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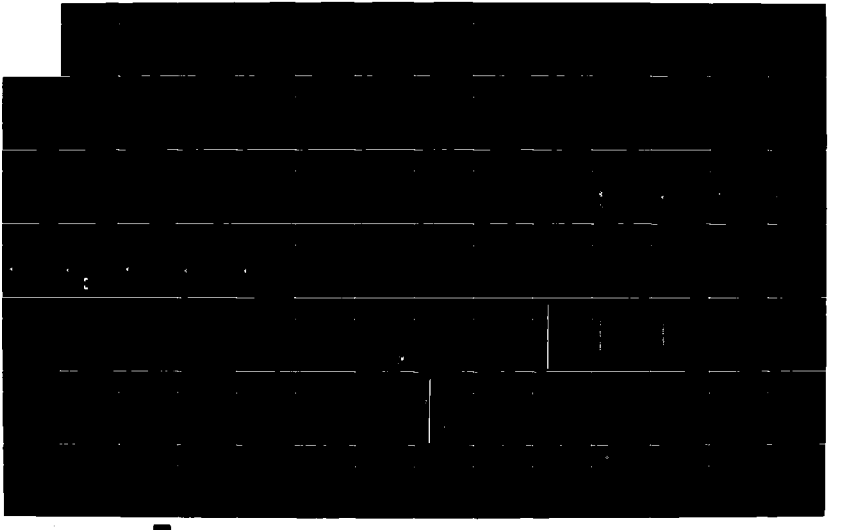

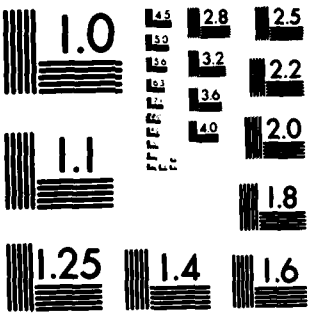

(12)

REPORT OF THE PROCEEDINGS OF THE

DOD AUTOMATED STANDARDIZATION WORKSHOP

AT THE SHERATON NATIONAL HOTEL, ARLINGTON, VA.

MAY 12-13, 1986

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N00140-85-D-E034

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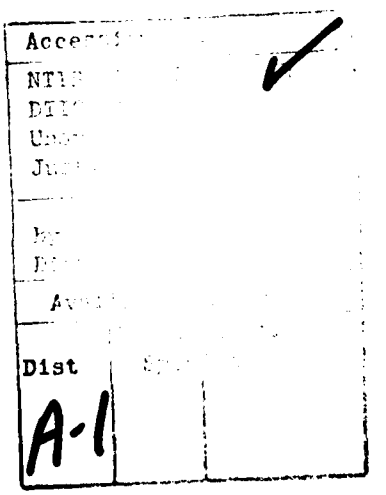
FOREWORD

This publication provides a Report of the Proceedings of the DOD Automated Standardization Workshop held on May 12-13, 1986. Appreciation is expressed to the Systems Engineering and Standardization Department, NAEC, Lakehurst, N.J., for their support in this undertaking. Material used in the preparation of this Report was assembled and compiled by Kilkeary, Scott and Associates, Inc., 2009 North 14th Street, Arlington, VA. 22201

RE: FOUO, Page 80
Page 80 is a sample page. Delete the FOUO.
Per Mr. Lee Rogers, PSPO



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REPORT OF THE PROCEEDINGS OF THE
DOD AUTOMATED STANDARDIZATION WORKSHOP
AT THE SHERATON NATIONAL HOTEL, ARLINGTON, VA.
MAY 12-13, 1986

PURPOSE AND OBJECTIVES:

By letter dated February 19, 1986, the Director, Standardization and Data Management (SDM) OASD (A&L), advised the DOD agencies of an on-going study of existing computer systems and data bases used to support participation in the Defense Standardization and Specifications Program. The study was particularly focused on systems and data bases dealing with the identification of successive levels of references within specifications, standards and other acquisition documents, as well as those used in the preparation, identification, management, and maintenance of these documents and their utilization in the acquisition process. The purpose of the study was to determine the degree of commonalty between existing systems, whether any of them could be used by other activities, and whether any could be used in conjunction with the acquisition streamlining process. Addressees were requested to identify any data base falling within the established criteria and provide a short description of it for staff review. Their responses are included as the first page of each System presentation.

After review of the responses to that letter, selected agencies were requested to attend this workshop to discuss their systems in greater detail and to offer recommendations regarding their potential application and use on a broader DOD wide basis.

ORGANIZATION, STRUCTURE, AND ATTENDANCE:

The first day and a-half of the workshop consisted of presentations by agency representatives describing their data base(s) with follow-on questions and answers. The latter part of the second day was spent in general discussion and the development of recommended actions, which are provided later in this report. The agenda for the meeting is at attachment 1.

There were 52 participants in the workshop, including representatives from OASD (A&L), the Army, Navy, Air Force, DNA, and interested industry concerns. A list of the workshop participants is at attachment 2.

