

C4.3.2.2. Mainframe/Minicomputer. All processing (application processing and EDI translation) is performed within one computer. Outbound transactions are consolidated, translated, and transmitted. Network communications and hardware/software are under the control of the one computer.

C4.3.2.3. Stand-alone Microcomputer. Outbound transactions either are entered into an application or some translation software supports direct entry of data. Translation software resides within the microcomputer and communications software/hardware handles both inbound and outbound transactions. This approach supports only activities with very low transaction volumes and simple application systems.

C4.3.3.Other Functions. Other software/hardware will be required to archive data for retransmission, in case the original transaction is lost or damaged, and to compress data to minimize long-haul communications costs.

C4.4. APPLICATION INTEGRATION

C4.4.1. Data Exchange Requirements. The translation software will need to exchange a substantial amount of data with the host application software. The primary exchanges will be transaction data. For outbound transactions, applications programs developed by the DoD Components will extract transaction data from the host

application data base and reformat it into what is typically called a "flat file" which can be processed by the EDI translator. Inbound transactions are reversed. The translator outputs the flat-file and application programs must convert the data into the proper format to be input into the application database. The characteristics of the "flat-file" are determined by the type of EDI translation software.

C4.4.2. Translation Flat Files. Translation flat files are not the only information that must be dealt with. Automatic data processing and functional procedures must exist to manage errors for both outbound and inbound transactions. Outbound errors must be reported to both the technical and functional staffs. The cause of an error must be identified, corrected, and the data reconstructed for proper transmission. For inbound errors, the type of error needs to be identified and a decision made as to whether the data can be processed or rejected.

C4.4.3. Multiple Applications. Activities that support multiple applications (e.g., a large post which has a separate supply, transportation, and procurement system) must be capable of evaluating inbound transactions and routing them to the proper application system. The capability for updating communications modules with trading partner communication information profiles must also exist.

C4.5. SYSTEM ARCHITECTURE. The aggregation of these components in combination with the communications path is called the EDI systems architecture. The DoD Components are responsible for determining the most effective architecture(s) for their requirements. DoD Components may vary the architecture by type of activity, (e.g., retail versus inventory control point). There is no DLMS restriction regarding the DoD Components' architectures as long as the transactions:

C4.5.1. Meet DLMS format requirements, including enveloping and compression algorithms.

C4.5.2. Are transmitted through a DoD approved communications medium.

C5. CHAPTER 5
CHANGE MANAGEMENT

C5.1. GENERAL INFORMATION. This chapter describes the guidelines for maintaining the DLMS standards, DSs to Federal ICs, and procedures. The change control process ensures the proper documentation of all proposed or approved changes to the DLMS, the tracing and reporting of these changes to the functional baseline using change control status accounting, and the validation of the changes using functional change control reviews, as required. These guidelines also apply to the DLSS legacy systems changes and for changes employing EB methods other than EDI that are chosen by DoD Components for use within their logistics business processes/systems. DLMS shall support emerging EB technologies such as: data sharing, automated identification technology, object-oriented user interfaces, electronic malls, web-based technology, electronic funds, etc.

C5.2. MAINTAINING SUPPLEMENTS TO FEDERAL IMPLEMENTATION CONVENTIONS. The DLMSO coordinates the implementation of the DLMS. DLMSO maintains control of related standards, DLMS supplements to Federal ICs, procedures, and common support packages (e.g., versions of the ANSI ASC X12 standards, XML-based standards, etc.), participates in the standards-setting process, and assures compliance with approved EDI standards.

C5.2.1. DLMS Baseline. The Director, DLMSO, establishes the baseline for DLMS standards and supplements. The previous baseline, plus approved changes from that baseline, constitutes the current approved DLMS baseline.

C5.2.2. Change Control

C5.2.2.1. Scope. DLMS change control is the approval/disapproval and prioritization of changes to the DLMS, achieved through DoD Component coordination and consensus, thereby, promoting an integrated approach to the standardization and modernization of the DoD logistics business processes. Control of changes includes documentation, justification, systematic evaluation, coordination, release, implementation, and publication.

C5.2.2.2. Purpose. The change control process assures that those involved in the change process define and evaluate the full impact of a change based on at least the following considerations before making a decision to approve and implement the change:

C5.2.2.2.1. Functional requirements

C5.2.2.2.2. Change justification

C5.2.2.2.3. Quality assurance

C5.2.2.2.4. Operational readiness

C5.2.2.2.5. Systems interfaces

C5.2.2.2.6. Technical reviews

C5.2.2.2.7. Estimated impact on total life-cycle costs

C5.2.3. Change Control Status Accounting (CCSA)

C5.2.3.1. Purpose. DLMS change control guarantees that there is a record documenting all proposed changes. DLMS CCSA provides for tracking and reporting all proposed changes to the DLMS baseline. CCSA is also a management tool for documenting the accomplishment of all related tasks resulting from adopted changes and for updating the current DLMS baseline.

C5.2.3.2. Reporting. The Director, DLMSO, ensures the proper recording, management, and reporting of the CCSA data needed to effectively manage proposed changes during development or modification of the DLMS.

C5.2.4. Documentation. The Director, DLMSO, creates a proposed change record concurrently with the establishment of the functional baseline, and maintains the record's documents and data in a manner that provides the continued visibility required to effectively manage the DLMS baseline. The baseline record, at a minimum, contains:

C5.2.4.1. The functional documentation comprising the baseline.

C5.2.4.2. The essential baseline item data elements.

C5.2.4.3. A functional economic analysis.

C5.2.4.4. All approved changes to the baseline and the implementation status of such changes.

C5.2.5. Reporting Requirements

C5.2.5.1. Status Reports. DoD Components will provide a semiannual status report on the implementation of approved DLMS changes. Report information as of May 1st and November 1st of each year for approved changes until fully implemented. In the final report, identify the implementing publication and change number/system/subsystem identification, as applicable. Attach a copy of the publication change or information needed to acquire a copy of the change (web site, link, etc.). In addition, this report will document DoD Component progress in migration to the DLMS during the transition phase. The report will be furnished to DLMSO no later than 30

May and 30 November of each year. RCS: DD-AT&L(AR)1419, System Implementation and Business Process Status Report, applies.

C5.2.5.2. Status Reviews. DLMSO will provide a status review of all change proposals which have not yet been approved for publication, or if approved, have not been implemented. The report will reflect the title and change number, associated dates, and current status for each DoD Component. This information will be incorporated under the aforementioned RCS for semiannual publication by DLMSO subsequent to DoD Component submissions discussed above.

C5.2.6. Functional Change Control Reviews (FCCRs)

C5.2.6.1. Purpose. The Director, DLMSO, conducts functional FCCRs to validate the satisfactory completion of DLMS development or modification and to validate the:

C5.2.6.1.1. Establishment and accuracy of the CCSA system.

C5.2.6.1.2. Existence of a formal process for establishing the functional baseline.

C5.2.6.1.3. DLMS baseline functional requirements.

C5.2.6.1.4. Execution of appropriate tests, analyses, and reviews; conformance with acceptance requirements; and documentation and resolution of all deficiencies.

C5.2.6.1.5. Performance of current baseline requirements.

C5.2.6.1.6. Technical documentation accurately reflecting the functional characteristics.

C5.2.6.1.7. Test and analysis data verifying that the DLMS is achieving the performance specified in its current functional baseline.

C5.2.6.2. Baseline Reviews. The Director, DLMSO, performs baseline reviews at his or her discretion:

C5.2.6.2.1. When verification is required to insure that follow-on changes meet their specified functional characteristics and the current baseline requirements.

C5.2.6.2.2. When the accumulation of DLMS approved changes, deviations, and waivers (refer to chapter 1) warrant additional reviews.

C5.2.6.2.3. When there is a need to validate the performance of the DLMS and/or the accuracy of its baseline and status accounting system.

C5.3. DLMS VERSION CONTROL. The official ANSI ASC X12 version of a standard transaction set (e.g., 511) is a key ingredient in the successful application of DSs to Federal ICs. The version number is transmitted as a code in the functional group header within an interchange envelope. The version is transmitted as a three-position code. Each major ANSI ASC X12 standards revision involving the public review process that leads to a publication of a set of American National Standards causes the version number to increase by one. The predominate DLMS version is 004. The next three positions designate the release level within each version, i.e., 010. The release number of each version is identified in the second position of the release level. The initial DLMS implementation release is release one (010). Both version and release numbers are commonly referred to as a version release, e.g., ANSI ASC X12 version release 004010 (“4010”). The DLMS may eventually support multiple versions dependent upon trading partner requirements to include a minimum of the current version plus two previous versions. In addition, the DLMS will support multiple versions of DSs within each ANSI ASC X12 version release. This layered version control schema will allow for documentation and control of DLMS changes that do not affect the structure of ANSI ASC X12 transaction sets or DLMS supplements, but are required for clarification and/or update of DSs.

C5.4. DLMS CHANGE PROCESS

C5.4.1. New Requirements. A new requirement, a modification in design, a system deficiency, a change in DoD logistics policy, or an operational emergency can all cause a PDC. Examples of significant changes include those that create substantial life cycle cost savings, correct deficiencies, or make significant effectiveness change(s) in operational or logistics support requirements. Other changes include, but are not limited to: revisions to formats, codes, procedures, or changes requiring interface with other systems, retail level systems, or Federal agencies.

C5.4.2. Information Exchanges. PDCs will also be used to effect new or revised information exchanges. Information exchange is defined as the process of transferring data by means of direct interface between two or more databases. An information exchange opportunity exists when the authoritative source can be identified and when direct database access is technically feasible. However, other conditions must be satisfied to implement the exchange, e.g., the proposed exchange must be evaluated against other available processes. Cost, number of subscribers, data security/quality may also be factors.

C5.4.3. Submission. PDCs will be submitted to DLMSO through the applicable DoD Component PRC member. DLMSO may also accept proposed changes submitted through joint Service/Agency process action teams or the equivalent sponsoring organization.

C5.4.4. Procedures. Appendix 2 is a flow chart that illustrates the process to submit a PDC. In summary, the processing of a change, waiver, or deviation to the DLSS or DLMS involves the following steps and the normal associated timeframes (NOTE: The PRC Chair may accelerate the change process from the timeframes indicated and may, when appropriate, extend them):

C5.4.4.1. Step 1. The PDC sponsor (see C5.4.3) submits a PDC (or waiver or deviation request) in ***the*** format **found at http://www.dla.mil/j-6/dlmso/eLibrary/Changes/processchanges.asp** to the Director, DLMSO, or appropriate PRC chair. When more than one committee is involved e.g., supply, finance, data management, etc. the PRC chairs involved determine the lead PRC and coordination required.

C5.4.4.2. Step 2. Within 10 calendar days of receipt of proposal, the PRC chair evaluates the proposal and determines appropriate action, e.g., return for additional information, work with PDC sponsor to clarify/amend, accept for staffing, etc. If the proposal is accepted for staffing, the PRC chair assigns a PDC number and forwards the proposal to the DoD Component PRC members, if necessary. The PRC chair also determines if submission to external standards bodies (Functional Working Group, DoD EDI Standards Management Committee (EDISMC), Federal EDI Standard Management Coordinating Committee (FESMCC) or ANSI ASC X12 is required. If the PDC includes a change to a Federal IC that requires review and approval by the external standards bodies, the PRC chair will forward the IC change(s) and/or related data maintenance request(s) to those groups/committees for processing after the proposal is approved or in conjunction with staffing, if appropriate.

C5.4.4.3. Step 3. The PRC members provide the PRC chair a fully coordinated DoD Component response, including a proposed implementation date if known, by due date provided in the proposal, normally within 45 days of the date of the PDC.

C5.4.4.4. Step 4. The PRC chair may initiate follow up for non-response within 5 calendar days of due date. Additional follow up may be elevated as appropriate.

C5.4.4.5. Step 5. The PRC chair evaluate all comments on the PDC within 5 calendar days from receipt of DoD Components' comments or in conjunction with the next quarterly PRC meeting. If necessary, the PRC will resolve comments and/or disagreement and establish an implementation date if possible. If the PRC approves the PDC, the PRC will establish an implementation date based on consensus. If the PDC is disapproved by the PRC, the sponsor is notified of the disapproval.

C5.4.4.6. Step 6. If an implementation date is not established during the approval process, the PRC chair prepares and disseminates to PRC members a request for implementation date (RFID). The PRC chair normally requests a

response within 45 days of the date issued. When a satisfactory implementation date cannot be jointly agreed upon, the PRC chair will refer the matter to the DUSD(L&MR), or other OSD sponsor for resolution. NOTE: This step will be used when an implementation date is not established during the original staffing process or during a PRC quarterly meeting.

C5.4.4.7. Step 7. Based on DoD Component responses, the PRC chair will establish a single DoD implementation date, or when appropriate, authorize DoD Components to implement on a staggered schedule.

C5.4.4.8. Step 8. Upon reaching the effective date of implementation, all approved DLMS changes (ADCs) are formally incorporated into the electronic version of the DLMS manual, which can be found on the DLMSO worldwide web (WWW) page, http://www.dla.mil/j-6/dlmso/eLibrary/TransFormats/formats.asp. Interim changes will be published, as required, to meet system requirements. Approved interim changes will also be incorporated into the electronic version of the DLMS manual on their effective date. Formal changes will be published to coincide with scheduled implementation dates. Formal changes may include any approved change with the same scheduled implementation date and any interim changes which have been published since the last formal change.

C6. CHAPTER 6
COMMUNICATIONS

C6.1. INTRODUCTION

C6.1.1. Defense Integrated Services Network. The DISN will be the primary communications path to convey DLMS transactions between DLMS users. In some cases, DLMS participants will be commercial entities or foreign governments which do not have access to DISN. In these cases, the DAASC will be responsible for conveying the DLMS transactions to the appropriate DoD distribution point which can link to the specific DLMS trading partner.

C6.1.2. Purpose. Within the general DISN requirements for transmitting data, the DLMS has specific capabilities and requirements for transmitting data. This chapter identifies and defines these requirements and capabilities.

C6.2. ENVELOPING

C6.2.1. General Information

C6.2.1.1. Transaction Sets. EDI transaction sets are transmitted within other data structures that provide telecommunication (rather than functional) information. For instance, several transaction sets (a transaction set begins with "ST" and ends with "SE" segments) can be grouped together within a transmission standard structure (called an envelope). The rules governing such multiple packaging are: (1) only transactions of the same kind may be bundled together; (2) the group envelope within which they appear must begin with a "GS" (group start) segment and end with a "GE" (group end) segment; and (3) one or more like transaction set(s) will be contained within the GS and GE segments.

C6.2.1.2. Transaction Groups. In a similar fashion, one or more transaction groups fit into a higher-level enveloping structure required for actual EDI transmission. This structure always begins with an "ISA" (interchange start) segment and ends with an "IEA" (interchange end) segment. Contained within the ISA and IEA will be one or more group control set(s).

C6.2.2. Description of Use.

C6.2.2.1. The interchange header and trailer segments (ISA/IEA) constitute the interchange control structure, i.e., an interchange envelope. Interchange control segments perform the following functions:

C6.2.2.1.1. Define data element separators and data segment terminators.

C6.2.2.1.2. Provide control information.

C6.2.2.1.3. Identify sender and receiver.

C6.2.2.1.4. Allow for authorization and security information.

C6.2.2.2. Interchange Control Structure. The actual interchange control structure includes neither the group control structures nor the transaction control structures. ANSI ASC X12 defines the latter two structures as application control structures, and even their version and release may differ from those for the interchange envelope. An interchange envelope may encompass one or more functional groups (GS/GE) which, in turn, may enclose one or more related transaction sets (ST/SE). The DLMS Supplements (DS) to Federal ICs illustrate the relationship for these structures.

C6.2.2.3. Purpose of Functional Groups. Since the only purpose of the GS/GE functional groups is to serve as an additional control envelope surrounding like transaction sets (within the ISA/IEA structure), DAASC considers their usage as interchange control segments.

C6.2.2.4. Transaction Interchanges. The generic term, trading partner, has extensive use throughout the EDI community. It refers to the sender/receiver pair in an interchange. In contrast to the arrangement between many commercial or industrial trading partners, the interchange of DLMS transactions employs a central communications hub, known as the DAAS. DAAS performs several value-added functions before forwarding DLMS transactions to their ultimate receiver. Thus, DLMS interchanges occurring between DoD Components or between Components and commercial entities always involves this central hub. For clarity within this interchange control process, DAASC distinguishes between intermediate communication between site and central facility from the actual exchange of EDI transactions between end-to-end entities. DAASC characterizes the intermediate interchange between DAAS and any DoD Component or commercial entity as occurring between communications partners. The term, trading partners, in the interchange control process is defined as the end-to-end communicants in an interchange.

C6.2.2.5. Envelope Control Segments. Envelope control segments have few options and, except for minor tailoring, are identical for every EDI interchange. The tailoring involves the code values selected for the GS01 and GS08 elements. GS01 classifies the particular transaction set(s) within a functional group and GS08 identifies their ASC X12 version and release (and the (IC) version itself). It should be noted that the version and release identified in the ISA12 pertains to the control envelope and not to the transactions.

C6.2.3. Data Element, Data Segment (File), and Subelement Separation

C6.2.3.1. Data Element Separator

C6.2.3.1.1. Purpose. In ANSI ASC X12 documentation, the data element separator is graphically displayed as an asterisk (*). The actual data element separator employed within the interchange envelope assigns the value for the entire interchange. The first occurrence of the data element separator is at the fourth byte of the interchange control header. The value appearing there prescribes the data element separator through the next interchange trailer.

C6.2.3.1.2. Rules. Any character can serve as a data element separator so long as: (1) it is disjointed from every other data element within an interchange; and (2) it does not conflict with telecommunications protocols necessary for the transmission of the interchange. The value recommended by ANSI ASC X12, ASCII hexadecimal character 1D, shall apply for use to interchange DLMS transactions.