The workshop was co-chaired by Messrs Lee Rogers and Gregory Saunders, Senior Staff Engineers from the Defense Standardization Program Office.

OPENING REMARKS:

In his informal opening remarks, Mr. Peter Yurcisin, Director, Standardization and Data Management, (OASD (A&L) welcomed the participants and thanked them for their interest in this study. He discussed the background leading up to the initiation of the study and commented on efforts by some of the agencies in developing data bases to support the acquisition process and to provide better visibility over activities involved in the Defense Standardization and Specification Program. He emphasized the importance of this workshop and his interest in capitalizing on those existing systems and data bases that may enhance the acquisition process, streamlining initiatives, and management of standardization

program activities. He also emphasized the interest expressed by the Congress in DoD's efforts to more efficiently control and utilize information already at its disposal, through the use of automated techniques. In his remarks, Mr. Yurcisin also described his recent experiences in international standardization, particularly with AC/315, NATO Standardization Group. He went on to describe the emphasis placed by that group on the need for a comprehensive international standardization data base in order to better manage the myriad of on-going standardization activities, to avoid duplication of effort, to establish priorities, to measure progress and to improve planning and programming in the international standardization arena. Mr. Yurcisin also emphasized the need for the standardization community to take a more active role in the acquisition process and to look for ways in which existing data bases and the information in them can be expanded to support other users and be made more readily available to those involved in the acquisition system.

PRESENTATIONS:

A synopsis of each presentation follows in this order:

Automated Specifications and Standards Information System (ASSIST)
Computerized Standardization Search System CS^3
Computer-Assisted Ship Specification System (CASS) and Specification Improvement Program Information System (SIPIS)
Computer Generated Acquisition Documents System (CGADS)
Technical and Managerial Support Environment/DOCWRITER (TEMSE/DOCWRITER)
Automated Engineering Documentation Preparation System (AEDPS) and MICOM Integrated Documentation and Standardization System (MIDAS)
Technical Data/Configuration Management System (TD/CMS)
The Adequacy and Assignment (A&A) Index
Engineering Criteria Management System (ECM) and Automated Facility Engineering Information System (AFEIS)
The Army Specifications and Standardization Computer System (DEPSOMIS)
The DOD Index of Specifications and Standards (DODISS) and Navy Print on Demand System (NPODS)

Following the DOD presentations, Information Handling Services and Ziff Technical Information Company presented an overview of services available from their companies, and discussed their ability to support the DOD within the areas of their expertise.

Automated Specifications and Standards Information System (ASSIST). Presented by the Naval Air Engineering Center, Lakehurst, NJ

This data base and information retrieval system is located at the Naval Air Engineering Center, Lakehurst, N. J. The data base presently includes all DODISS information on approximately 32,800 Military and Federal Specifications Standards and other standardization documents, together with all of each documents primary references. There are an additional 10,000 documents in the base for which all data except primary references are included.

The system will provide a variety of management information on specifications and standards and other standardization documents; will provide greater visibility over documents to be invoked by reference in the acquisition process; will provide support to the acquisition streamlining process and will improve the currency, accuracy and management of standardization documents.

The system can provide support to a variety of users, including standardization program managers, standardization document engineers, system document engineers, acquisition manager, and supply managers. The following information is included for each document in the base: document number, issue indicator, date, document type, title, all primary references, FSC/AREA Class, validation date, status, agency interest, and QPL requirement.

Preformatted output reports include the following: Specification Tree (Pyramid), Reference List, Keyword Index, QPL Requirement, Overage Documents, Alphabetical Index, Documents as Preparing Activity, Interest Other than Preparing Activity, Cancelled Documents, Age and Cog Code, and Referenced by Other Documents (Ref by). Other reports to be added include Non-Government Documents, Metric Documents and High Cost Driver.

ASSIST is a multi-user system. There is presently limited access to the system, using a 300/1200 Baud Voice Grade telephone line link. It does not have AD Hoc query capabilities. It is a data processing system residing in an IBM 4341 mainframe computer at NAEC.

The point of contact for this system is Mr. Thomas J. Marchesani, Naval Air Engineering Center, SESD-93, Lakehurst, NJ 08733-5100, telephone A/V 624-7429 or A/C 202-323-7429. A copy of the presentation is at attachment 3.

Computerized Standardization Search System (CS^3). Presented by Army Materials Technology Laboratory, Watertown, MA.

The CS^3 data base is located at the Army Materials Technology Laboratory, Watertown, MA. The system was established for the storage, retrieval and analysis of specifications data on a variety of materials such as ferrous and non-ferrous metals, plastics, composites, ceramics, rubber products, finishes, and adhesives as well as materials related processes and test methods. The data base presently stores information and data from over 4300 materials and materials related specifications, standards and other standardization documents covering 543 federal supply classes.