C6.2.3.2. Data Segment Terminator

C6.2.3.2.1. Purpose. The interchange control header establishes the value to be used for segment termination within an interchange. ANSI ASC X12 documentation represents this graphically by a new line. The first instance of segment termination immediately follows the ISA16 segment, and the data value occurring there sets the value for the interchange.

C6.2.3.2.2. Terminator Value. The segment terminator value must be disjointed from every other data value within an interchange and must not conflict with transmission protocols. ANSI ASC X12 recommends using the ASCII hexadecimal character 1C for the segment terminator (file separation) character. To comply with this requirement, DLMS users shall set the pertinent parameter in their translation software.

C6.2.3.3. Subelement Separator

C6.2.3.3.1. Purpose. Designation of a subelement separator differs from the other separators. First, the ISA segment provides a discrete element (ISA16) for defining the subelement separator data value. ANSI ASC X12 supports the use of subelements (and use of a subelement separation) only in transactions employing a Composite Unit of Measure (MEA) segment.

C6.2.3.3.2. Rules. The requirements for any separator value are disjointedness and lack of conflict with other protocols. DLMS users shall set the applicable translation software parameter to employ the recommendation of ANSI ASC X12 for subelement separation by using the ASCII hexadecimal character 1F.

C6.3. ARCHIVING AND SEMANTIC ERROR RECOVERY

C6.3.1. Archiving. EDI transactions will be retained online at DAASC for a period of seven days after receipt and can be accessed by the DAASC customer relations assistance desk for obtaining customer status. After successful processing, EDI transactions will be moved to the DAASC LOTS archives. The DAASC central communications facility provides significant archiving and error recovery services for DLMS trading partners. To assist with error correction, DAASC maintains cross-references between original inbound transmissions and subsequent (different) outbound transmissions. These data are forwarded to a receiving trading partner. Without these services, each end of the communication link would have to provide for extended data recovery procedures.

C6.3.2. Transaction (Semantic) Errors

C6.3.2.1. Purpose. Semantic errors involve EDI transaction data which have been correctly formatted but whose meaning cannot be correctly interpreted by the receiving application process. It is not possible to detect semantic type errors during either transmission or translation. As a result, detection of erroneous data occurring within a transaction is the responsibility of the receiving partner. Semantic errors must be determined either within the receiving application processes or by some error detection software whose editing rules are based on the receiving application. DAAS will perform certain levels of semantic error detection for DLMS transactions based on DoD standard rules and at the request of users of the central communications facility.

C6.3.2.2. Error Detection. If semantic errors are detected after transmission and translation, their correction may fall outside the domain of either the translation or the transmission process. Semantic errors can be corrected either within the originating application process, by error correction software whose editing rules are based on the originating application process, by error correction software whose editing rules are based on the originating application, or by default values agreed upon by both originator and receiver. At the request of users of the central communications facility, DAASC can perform various levels of semantic error correction based on computer processable editing rules.

C6.3.2.3. Administering Corrections. For the originating application process to administer correction measures, the application must be cognizant of what and where the error occurred. An error advice transaction must be generated by the receiving trading partner or by some error detection software outside the originating process. (See chapter 7 for details on using the DS to 824 Federal IC, Reject Advice to report transaction semantic errors.)

C6.4. TRANSACTION ACKNOWLEDGEMENT AND ENVELOPE ERROR REPORTING

C6.4.1. General Information

C6.4.1.1. Failure Levels. In addition to semantic errors, EDI formats are subject to failure at three additional levels: (1) transmission, (2) EDI control envelope, and/or (3) EDI transaction syntax. When successful processing is not possible due to problems within one of these levels, error recovery is performed by the central communications facility.

C6.4.1.2. Transmission Integrity. For incoming traffic at DAASC, successful receipt of an electronic message means that the transmission arriving is the same as that which was sent. Thus, if transmission integrity is lacking, communication protocols will require retransmission to be considered to have been unsuccessfully received at DAASC. Also, receipt of any transmission whose EDI control envelope has been corrupted prompts DAAS to return to the sender an appropriately coded acknowledgement. If the envelope is incorrect or lacking, DAAS will treat the faulty transmission as never having been received.

C6.4.1.3. Translation. After receiving a correct EDI envelope control structure, DAAS will attempt to translate the EDI format. In any case where the translation process identifies inconsistencies with agreed upon syntactical standards, DAASC will return to the sender a coded error acknowledgment transaction. (See C6.4.2 regarding the 997 Federal IC, Functional Acknowledgment (DLMS appendix 1)). Transactions containing syntax errors are neither forwarded on to the receiving trading partner nor retained at DAASC. They are "refused for delivery" until corrected.

C6.4.1.4. Error Advice. The submitting party accepts and responds to the error advice transaction (e.g., 997 IC), corrects the error, and retransmits.

C6.4.1.5. Trading Partner Transaction. For transmissions between DAASC and the destination trading partner, the roles for error recovery are reversed. Transmission acknowledgement, EDI control envelope error detection, and EDI syntax checking are all performed within the receiver's communications and EDI translation facilities; DAASC responds only to communications protocol IC 997 advice messages.

C6.4.2. Federal Implementation Convention 997, Functional Acknowledgment

C6.4.2.1. Negative Functional Acknowledgment. Between DLMS trading partners, only a negative functional acknowledgement will be employed. The 997 IC will be transmitted for any interchange whose contents cannot be handled unambiguously by properly functioning EDI translation software. Note that "functional acknowledgement" might be a slight misnomer; the 997 IC merely verifies (or challenges) the syntactical correctness of (ability to translate) transaction-level data within a functional group. For DLMS interchanges, an IC 997 defining translation problems is exchanged not between trading partners, but between communications partners (i.e., between DAAS and either of the trading partners).

C6.4.2.2. Outbound Syntax Errors. Outbound transaction sets which contain EDI syntax errors will cause an error condition at the receiving EDI translator (typically at DAASC). The receiving EDI translator will report the error back to the sender via an 997 IC. For inbound interchanges, errors in syntax discovered by the receiver during translation will result in the generation of a 997 IC defining the syntactical discrepancies and the interchange will be returned to DAASC for correction and retransmission.

C6.4.2.3. Use. The 997 IC is used for DoD interchange of DLMS transactions.

C6.5. ADDITIONAL COMMUNICATION ISSUES

C6.5.1. Control Numbers. ANSI ASC X12 standards provide for syntax control on three levels: interchange, group, and transaction. Within each level, use of an identical control number exhibits a positive match between the header segment and its corresponding trailer (e.g., ISA/IEA, GS/GE, and ST/SE). The DLMS conventions specify assignment of these control numbers at each level as described in the following paragraphs.

C6.5.1.1. ISA/IEA Interchange Control Numbers (ISA13/IEA02)

C6.5.1.1.1. Assignment. The nine-digit interchange control number is assigned by the originator's translation software starting with 000000001. This control number is incremented by one for each subsequent interchange. When the number in the sequence advances to 999999999, the next interchange envelope will restart the series at 000000001.

C6.5.1.1.2. Control Number Duplication. The duplication of control number in both header and trailer segments provides the means to perceive loss of data and, of course, easily recognize duplicates.

C6.5.1.2. ST/SE Transaction Set Control Numbers. The originator's translation software also assigns the transaction set control number. The number starts with 0001 and increments by one for each transaction set within a functional group. (While a minimum of four digits are required, never transmit more digits than the least number needed.) The series restarts at 0001 with the next functional group sent.

C6.5.1.3. GS/GE Data Interchange Control Numbers (GS06/GE02). This is a one-to nine-digit number assigned by the originator's translation software. The group control number sequence begins with one and, in contrast to the ISA control number, is incremented by one for every functional group (GS/GE) within an interchange. This number simply counts the functional groups in the interchange.

C6.5.1.4. Sender and Receiver Identifiers. A DoDAAC is the usual identifier of originators and receivers of DLMS EDI transactions. All DoD Component requisitioning activities are assigned a DoDAAC. Commercial transportation activities

without a DoDAAC assignment, which may send or receive DLMS transactions, are identified by their Standard Alpha Carrier Code (SCAC) designation. A Contractor and Government Entity (CAGE) code identifies a commercial contractor authorized to do business with the U.S. Government. Other DLMS trading partners without an assigned DoDAAC, SCAC, or CAGE code may be distinguished either by their telephone number or their data universal numbering system (DUNS) code plus four-digit telephone suffix, as coordinated by their VAN.

C6.5.2. Compression

C6.5.2.1. General. The most prominent cost in the EDI interchange is the cost of communications. Therefore, it is cost effective to reduce data to a minimum. DLMS transactions (in EDI format) require roughly twice the number of data bytes as an equivalent amount of information expressed as a continuous string. This is due to the separation of fields within variable-length records and identification of each segment within the transmission. Mandatory control segments add slightly to the overhead as well. While increasing the number of transactions contained within an envelope is good for improving the overhead-to-data ratio, it provides only minor gains in efficiency.

C6.5.2.2. Standard Pattern Recognition. The most effective means available for reducing transmission size is data compression. This process uses standard pattern recognition algorithms that substitute single characters for frequently occurring patterns which the decompression process at the other end of the transmission line recognizes and replaces with the original patterns. Being inherently repetitious, EDI transactions are conducive to such data pattern substitutions, and using compression techniques, 40 to 80 percent reduction of the data transmitted is a realistic expectation.