The system enables searches on text and date fields within interrelated groups of documents, test methods, requirements, cross reference material, referenced documents, or other salient information contained within the body of a specification or standard. The system is used in the preparation of new materials or materials related specifications and standards and for the maintenance of existing documents. The system also provides information concerning standardization accomplishments and performance, supports the overage document review and validation program, and is used to prepare standardization program plans and annual and periodic standardization reports.

System hardware used to store the data base is a Digital Equipment Corporation VAX 11/780 computer which is accessed in a time shared environment through multiplexed video terminals which share logic through a single communications circuit. CS^3 was developed as an application of the DRS management element. It contains a unique command language allowing users to query and update the system and provides two interactive modes of operation: an automatic menu driven mode, designed for ease of use and a manual mode which provides maximum retrieval flexibility and reporting facilities. The system may be accessed in a multi-user environment.

The point of contact for this system is Ms. Kathy Bamberg, U.S. Army Materials Technology Laboratory, SCLMT-MSR-ES, Watertown, MA., 02172-0001, telephone A/V 955-5567 or A/C 617-923-5567. A copy of the presentation is at attachment 4.

Computer-Assisted Ship Specification System (CASS) and Specification Improvement Program Information System (SIPIS). Presented by Naval Sea Systems Command, Arlington, VA.

The CASS system is located at the Naval Sea Systems Command, Arlington, VA. It is a living version of the "General Specifications for Ships of the United States Navy" (GENSPECS), which is the Navy's generic ship "building code" -published once a year. It is also a source for development of the initial version of a specific ship's specification. The "Gen Specs" provide system level requirements for ship acquisition, provide standard requirement/texts, provides Ship Work Breakdown Structure format and at the present time contains some 2500 reterenced documents. A separate program compiles a list of these referenced documents and identifies the "Gen-Spec" section or sub-section where the references are used. This list is then used to monitor the status of each document and to identity potential problem references.

Users of the system include NAVSEA engineers, line managers, ship design managers, and ship acquisition managers. The system is presently stored on a remote IBM-3033 mainframe, to be transitioned to an in house IBM-3083 in the near future. It has multi-user capability and remote access through 1200 baud dial-up using YTERM software from IBM PC.

The SIP management information and retrieval system, also located at NAVSEA, is designed to provide a variety of information concerning documents critical to NAVSEA acquisition programs. These documents include Military and Federal Specifications and standards, NAVSEA Standard Drawings, Design Data Sheets, and other miscellaneous documents. Information for each document in the base includes number, title, type document, issue/revision, FSC Class, date, validation date, status (current, or revision required), NAVSEA interest, and cognizant code. Milestones are provided for documents under revision.

Users of the system include NAVSEA engineers, line managers, ship design managers and ship acquisition managers. Output reports provide a listing of all documents of interest to NAVSEA (with the elements of data cited above), which are used as a means of control of spec-related work and to determine the status of documents to be used in procurement. The system is presently stored on a remote IBM-3033 mainframe, to be transitioned to an in-house IBM 3083 in the near future. It has multi-user capability and remote access through 1200 baud dial-up using YTERM software from IBM PC.

NAVSEA is also developing a specification referencing (spec-tree) system using an adaptation of the "ORACLE" DBMS, to be made a part of the CASS and SIP data bases.

The point of contact for this system is Mr. Norman J. Griest, Naval Sea Systems Command, SEA-5522, Washington, DC, 20362, telephone A/V 222-0490 or A/C 202-692-0490. A copy of the presentation is at attachment 7.

Computer Generated Acquisition Documents System (CGADS). Presented by AFSC, Electronics Systems Division, Hanscom AFB. MA.

This data base is located at the AFSC Electronics Systems Division, Hanscom AFB, Ma. The data base is used to prepare drafts of system acquisition and management documents such as Statements of Work (SOW) and Contract Data Requirements Lists (CDRL) for each phase of the development cycle, production and deployment, Reliability Centered Maintenance (RCM) Analysis, Multi-year Affirmative Action Program Mini-Plans, Program Management Plans, Acquisition Plans, and Test and Evaluation Plans (TEMP). The system is designed to standardize, simplify, and automate the preparation of Requests for Proposals.

The data base stores the paragraph text of tasking type documents such as Military Specifications and Standards and applicable Data Item Descriptions (DIDS). Through the use of a menu and simple prompting questions it will select and print in SOW format the specific paragraphs of each tasking document required to be imposed. Through the process of selectively applying specific paragraphs from each tasking document and its DIDS, tailoring of the SOW and/or the RFQ is achieved and its format standardized.

Primary users of this system are acquisition/procurement offices, including engineering, reliability and maintainability, configuration and data management and logistics. It also assists standardization managers by carrying out the tailoring process during the preparation of the SOW.

The system is stored on a VAX 11/780 computer. Remote access is available, using conventional AUTOVON or commercial telephone lines. A VT-100 or compatible remote terminal is required. The system has DOD wide application and is now used by the Air Force, Army, Navy and other government agencies. Future enhancements include the addition of other output products such as Task Orders, Source Selection Factors and Standards, Instructions for Preparation of Proposals, System Specifications, and Operation and Maintenance RFPs.