C6.5.2.3. Data Compression. Data compression is not a part of the EDI format standard. As a result, compression must occur after the EDI translation process, including generation of the control envelope, and prior to packaging the data for actual transmission. Some commercial VANs offer data compression as an optional service. Presently, Defense Data Network does not offer compression services.

C6.5.2.4. Error-Free Data Recovery. For error-free data recovery, it is essential that both sending and receiving software be compatible. Presently, DAASC

supports PKWare compression software. As the ***ESP*** for the DLMS, DAASC is responsible for coordinating use of compression software. As with version control for EDI conventions, DAASC shall manage compression software version control through trading partner profile information.

C6.5.3. Encryption. Presently, DLMS transactions contain only unclassified data and there is no requirement for encryption. DoD policy will prescribe any encryption technique which will be coordinated with the DAASC.

C6.5.4. Maximum Sizes C6.5.4.1. Transaction Size Limit. Technically, there are no limitations on the size for EDI transactions. However, there are practical limits imposed by transmission duration, speed of the translation process, storage, and processing capacities of the communications system, and application systems limitations.

C6.5.4.2. Practical Limit. As a practical measure, DLMS transaction sets should be limited to not greater than one megabyte (1,000,000 bytes), uncompressed, for a single transmission envelope. Should the need arise for a larger envelope capacity, such requirement should be negotiated between the affected trading partner(s) and DAASC.

C6.5.4.3. Batch Size Restrictions. The restrictions on batch size for some requisitioning and billing documents will continue until all of DoD have implemented ANSI X12/DLMS supplements. A batch size limit of 496 total documents will continue for the Material Obligation Validation (MOV) and Interfund Billing Documents. The ANSI X12 ST/SE envelope size will be restricted by these procedures.EDI conventions, DAASC shall manage compression software version control through trading partner profile information.

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C7. CHAPTER 7

FUNCTIONAL APPLICATION ERRORS

C7.1. INTRODUCTION

C7.1.1. Purpose. A variety of different application systems used by the DoD Components, Federal agencies, contractors, and foreign governments will exchange DSs to Federal ICs. The primary purpose of this manual is to establish standards through which all of these varied systems can work in unison. This unison will be both on a technical and functional basis. If systems comply fully with these standards, errors should not occur. Nonetheless, errors will occur due to various circumstances and a mechanism must exist for dealing with them. This chapter describes ***use of DS to Federal IC 824R, Reject Advice, for functional errors not covered by DLMS status transactions. DS 824R is not used to reject a transmission due to ASC X12 syntactical errors. A Federal IC 997, Functional Acknowledgement, transaction is used for that purpose (reference Chapter 6 this volume).***

C7.1.2. Error Reduction. The primary means for reducing errors is for each DoD Component to ensure that outbound transactions are thoroughly edited to fully comply with these standards as well as complying with any DoD Component-unique requirements. Still, receiving applications will likely perform edits to preclude processing erroneous transactions that may cause incorrect actions, disrupt the integrity of other data, or even disrupt the operation of the system as a whole.

C7.1.3. Error Reporting. When receiving applications apply edit checks and discover ***functional*** errors, the errors may be reported back to the originating activity using ***DS 824R.***

C7.2. ***DS*** 824R***, REJECT*** ADVICE

C7.2.1. Implementation Convention Content. The reject ***DS sha***ll convey the following information when reporting errors to the originator:

C7.2.1.1. Table 1 data: ***identifies the originator of DS 824R and the recipient, which is the originator of the erroneous transaction being rejected.***

C7.2.1.2. Table 2 data includes:

C7.2.1.2.1. ***Transaction identification of the erroneous transaction to include:***

C7.2.1.2.1.1. Transaction number or contract number.

C7.2.1.2.1.2. Transaction set control number.

C7.2.1.2.1.3. Transaction set identifier code.

C7.2.1.2.1.4. Beginning segment information as applicable to include transaction set purpose code, transaction type code, report type code, action code, etc.

C7.2.1.2.1.5. Identifying material number (e.g. National Stock Number; part number/CAGE, etc.)

C7.2.1.2.1.6. Transaction creation date.

C7.2.1.2.2. The Application Error Condition Code identifying the type of error.

C7.2.1.2.3. ***Option of providing a*** copy of the bad data element.

C7.2.1.2.4. A free-form text message describing the error, which the rejecting software can add as an option.

C7.2.2. Reject-Error Routing. Routing of the reject is from the rejecting activity to the sending activity. This will typically lead to one of two scenarios:

C7.2.***2***.1. DAASC Transaction Reject. In this case ***DAAS***, using the DS 824***R***, ***sha***ll report the error back to the originating activity which must correct the transaction and retransmit it.

C7.2.***2***.2. Activity Transaction Reject from ***DAAS***. ***A***n activity ***receiving*** a transaction from ***DAAS shall report*** the error back to ***the transaction originator using*** DS 824***R***. ***DAAS*** will compare the reject information to an image of the transaction as they received it from the originating activity. If ***DAAS*** determines it caused the error, ***DAAS sha***ll correct and retransmit the transaction. If ***DAAS*** determines the originating activity caused the error, then ***DAAS sha***ll initiate another reject back to the originating activity, as in the first scenario.

C7.2.3. Use of DS 824R, Reject Advice.

C7.2.3.1. Rejection by Specific Reject Advice Code. Initially, DS 824R was developed to reject DSs 527D, 536L, 650A, 650C, 830R, 830W, 846A, 846D, 846F, 846I, 846P, 846R, 846S, 867D, 867I, 870L, 888I, and 947I citing specific reject advice codes in the LQ segment. However, DS 824R is also authorized for use with other DLMS supply and contract administration transactions not specifically identified, but does not supersede procedures for error identification addressed by the DS 140A, Small Arms Reporting, DS 870S, Supply Status, or DS 842A/R, DoD Supply Discrepancy Report Reply. DS 824R reject advice codes may be expanded in the future as requirements are identified and put in place.

C7.2.3.2.. DAAS Rejects. DAASC uses DS 824R to provide narrative message rejection of any DLMS transaction as described under DAASC Receipt Generation of DS 824R.

C7.2.***4***. Summary of Use. ***The DoD Component*** application programs ***shall use*** DS 824***R*** to reject a received transaction which the application program cannot process back to the sending activity. The reject ***DS*** reports the unique transaction number of the erroneous transaction and codes identifying one or more specific error conditions.

C7.2.***5***. Characteristics of Use

C7.2.***5***.1. EDI Translator-Identified Errors - Use of DS 824***R***. In some cases this closely parallels generation of rejects by the receiving activity's EDI translator. The translator should identify any of the following types of errors:

C7.2.***5***.1.1. Errors in the ISA/IEA envelope segments.

C7.2.***5***.1.2. Errors in the GS/GE functional groups segment.

C7.2.***5***.1.3. Errors in a transaction set. Typical of this type of error is:

C7.2.***5***.1.3.1. Failure to use an ***ASC*** X12-mandatory or DLMS required segment or data element.

C7.2.***5***.1.3.2. Use of an ***ASC*** X12 code that is not included in the ***DS***.

C7.2.5.1.3.3. A data error which prevents DAASC from proper conversion during translation. Examples include where the number of characters exceeds is less than number authorized, e.g., DoDAAC greater or less than six, port code greater than three, etc.

C7.2.5.1.3.4. A data error that prevents DAASC from routing the transaction correctly. Examples include invalid "TO Addressee," invalid MCA, etc.

C7.2.***5***.2. Application Identified Errors - Possible Errors. Even with stringent editing performed by the EDI translator, some error conditions will occur which only the more complex application program edits can identify. Such errors could include:

C7.2.***5***.2.1. Invalid item identification.

C7.2.***5***.2.2. Quantity of zero when a quantity is required.

C7.2.***5***.2.3. Invalid DLMS code received in LQ02. ***DS*** 824***R*** applies only when a received ***DS*** fails to comply with the rules/format specified in the ***DS***.

C7.2.***5***.3. Violations of ***DoD*** Business-Process Rules ***for which reject advice codes have been identified***.

C7.2.***5***.3.1. Exceptions. ***DS*** 824***R*** does not apply when specifying violation of a DoD Component or activity business ***policy.***

C7.2.***5***.3.***2***. Reporting. Reporting these types of errors is accomplished through the ***DS*** specified in the ***appropriate*** functional volume. Frequently, the same ***DS*** number used in the erroneous transaction set applies for reporting back the errors.

C7.2.***5***.4. DAASC Receipt and Generation of DS 824***R***

C7.2.***5***.4.1. Processing Data. As ***DAAS*** receives DLMS interchange envelopes it will process the data through an EDI translator and then break the contents down to the transaction level. ***DAAS sha***ll apply applicable DLMS and ***the*** DoD Component edit checks on received transactions.

C7.2.5.4.1.1. If DAAS software detects a nonbusiness-process error, it will reject the transaction back to the sender using ***Federal IC 997***, ***or*** DS 824**R**, as applicable.

C7.2.5.4.1.2. If DAAS detects data errors preventing the correct routing or processing of the transaction, DAASC will reject the transaction back to the originator with a DS 824R containing a narrative message in the NTE segment identifying the error(s) which prevented the routing/processing. DAASC will also use the NTE segment to identify the GS sender identity, the GS control number, and the ST control number.

C7.2.***5.4.2***. Loading Transactions. ***DAAS sha***ll load transactions which do not contain errors into the Logistics Online Tracking System.

C7.2.***5***.4.3. ***Detecting Non-business Process Errors***. Application software which receives data sent from ***DAAS*** and detects nonbusiness-process errors in a transaction shall ***use*** DS 824***R*** to reject the transaction. ***DAAS sha***ll access the transaction identified in the reject and compare the image DAAS received from the originator to the image DAAS retransmitted. If the two images are different, then DAAS will correct the transaction and retransmit it. If the two images are the same, ***DAAS*** will forward the reject to the originating activity.

C7.2.***6***. Levels of Errors

C7.2.***6***.1. Substantial Errors. Organizations receiving DLMS transactions shall ***use*** DS 824***R*** to report errors only when the error is so substantial that the receiving application software cannot process the transaction. The receiving translator (or application software if the translators do not detect the error) shall reject a transaction whenever segment(s) or data element(s) identified as mandatory or required by the ***DS*** are not present. ***(See Chapter 6 of this volume on use of Federal IC 997).***

C7.2.***6***.2. Non-Fatal Errors. Other "non-fatal" errors, such as failing to transmit recommended data elements, that still allow the transaction to be processed, are not subject to reject. Receiving organizations which identify a high number of "non-fatal" errors originating from a single activity shall notify that activity in writing and send a copy of the correspondence to their own, and the offending organization's, functional

area Process Review Committee (PRC) representative and to the ***appropriate DLMS*** PRC Chair.

C7.2.7.3. Optional Data Elements. Segments and data elements listed as optional in ***DSs*** are optional at the discretion of the transmitting activity. The receiving translator or application software shall never reject a transaction based on omission of optional segments or elements.

C8. CHAPTER 8

STANDARDS AND CONVENTIONS

C8.1. GENERAL INFORMATION

C8.1.1. Use of ANSI ASC X12. The DLMS uses the ANSI ASC X12 standards for EDI to exchange DoD Logistics data. The ANSI ASC X12 standards are formally established, maintained, and published under ANSI ASC X12 to provide a common basis for communicating shared business information.

C8.1.2. ANSI ASC X12 Syntax Rules. The ANSI ASC X12 standards define the specific rules of syntax for using EDI constructs and define the universe of components that can be used. However, because the ANSI ASC X12 standards are intentionally designed to be very flexible to meet the needs of a wide variety of users, additional documentation is necessary to define how to use the standards within a specific user community. This documentation is called an IC.

C8.1.3. Implementation Conventions. The ICs further define applicable ANSI ASC X12 TSs used in the DLMS. Within DLMS, DSs to Federal ICs identify and define the segments, data elements, and codes that are used in each IC. Most importantly, the ICs specify rules and formats for the contents of data within the data elements.

C8.1.4. DLMS Supplements to Federal Implementation Conventions. The DSs to Federal ICs are organized by functional area: supply, transportation, finance, acquisition, and maintenance. A list of the supplements is contained in DLMS appendix 6 and can be accessed via hyperlink to the DLMSO home page: http://www.dla.mil/j-6/dlmso/eLibrary/Transformats/X12.asp.

C8.1.5. Code Sources

C8.1.5.1. Deriving Code Values. Code values associated with data elements may be derived from several locations. Many of the applicable code values for DLMS data elements are listed in the DLMS supplements. Three data elements, transportation mode/method code (transportation method/type code), unit of issue (unit or basis for measurement code), and type pack code (packaging code), use conversion guides to convert the DLSS legacy code structure to the ANSI ASC X12 code structure. The DLMS will continue to support other legacy code structures used in the DLSS. Special processing at the point of input provides conversion from DoD code value to ANSI ASC X12 code value for transmission of the TS. Both the sender and the receiver employ the conversion guide so that the user sees only the familiar DoD code values. The DLMS Cross Reference/Conversion Guides are available electronically at the DLMSO WWW page at : ***http://www.dla.mil/j-6/dlmso/eApplications/LogDataAdmin/dlssdlmscrossreftable.asp***.

C8.1.5.2. References to Code Source. For data elements that reference a significant number of code values and all that are applicable to a DLMS application, specific codes may not be listed in the DLMS supplement. In those cases, reference to a code source is provided.

C8.1.6. DLMS Qualifiers. The DSs frequently employ a specific combination of segments and data elements to convey encoded information. The DLMS Qualifiers and Cross Reference/Conversion Guides list approximately 200 DoD standard data elements such as supply condition code, air commodity and special handling code, and management code. The DSs specify which code lists are appropriate. DLMS Qualifiers are available DLMSO WWW page at: ***http://www.dla.mil/j-6/dlmso/eApplications/Logdrms/logview/LQVSearch.asp***.

C8.2. DLMS SUPPLEMENTS TO FEDERAL IMPLEMENTATION CONVENTIONS. The DLMS supplements are presently located on the DLMSO WWW site at http://www.dla.mil/j-6/dlmso/eLibrary/TransFormats/x12.asp and are referenced in distinct volumes which correspond to the functional areas of supply, transportation, acquisition, maintenance, and finance. The DSs address how the standards are implemented. One TS may be used in several different functional areas or repeatedly within the same functional area. Each separate interpretation of the standards according to a specific usage is called an application.

C8.2.1. General

C8.2.1.1. Purpose. Each DS represents a combination of ANSI ASC X12 standards and implementation guidance specific to the DLMS. The manner in which this information is presented is consistent from one application to the next. The format used is derived from the ANSI ASC X12 guidelines for implementing EDI with slight alteration, where necessary, to accommodate the amount of information included.

C8.2.1.2. Structure. Each DS begins with a hierarchy table showing the entire TS. This is followed by a segment hierarchy for each of the segments used by the application.

C8.2.1.3. Segment Hierarchy. The segment hierarchy includes a data element summary with information pertaining to each data element in the segment. In general, information printed in normal typeface is extracted from the ANSI ASC X12 standards and information printed in italics relates to the DLMS implementation of the standards.

C8.2.2. Implementation Notes

C8.2.2.1. Instructions on Use of ANSI ASC X12 Standard. In many instances, exact equivalents are not available to accommodate the mapping of DoD information requirements to the standard. Specific instructions on how a particular

portion of the standard is used under DSs are provided in the form of implementation notes. These notes explain what data may be carried where. They are printed in italics. Notes may be applicable to a transaction set, a segment, a data element, or a specific code value depending upon their placement.

C8.2.2.2. Importance of Notes. The information provided in implementation notes is crucial to understanding the convention. At times, the ANSI ASC X12 data element or code value name has little similarity to the commonly used name for a piece of information. Additionally, an ANSI ASC X12 data element or code value may be used as a surrogate to carry DLMS-required data not otherwise provided for by the standard. It is the implementation notes which explain these circumstances

C8.3. DLMS DICTIONARY/DIRECTORY. ANSI ASC X12 develops uniform standards for electronic interchange of business transactions. The main objective of ANSI ASC X12 is to provide standards to facilitate electronic interchange of general business transactions. The standards are intended to provide a broad range of ICs by trading partners. By agreement between trading partners, ICs are developed to satisfy a specific business interchange. These ICs do not incorporate the full range of allowable business information in a TS but tailor the configuration of the TSs to identify selected data segments and data elements essential to the business interchange. The DoD logistics community has exercised similar judgment in developing and defining DSs. The DLMS Dictionary/Directory is an extract of the ANSI ASC X12 Dictionary/Directory and reflects only those DSs, data segments, and data elements authorized for use in the DLMS data interchange processes. The DLMS Dictionary/Directory is available on the DLMSO WWW page at: ***http://www.dla.mil/j-6/dlmso/eApplications/LogDataAdmin/dlmsdicdir.asp***.

AP1. APPENDIX 1

INSTRUCTIONS FOR PREPARATION OF PROPOSED DLMS CHANGES

DoD Components shall submit proposed DLMS changes in the format illustrated in this appendix and in accordance with the entry instructions provided below. Refer to C5.4 of this volume for additional information concerning submission and processing of change requests.

AP1.1. ORIGINATOR

AP1.1.1. DoD Component. Identify the Service or Agency submitting the change request.

AP1.1.2. Originator. Identify the person who can discuss the concepts, needs, and the rationale underlying the proposed change. Include the name, organization and office symbol, and commercial telephone number, as a minimum. Include Defense Switched Network number, data facsimile number, and electronic-mail address, when available.

AP1.2. FUNCTIONAL AREA

AP1.2.1. Primary. Identify the DLMS functional area[1] whose systems, policies and procedures are most affected by the change.

AP1.2.2. Secondary(ies). Identify any other functional area(s)[1] which may be affected by, or have an interest in, the problem or the requested change.

AP1.3. REQUESTED CHANGE

AP1.3.1. Title. A brief, descriptive title for the change requested.