The point of contact for this system is Mr. Richard O'Neil, AFSC Electronics Systems Division, ESD/PLEA, Hanscom AFB, MA., 01731, telephone A/V 478-2843 or A/C 617-377-2843. A copy of the presentation is at attachment 5.

Technical and Managerial Support Environment/DOCWRITER (TEMSE/DOCWRITER). Presented by AFSC, Space Division, Los Angeles, CA.

This data base is located at the AFSC Space Division, Los Angeles, CA. The system is an automated data base which assists technical specialists in writing structured documents and managing project-related information. It provides a disciplined environment for preparing system specifications, Statements of Work (SOW), Contract Data Requirements Lists (CDRL) and other structured documents used in acquisition and for capturing information related to each requirement or task contained in those documents. The system is an integrated word processor, a Data Base Management System, and report generator. It is used to author and manage structured documents, as a repository for corporate knowledge, and to train acquisition managers.

The system provides a pre-established outline for each document that it produces, for example, a specification structure based upon MIL-STD-490, a SOW structure based upon a format developed by the Space Division. It provides tutorial information on how to write the document and offers additional information associated with each requirement and task, such as its source, justification, traceability to higher level specifications and other source documents, test/verification methods, and the like.

DOCWRITER has a hierarchical structure, having four major functions. These are:

o The tutorial function, which encompasses information on acquisition management, on writing the SOW, CDRL and WBS documents, and on operating the system.

o The operate function, where the document creation and writing takes place.

o The browse function, where the user may view but not alter the contents of the data base.

o The reports function, where reports are requested.

The system operates on IBM 3278 and IBM 3279 terminals. It is a multi-user system and can be accessed remotely with ASCII terminals via commercial telephone lines.

The point of contact for this system is Mr. Gerald Hyman, AFSC Space Division, SD/AL, P.O. Box 92960, Worldway Postal Center, Los Angeles, CA., 90009-2960, telephone A/V 833-0831 or A/C 213-643-0831. A copy of the presentation is at attachment 6.

Automated Engineering Documentation Preparation System (AEDPS) and MICOM Integrated Documentation and Standardization System (MIDAS). Presented by the Army Missiles Command, Huntsville, AL.

The AEDPS system is located at the Army Missile Command, Huntsville, AL. It is designed to provide Military Specification Exception (MSE) documents to be used together with an existing military specification for the procurement of non-standard parts. AEDPS takes advantage of the fact that most special or unique application items call for relatively minor exceptions to an existing military specification. By following the procedures prescribed in DOD-STD-35 and inputting the selected codes and values required, the user can have the computer prepare an exception document that is ready for use in procurement. Information presently stored in the computer includes standard text paragraph data and DOD-STD-35 codes used to prepare an MSE for any one of 124 families of parts; codes and values used in the preparation of all existing MSE's; user data; sources of supply including manufacturers part number, name, and FSCM; management information data; document designation including date and references; and tracking and control data.

System users include every major contractor and sub-contractor that the Army Missile Command is involved with, every project/commodity manager at Redstone Arsenal and the MICOM standardization activity. Sources for data included in the base are user generated requirements, DODISS, CDRL, and delivery extraction data including Engineering Change Proposals, drawings and specifications.

The MIDAS system is a management information and reporting system used to capture, manage and manipulate the large amounts of data derived from and used in support of all MICOM contracts. It provides a greater degree of awareness and control in the management of Standardization, Parts Control, and Engineering Documentation. The system has 18 major data files including topics such as non-standard parts, missile specifications, common item drawings, GIDEP, automated item reduction, drawing control, engineering document data, document number assignments, nomenclature recording and reporting, standardization document project recording and reporting, and AEDPS. The system is stored on a Honeywell Level 6 Model 57 computer having remote access and multi-user capability.

The point of contact for these systems is Mr. Jerry Nabors, U.S. Army Missile Command, AMSMI-SE-TD-ST, Redstone Arsenal, AL., 35898-5276, telephone A/V 746-1335 or A/C 205-876-1335. A copy of the presentation is at attachment 11.

Technical Data/Configuration Management System (TD/CMS). Presented by Belvoir Research and Development Center, Fort Belvoir, VA.

The TD/CMS system is located at the Army Belvoir Research and Development Center, Fort Belvoir, VA. It was designed to maintain an integrated digital data base of technical data in support of engineering and procurement actions and provide identification, control and status accounting functions for engineering documentation, i.e., Configuration Management. Source documents which comprise the Technical Data Package (TDP) and provide input to the system include: engineering drawings, parts lists, Military, Federal and Industry Specifications and Standards, Engineering Change Proposals, Deviations, Waivers, Specification Change Notices and Notices of Revision. Data elements in the base include document identification data, revisions, nomenclature, manufacturers part number, Federal Supply Code for Manufacturers (FSCM), document size and number of sheets.