AP1.3.2. Description of Change. A brief description of: (a) the fundamental problem or issue this change seeks to resolve; and (b) the change requested.

AP1.3.3. Procedures. Identify changes needed to DLMS publications to support this proposed change and provide the specific wording for the needed changes. Include changes to the DLMS manual procedural text, implementation conventions, and other related appendices, as well as the relevant dictionaries (transaction set, segment, data element, and code value).

[1]Acquisition (Contract Administration), Financial, Maintenance, Supply, or Transportation.

AP1.3.4. Alternatives. Identify and discuss alternate approaches to resolving the problem or issue.

AP1.4. REASON FOR CHANGE. Provide background and support for the problem or issue this change attempts to resolve. Elaborate on the need for the change and place the problem in a context which allows evaluators, who are generally familiar with the process, to understand the full impact of the problem or issue and the impact of maintaining the status quo.

AP1.5. ADVANTAGES AND DISADVANTAGES

AP1.5.1. Advantages. Identify both tangible and intangible benefits expected from adoption of the change. Include benefits both within and beyond the primary functional area of the DLMS, especially benefits accruing to the DoD. Address what happens if nothing is done. Quantify both tangible and intangible benefits and advantages. Show computation of dollar values. Demonstrate why the proposed solution is more advantageous than the alternatives.

AP1.5.2. Disadvantages. Indicate known or potential problems and costs associated with the proposal. Consider disadvantages both within and beyond the primary functional area of the DLMS. Quantify both tangible and intangible costs and disadvantages. Show computation of dollar values.

AP1.6. IMPACT

AP1.6.1. Transaction Set(s). Identify transaction sets which will be added, revised, or deleted as a result of this change.

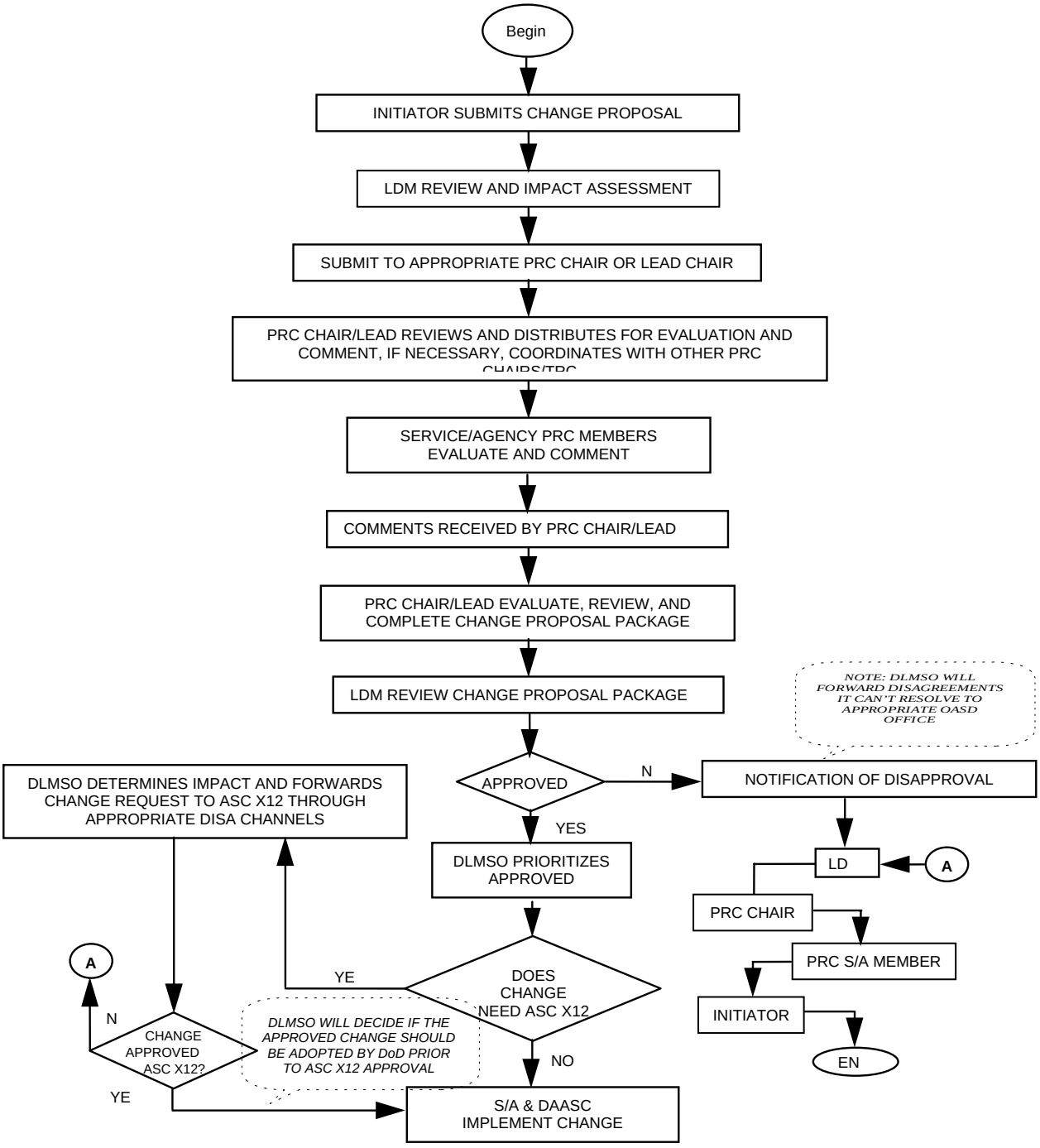
AP1.6.2. Segment(s). Identify segments which will be added, revised, or deleted as a result of this change.

AP1.6.3. Data Element(s). Identify data elements which will be added, revised, or deleted as a result of this change. Include those data elements wherein code values will be added, deleted, or revised.

AP1.6.4. Publication(s). Identify other DoD publications which will need to be revised to remain compatible with the DLMS. Include suggested wording changes.

AP2. APPENDIX 2

DLMS CHANGE PROCESS FLOW CHART



AP3. APPENDIX 3.

DLMS COMPLIANCE

AP3.1. Determination of DLMS Compliance**.** DLMS is the collective body of policy, procedures, business rules, data and information exchange standards that are documented in DOD 4000.25-M and any approved DLMS changes (ADCs) published and posted to the DLMSO Web site subsequent to the latest publication date of DOD 4000.25-M.

AP3.2. Non-Compliant DLMS Systems. Non-compliant systems interface with other systems in the accomplishment of the business processes covered by DOD 4000.25-M, but have not been designed to the DLMS, and have no current plans to implement the DLMS, or have plans to implement DLMS but have not started doing so.

AP3.3. Limited Compliant DLMS Systems. Limited Compliant DLMS Systems interface with other systems in the accomplishment of the business processes covered by DOD 4000.25-M, have not fully implemented the DLMS, but have begun doing so, and have detailed plans and actions ongoing to reach full DLMS Compliance.

AP3.4. Full Compliant DLMS Systems. Systems that interface with other systems in the accomplishment of the business processes, policy, procedures, business rules, and data that are documented in DOD 4000.25-M, have implemented the DLMS information exchange standards (e.g., DLMS Supplements to ASC X12 EDI and DLMS XML Schema Documents) as published in DOD 4000.25-M, and all approved DLMS ADCs by their respective required implementation dates.

AP3.5. Full Business Rule and Business Process Compliance. DLMS Compliance is a statement which identifies whether a business rule and business process either conforms or is compatible with a DLMS Business Rule and Business Process. DLMSO will continue to post the only approved DLMS Business Rule and Business Process on its website and its manuals.

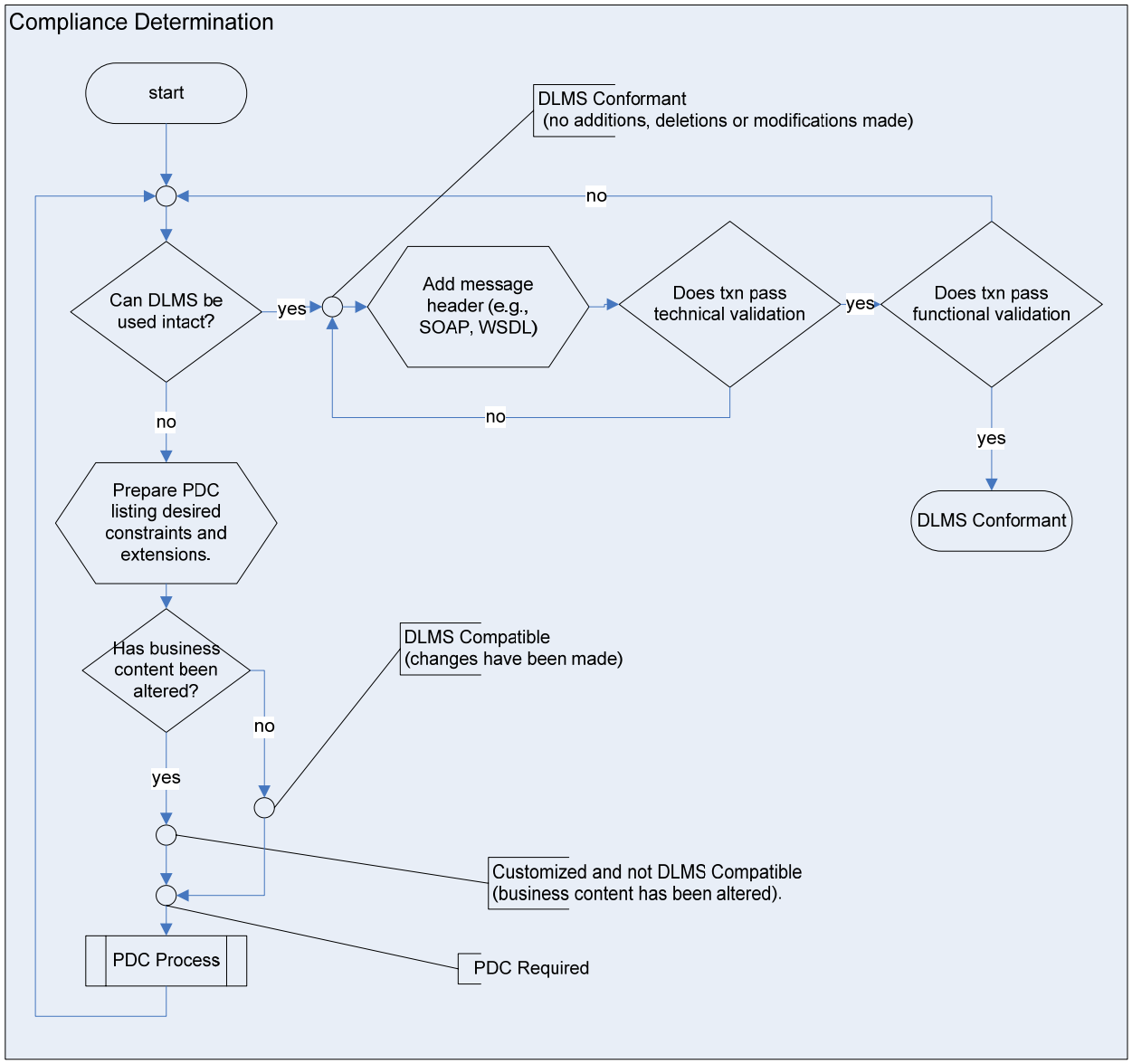


Figure A3.F1 - DLMS Compliance Decision Tree for Business Processes

AP3.6. Conformance. A conformant process (Figure A3.F1) is a set of business rules executed in a predefined sequence to achieve a business objective that is used as approved by DLMS Manuals and Supplements without change. A conformant business rule is an explicit statement of one or more conditions that must or must not be met within a business context that is used as approved by DLMS Manuals and Supplements without change

AP3.7. Compatibility. A compatible process (Figure A3.F1) is a set of business rules executed in a predefined sequence to achieve a business objective that extends or constrains a DLMS Business Process yet is consistent with DLMS Manuals and Supplements. A compatible business rule is an explicit statement of one or more conditions that must or must not be met within a business context that extends or constrains a DLMS Business Rules yet is consistent with DLMS Manuals and

Supplements. If a system or program manager identifies her system is compatible, she must identify what extensions or constraints have been made. DLMSO will make a determination which extensions or constraints get added to the standard. DLMSO is not responsible for generating the associated Proposed DLMS Change (PDC).

AP3.8. Full Compliant Instances. Systems will likely include multiple transactions of which only a handful of the transactions are within the scope of DLMS; therefore, this document will focus on applicability to transactions, documents, instances and any informational exchange messages (hereafter referred to inclusively as instances). DLMSO also does not have the resources to determine which instances are compliant; instead, DLMSO provides the criteria for systems and program managers to self certify that their transactions, documents, instances or informational exchange messages are compliant. Compliance will ultimately be proven when information is exchanged and it passes both functional and technical validations.

AP3.8.1. DLMSO is committed to using commercial standards as applicable and therefore participates in ASC X12, OASIS and UN/CEFACT. Conformance, compliance or compatibility with ASC X12, ISO, OASIS, UN/CEFACT, or Service / Agency does not infer conformance, compliance or compatibility with the DLMS standard. Nor does conformance, compliance or compatibility with the DLMS standard infer conformance, compliance or compatibility with the ASC X12, ISO, OASIS, UN/CEFACT, or Service / Agency standards.

AP3.8.2. DLMS compliance is a statement which identifies whether an instance either conforms or is compatible with a DLMS schema. DLMSO will continue to post the only approved DLMS schemas on its website and the DoD Metadata Registry.

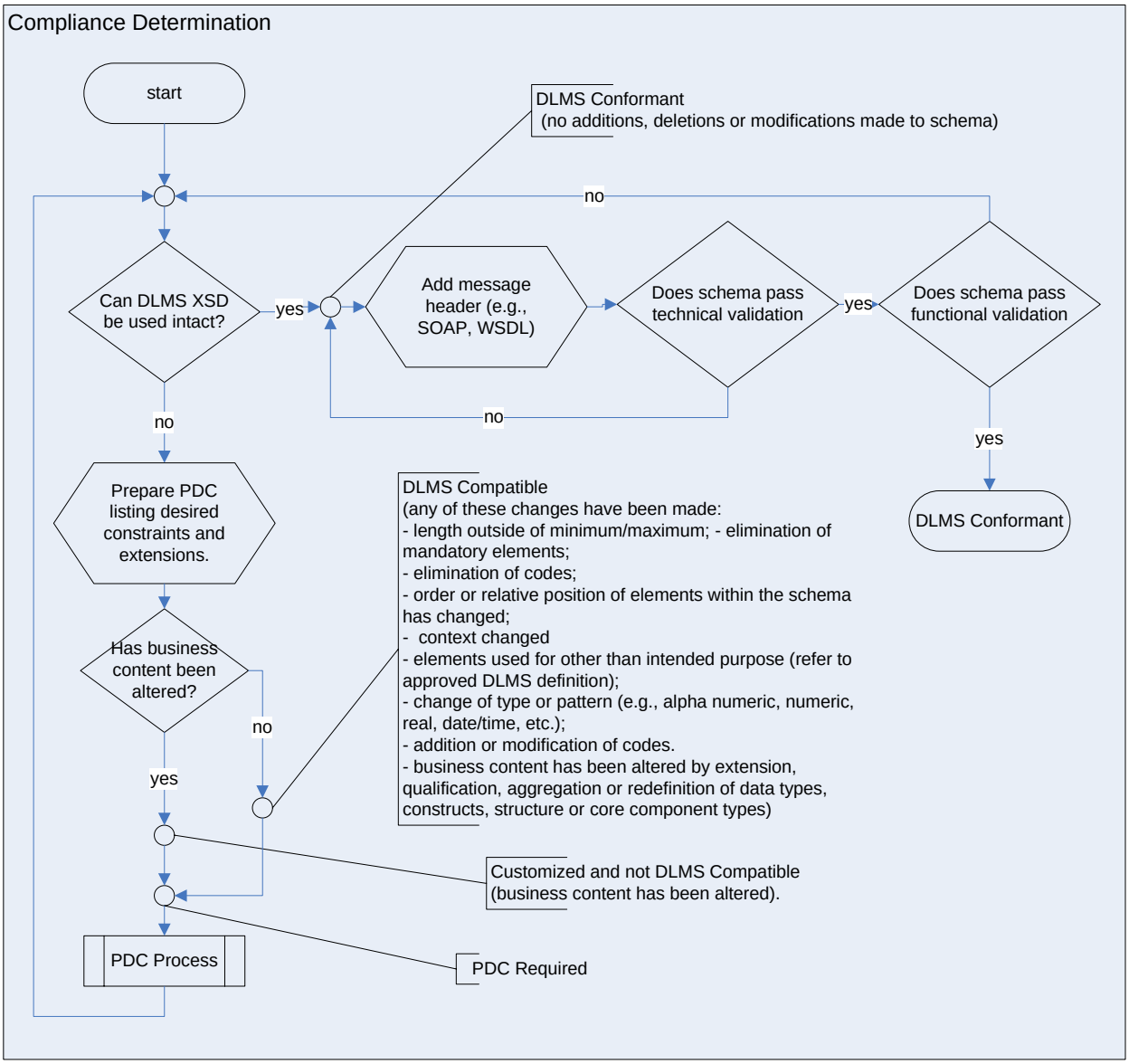


Figure A3.F2 - DLMS Compliance Decision Tree for Transactions

AP3.9. Conformance. A conformant instance (Figure A3.F2) is a transaction, document, XML instance or informational exchange message that uses an approved DLMS schema without change.

AP3.10. Compatibility. A compatible instance (Figure A3.F2) is a transaction, document, XML instance or informational exchange message that uses a modified DLMS schema by adding elements that are not identified in the DLMS model and/or eliminating optional elements. If a system or program manager identifies her system is compatible, she must identify what extensions or constraints have been made. DLMSO will make a determination which extensions or constraints get added to the standard. DLMSO is not responsible for generating the associated DLMS PDC.