System users include design and production engineers, standardization and procurement offices, configuration management personnel and data repository staff. Output reports include over thirty user requested reports and over thirty other reports used for quality control of data and the system. These reports pinpoint problem areas, identify missing documents, identify erroneous data, identify action necessary to finalize a data package for procurement, and identify engineering change action required. The most important aspect of the TD/CMS is its capability to ensure that documentation is complete and that the changes are identified, thus allowing TD/CMS to maintain the baseline technical documentation, track changes, generate status reports, and update the baseline for new procurement.

The system is presently housed on a CDC Cyber 835 computer, to be transferred to an IBM 4341 in the near future. It is a single user or batch processing system. Remote access is available for data input and system support via telephone line communication link from terminals with modems.

The point of contact for this system is Mr. Richard H. Goehner, U.S. Army Belvoir Research, Development, and Engineering Center, STRBE-TC, Fort Belvoir, VA., 22060-5606, telephone A/V 354-5789 or A/C 703-664-5789. A copy of the presentation is at attachment 9.

The Adequacy and Assignment (A&A) Index. Presented by the Army Troop Support Command, Natick Research and Development Center, Natick, MA.

This data base and information retrieval system is located at the Natick Research and Development Center, Natick, MA. The system was designed to identify and provide the current status of all technical data packages for which the Center is responsible, together with related items of supply, and standardization, i.e., engineering drawing numbers, NSNs, standards and handbooks. The technical data package consists of a basic document and all applicable amendments, deviation lists, notices, supplements, engineering drawings, and etc. The technical data package does not include subsidiary reference documents.

The data stored for each document includes: FSC Class, item material manager, Center cognizant code, document age, ADCOP designator, engineering support requirements, validation for procurement, referenced drawings, NSNs, active project assigned for updating, and document responsibility, i.e., PA, Custodian or MCA. The primary purpose of the A&A Index is to indicate to the responsible DOD procurement activity the current data elements that make up each TDP and to indicate which TDPs are valid for use in immediate procurement. The secondary purpose is to provide visibility over and current status of all TDPs assigned to the Center as preparing activity, military coordinating activity, or Army Custodian.

The A&A Index serves as a multi-purpose management tool, i.e., inventory access, ready identification, current status, and procurement support. Procurement Centers/Activities are furnished separate updated monthly reports on the current status of TDPs prepared by Natick for items for which that Center/Activity has procurement responsibility.

The point of contact for this system is Mr. D. E. Luppino, U.S. Army Natick Research, Development and Engineering Center, U.S. Army Troop Support Command, DEPM, Natick, MA., 01760-5014. Telephone A/V 256-5221 or A/C 617-651-5221. A copy of the presentation is at attachment 12.

Engineering Criteria Management (ECM) System and Automated Facility Engineering Information System (AFEIS). Presented by the Naval Facilities Engineering Command, Alexandria, VA.

The ECM system is located at the Naval Construction Battalion Center, Port Hueneme, Calif., and is managed by the Naval Facilities Engineering Command, Alexandria, VA.

The system is a management information system used to manage the development and revision of all facilities engineering and design criteria documents produced or used by NAVFAC. It is an inventory of NAVFAC criteria and a plan for criteria update. The main objectives of the system are to determine criteria requirements, to plan and execute the Navy's Facility Construction Program, to maintain the status of all criteria documents, to track scheduled and actual document preparation milestone dates and to monitor progress of planned versus actual performance.

The ECM system manages an inventory of over 300 NAVFAC Guide Specifications, 700 Military and Federal Specifications and Standards, 150 Standard Drawings, 130 Design Manuals and Publications, and over 550 Definitive Drawings. The system is an on-line, interactive MIS, written in COBOL and resident on an IBM 4300 series computer at Port Hueneme, CA. The data base is accessed via remote terminals located at the EFD's and NAVFAC headquarters and allows direct access for updates and verification and to queue reports to the remote printer. It is intended that this system will be integrated with the Automated Facility Engineering Information System (AFEIS), a description of which follows.

The AFEIS system is a facilities engineering information system under development by the National Institute for Building Sciences (NIBS). NIBS contemplates putting all government and non-government facilities engineering and design criteria, i.e., Military and Federal specifications, design manuals, definitive drawings, military handbooks, and a wide variety of non-government standards, on a master data base and distributing it with search software designed for easy user access. It is planned that a master data file, a text search index and a word processing software package will be mastered at a central location managed by NIBS. A data base copy on magnetic tape will be used to produce master copy disks and read only memory disks in sufficient copies for distribution to subscribers.

Currently a system pilot test is being conducted by the NIBS and is planned to be operational for Army and Navy Guide Specifications and Reference Specifications and P-34 by the Spring of 1987. Other criteria documents will be added in 1988. Eventually this system will enhance more than 2,700 government and non-government facilities engineering criteria documents, involving 67,000 pages of hard copy text, to be provided to subscribers on a single 5.25-inch optical disk. Users are expected to include engineering field activities of the Army, Navy, Air Force, other government engineering and design activities (HUD, VA, NASA), non-government A&E firms, and standards setting organizations.