AP3.11. Customization

AP3.11.1. Addition of Physical Metadata. It is DLMSO's intent to create schemas that can be used universally; DLMSO does not include message headers such as Simple Mail Transport Protocol (SMTP), Simple Object Access Protocol (SOAP) or Web Services Description Language (WSDL) in its schema. The message header is used to identify physical metadata associated with extraction of data from a system. The addition of this physical metadata is allowed as part of the message header as long as business content carried in the payload (or message body) is compliant with DLMS schema as described in the Conformance and Compatibility paragraphs of this document.

AP3.11.2. Business Content Metadata. Extensions or constraints to a transaction, document, XML instance or informational exchange messages are allowed but must be identified as stated in compatibility paragraph of this document. Modifications to business content which are not allowed include: changes of length outside of minimum/maximum; elimination of mandatory elements or codes; changing order or relative position of elements within the schema; changing context or using elements for other than intended purpose (refer to approved DLMS definition), change of type or pattern (e.g., alpha numeric, numeric, real, date/time, etc.); addition or modification of codes; alteration by use of namespaces, code lists, extension, qualification, aggregation or redefinition of data types, constructs, structure or core component types for the purpose of redefining content or elimination of mandatory elements is not allowed. Supplementing the DLMS standard is allowed provided business content has not been altered and the supplemental content is coordinated with DLMSO under a DLMS change.

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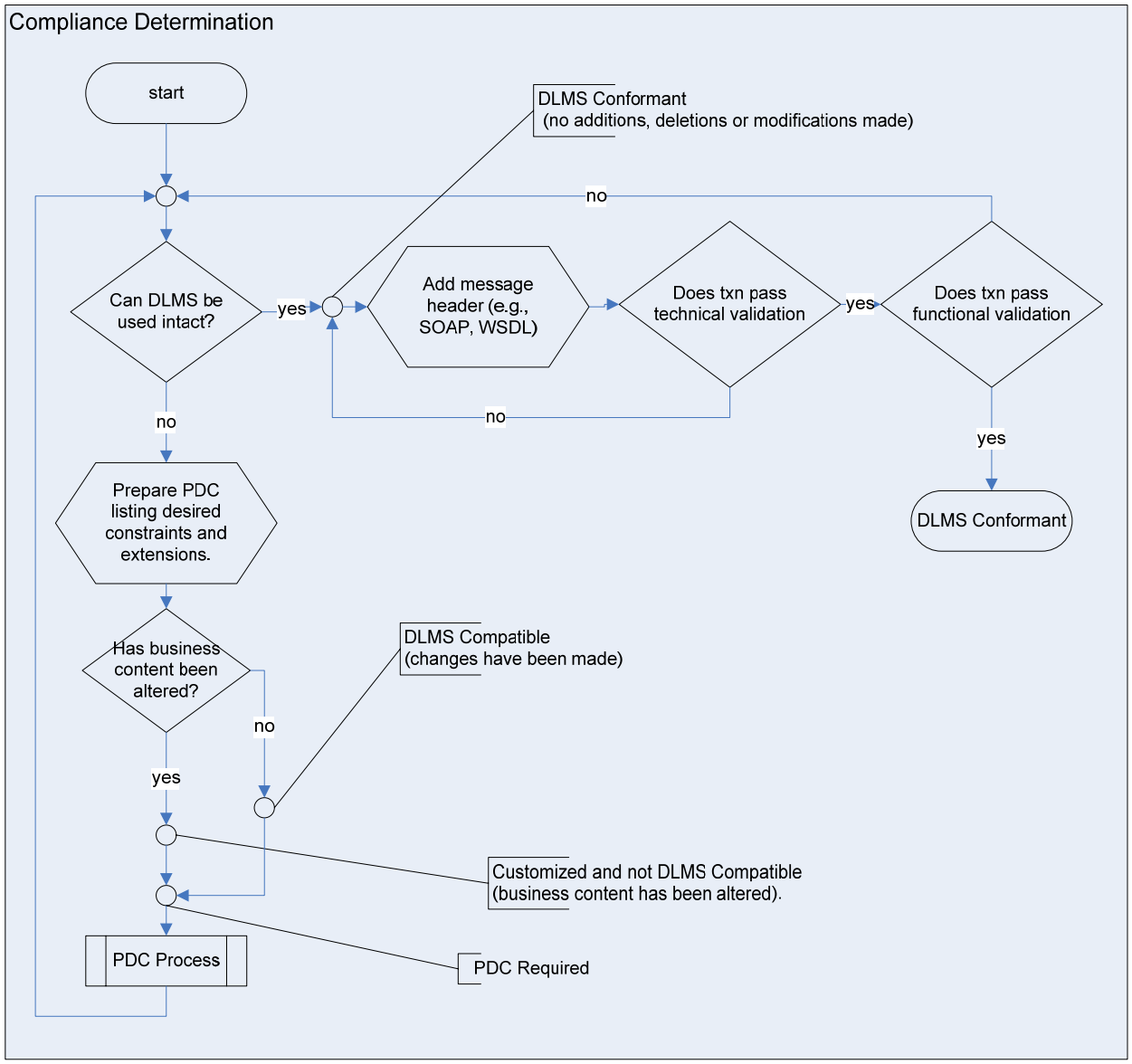

Figure A3.F1 - DLMS Compliance Decision Tree for Business Processes

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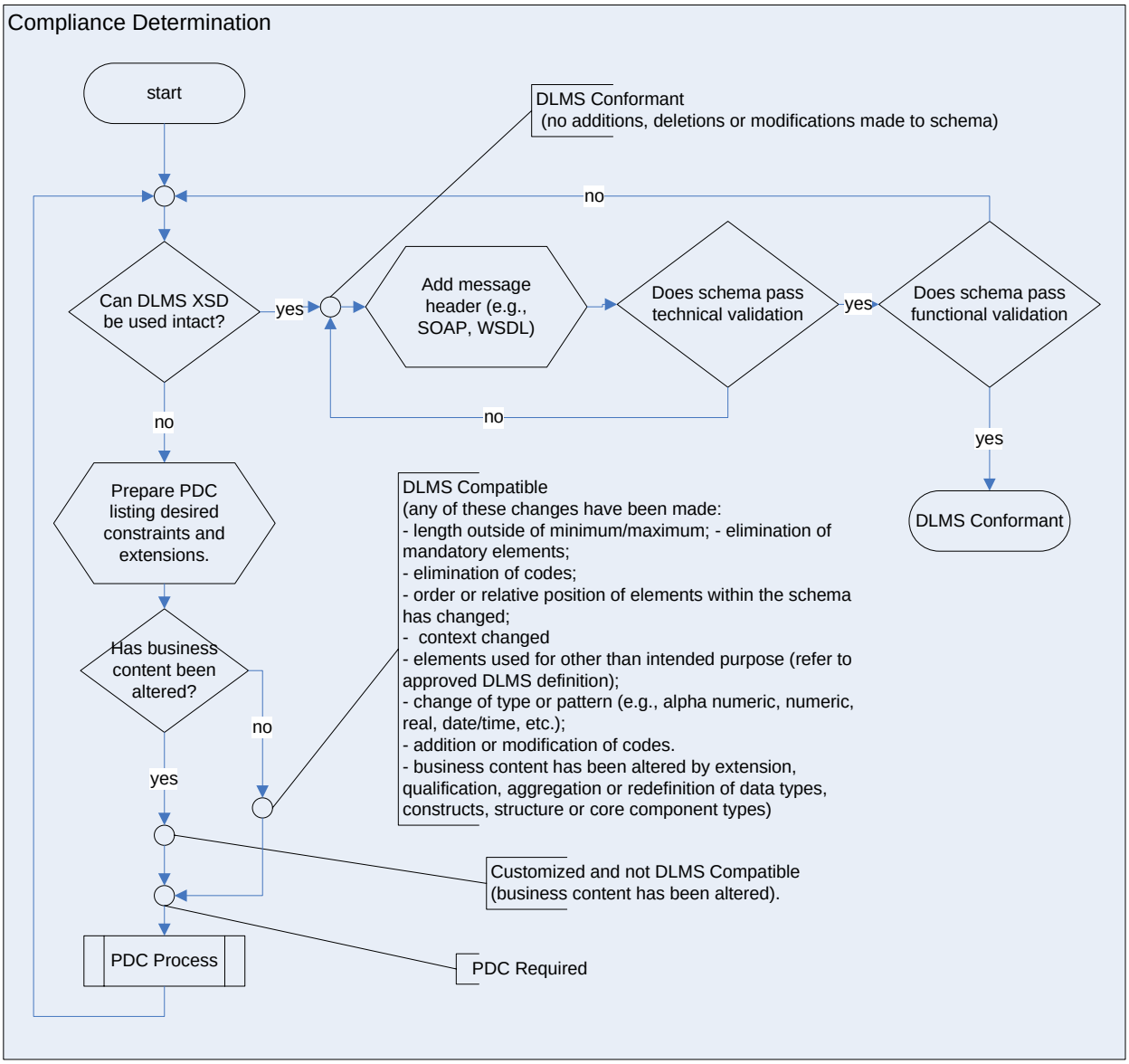

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