The point of contact for these systems is Mr. Thomas Rutherford, Naval Facilities Engineering Command, Code 04M2, 200 Stovall Street, Alexandria, VA., 22382, telephone A/V 221-0450 or A/C 202-325-0386. A copy of the presentation is at attachment 10.

The Army Specifications and Standardization Computer System (DEPSOMIS). Presented by the Army Departmental Standardization Office, Alexandria, VA.

This management information and retrieval system is located at Fort Belvoir, VA., and is operated by the Army Departmental Standardization Office, Hq., U.S. Army Materiel Command, Alexandria, VA. The system was designed to automate essential standardization information required by Army standardization activities to effectively manage their portion of the Defense Standardization Program. The system presently includes information from sources such as SD-1 -Standardization Directory, SD-4 - Status of Standardization Projects, the DOD Index of Specifications and Standards (DODISS), the DOD Parts Control Program, together with standardization budgeting, workload, manpower and accomplishment data provided by subordinate activities.

The system has the capability of analyzing SD-4 data and grouping projects by a number of categories. It can also provide project summary data categorized by milestones such as late start, past completion date, past completion date -not extended, number initiated, number completed, number cancelled and number planned. The system has also automated the information available from the DODISS. Although still under design, the system is capable of screening documents by Army interest, validation date, FSC/AREA Class, and the like. The system also provides summary data on performance in the Overage Document Review Program as well as the contractual application of the DOD Parts Control Program in acquisition.

The DEPSOMIS is housed in a CYBER 180/835 computer located at Fort Belvoir, VA. It is an interactive data base with remote access using conventional 300/1200 Baud commercial telephone lines. System S2K is used to manage all of the base except those portions dealing with DODISS, SD-4 and Parts Control.

The point of contact for this system is Mr. A. F. DeSantolo, U.S. Army Materiel Command, AMCLD, 5001 Eisenhower Ave., Alexandria, VA., 22333-0001, telephone A/V 284-6748 or A/C 202-274-6750. A copy of the presentation is at attachment 8.

The DOD Index of Specificati[illegible]. Presented by the Naval Publications and Forms Center, [illegible], PA.

Ms. Alice Bell gave a presenta[illegible] Naval Publications and Forms Center (NPFC), explaining that NPFC is the [illegible] Department of Defense Single Stock Point for all Military Specifications and S[illegible] and other Standardization documents, responsible for the preparation of the DOD Index of Specifications and Standards and for the stock, storage, and d[illegible] of the thousands of standardization documents used by the DOD and [illegible]. Ms Bell went on to describe the manual processes that are now being used to prepare the DODISS catalog file (the Index), to maintain document distribution lists, and to manage the stock, storage, distribution, and replenishment of standardization documents. She also described the considerable amount of warehouse space (approximately three city blocks in size) required to store and distribute documents for which NPFC is responsible, and the manual methods now employed in responding to requests for documents. She indicated that lead time to fill a request received by telephone or message is 5 days and up to 10 days if received by mail.

During her presentation Ms. Bell was followed by Mr. John Karpovich of the Navy Publication and Printing Service Management Office for a discussion of the Navy Print on Demand System (NPODS) which is about to be implemented at NPFC. Phase one of this system is intended to automate the printing, stock, storage and, distribution of documents and to streamline the requisitioning process and to improve the DODISS data file and [illegible] of the DODISS. The initial thrust of the NPODS program is to [illegible] standardization documents for full text storage on a mainframe in order to facilitate "print on demand". It is anticipated that with this [illegible] than 10% of the documents managed by NPFC will have to be stocked [illegible] thus significantly reducing warehousing space. In addition, response [illegible] requests for documents is expected to be reduced to 24-48 hours. [illegible] have a capability to "back order" requests for documents that are [illegible] out of stock.

Future NPOD plans include the [illegible] of systems to make the DODISS data base available to the services for [illegible] in managing standardization documents for which they are responsible and the establishment of satellite NPFC Centers to provide speedier service to requestors.

Further details on the NPFC p[illegible] may be obtained from Ms. Alice Bell, Naval Publications and Forms Center, [illegible], 5801 Tabor Ave., Philadelphia, PA, 19120, telephone A/V 442-5637 or [illegible]. Details on the NPODS program may be obtained from Mr. John Karpovich, Naval Publications and Printing Service Management Office, Code 41, Building [illegible], Washington Navy Yard, Washington, DC 20374-1573, telephone A/V 288-3691 [illegible]. A copy of the NPFC presentation is at attachment 13.

GENERAL DISCUSSION:

During the general session following the Service presentations, a number of topics were discussed. The more significant of these were; (a) the need for a single, comprehensive, DOD wide data base and management information system to embrace enhanced existing systems such as the DODISS, ASSIST, the SD-4, authoring systems for the preparation of acquisition documents such as SOW's, system specs, and CDRL's, and authoring systems for the preparation of MIL specs; (b) the need for a comprehensive action plan that would schedule studies of existing systems to determine enhancements required to facilitate DOD use, the physical location, equipment requirements, communication links, funding requirements, other systems that may be required, and schedules for conversion of the existing bases to DOD systems; (c) the need for a focal point at the DOD level to provide guidance and direction for this effort; (d) the need for a systems "integrator" to coordinate service efforts and to integrate the various systems into one, and (e) the need to determine whether other systems exist that may have DOD application.

OASD representatives agreed that they would become the focal point for this undertaking, indicating that this function would probably be assigned to the Defense Standardization Program Office. In the matter of funding the efforts to bring about an integrated system, no specific conclusions were reached, although the services were advised that funding would probably have to come from the services.

No decision was reached regarding the designation of a system "integrator", although it was indicated that one would be designated in the near future. Mr. Karpovich, of NPPSMO, suggested that the Navy Industrial Fund (NIF) be considered as a source for funding, and that the development of an integrated system and its maintenance could become a part of NPODS. NPFC was suggested as a possible site for the integrated system.

Following these and further discussions, the Chairman proposed a number of specific recommended actions for consideration. Each was discussed in some detail and agreed upon by the group. They are as follows.

RECOMMENDATIONS:

1. Determine the enhancements and other changes required to the ASSIST Program and implement it as a DOD wide specification tiering/specification referencing system, to be centrally located, perhaps at the Naval Publications and Forms Center.

2. A DOD wide DOD Index of Specifications and Standards (DODISS) data base should be implemented from which agencies may obtain specific information on documents listed in DODISS for which they are responsible. This base should be centrally located at the Naval Publications and Forms Center.

3. An enhanced DOD wide SD-4-Status of Standardization Projects data base should be implemented and centrally located, to provide management activities better visibility over the status of projects within areas of assigned responsibility.

4. A DOD wide authoring system or systems similar to Air Force CGADS and/or Air Force TEMSE/DOCWRITER, should be implemented to prepare automated System Specifications, Statements of Work, Contract Data Requirements Lists and other documents used in systems acquisition.

5. A DOD wide automated authoring system should be developed and implemented for the preparation of Military and Federal Specifications and other standardization documents.

6. The DOD should undertake a study to determine the feasibility of the use of electronic mail or other automated media to enhance the standardization document coordination process.

7. The DOD should develop and implement a system to identify and monitor the use of specifications, standards, and other standardization documents in acquisition, i.e., those documents appearing as referenced documents in Request for Proposals, Invitations for Bid, and contracts.

8. A single focal point should be established at the DOD level to develop a comprehensive plan to accomplish the forgoing recommended actions, to make task assignments, and to monitor progress.

9. DOD should designate an agency to be responsible for integration of the several data bases into a single comprehensive DOD wide data base. That agency would also be responsible for evaluating existing and new technology to determine the types of equipment that may be available for use, for determining funding requirements and charges to be imposed upon system users.

10. It was also recommended that the Standardization and Data Management News letter be used as the vehicle to describe any other Service data base(s) that may have DOD wide application.

CONCLUDING REMARKS:

In his concluding remarks, Mr. Yurcisin thanked the attendees for their participation in the meeting, and complimented the Services on the quality of their respective presentations. He expressed the hope that this meeting and its results would trigger new initiatives on the part of the Services to achieve further standardization data base automation, and that the Services would take advantage of these existing systems where ever possible rather than design their own. Mr. Yurcisin made particular note of the Navy NPOD System, suggesting that it may become a focal point for automated standardization data bases. He expressed his appreciation to the Naval Air Engineering Center for their work in developing the ASSIST Program and for undertaking the study of automated data bases. Lastly, he indicated that the minutes of the meeting and its recommendations would be provided to the attendees as soon as possible and asked that they be given widest possible distribution.

Attachments

AGENDA

AGENDA

MAY 13, 1986

0800 AM	Registration
0830	Opening Remarks - Peter Yurcisin, Director, Standardization and Data Management, Office, Assistant Secretary of Defense (A&L)
0845	Discussion of the Agenda - Moderators Lee Rogers and Greg Saunders, Defense Standardization Policy Office.
0900-0930	Data Base Presentation - Naval Air Systems Command - Automated Specifications and Standards Information System - (ASSIST)
0930-0945	Questions and Answers
0945-1005	Coffee Break
1005-1035	Data Base Presentation - U.S. Army Materials Technology Laboratory - Computerized Standardization Search System - (CS[3])
1035-1050	Questions and Answers
1050-1120	Data Base Presentation - Naval Sea Systems Command - Computer Assisted Ship Specifications - (CASS)
1120-1135	Questions and Answers
1135-1205	Data Base Presentation - Hq, Electronic Systems Division, Air Force Systems Command - Computer Generated Acquisition Documents System - (CGADS)
1205-1220	Questions and Answers
1220-1330	Lunch
1330-1400	Data Base Presentation - Hq, Space Division, Air Force System Command - TEMSE/Docwriter
1400-1415	Questions and Answers
1415-1445	Data Base Presentation - U.S. Army Missile Command - Automated Engineering Document Preparation System - (AEDPS)
1445-1500	Questions and Answers
1500-1515	Coffee Break
1515-1545	Data Base Presentation - U.S. Army Belvoir Research and Development Center - Technical Data Configuration and Management Information System - (TDC&MIS)

1545-1600	Questions and Answers
1600-1630	Data Base Presentation - U.S. Army Natick Research and Development Center - Adequacy and Assignment Index - (A&A Index)
1630-1645	Questions and Answers

MAY 14, 1986

0820 AM	Administrative Remarks
0830-0900	Data Base Presentation - Naval Facilities Engineering Command - Engineering Criteria Management (ECM) System and Automated Facility Engineering Information System (AFEIS)
0900-0915	Questions and Answers
0915-0945	Data Base Presentation - U.S. Army Material Command (DEPSO) - Standardization Program Management System - (DEPSOMIS)
0945-1000	Questions and Answers
1000-1020	Coffee Break
1020-1050	Data Base Presentation - Naval Supply Systems Command - DOD Index of Specifications and Standards (DODISS) and Navy Print on Demand System (NPODS)
1050-1105	Questions and Answers
1105-1135	Special Presentation - Information Handling Service (IHS)
1135-1145	Questions and Answers
1145-1300	Lunch
1300-1330	Special Presentation - Ziff Technical Information Co.
1330-1340	Questions and Answers
1340-1540	Open Discussions
1540-1600	Wrap Up
1600	Closing Remarks

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LIST OF ATTENDEES

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AUTOMATED SPECIFICATIONS AND STANDARDS SYSTEM (ASSIST)

RESPONSE TO TOPICAL QUESTIONS ON ASSIST DATA BASE

1. What was the system originally designed to do?

   The system was designed to provide a higher degree of control over specifications, standards, and other standardization documents in which NAVAIR has an interest and to provide greater visibility over their use in the acquisition process.

2. What information is presently stored?

   There are now approximately 35,000 documents loaded in the data base. For those documents falling within the Federal and Military series of specifications and standards, the following data is stored:

   Document number
   Document title
   Issue indicator (revision symbol)
   Approval date
   Type of document (Spec, Std, Etc.)
   All primary references
   FSC/AREA classification
   Military interest (Fed. Specs)
   Validation Date
   Status (active, cancelled)
   Agency interest (PA, CU, review, user)

3. Who are the system users?

   The system is used by specification writers and technical personnel in the preparation of new and revised documents in identifying materials, parts and other documents that can be used as references; in identifying and validating the currency of all primary and lower tier references; in identifying documents that will be affected by the cancellation of a given document; in identifying overage documents for purpose of the overage document review program; in maintaining a current list of all documents for which NAVAIR is responsible as preparing activity or Navy custodian, as well as those documents in which it has a review or user interest. The system can also be used to support the acquisition streamlining process by providing visibility over all of the documents to be envoked in a contract. This is accomplished by first identifying all of the documents cited in the System Spec of Statement of Work and then, by utilizing the data base, developing a single list of all of the documents called out as references by these cited documents.

4. What are the sources for data included in the base?

   A hard copy of the document (MIL-SPEC, MIL-STD) is used to obtain the document number and the number of each of its references. As the document and its references are loaded into the data base, each document is

4. What are the sources for data included in the base? (Cont'd)

compared by computer with a DODISS magnetic tape. All other pertinent data for that document is abstracted through automated comparison and incorporated into the base. This includes the title, approval date, revision symbol, FSC Class, qualification requirement, agency interest, etc.

5. What hardware is used for the system?

The ASSIST data base resides in an IBM 4341 computer at the Naval Air Engineering Center, Lakehurst, N.J. The operating system resident in the IBM 4341 is MVS V3.8J.

6. What types of programs/languages are used?

ASSIST is a COBOL based system, interfacing with a multi-user S2K data base. The only code that is not COBOL consists of several assembler language subprograms for controlling certain aspects of ASSIST's interactive prompting routines. Querries are initiated in an interactive TSO environment through the execution of TSO CLIST command procedures.

7. Is internal or external support used to load and maintain the data base?

External support is used to load and maintain the data base.

8. What output products are obtained from the system?

The following output products, or reports are provided by the data base.

System Spec Ref List - A single listing of all documents referenced by the primary documents cited in the system spec. Repetitive listing of the same document is suppressed.

Specification Tree (Pyramid) - A report displaying all of a primary document's 1st and lower tier references to as many as five levels. It also identifies any referenced documents that are cancelled.

Keyword Index - The computer will search and find all documents in the base that have a "keyword" in the title and will provide a list of these documents by number and title.

QPL Requirement - A listing, in numerical order of all documents in the base for which a QPL has been or will be issued.

Overage Documents - A listing by date of approval of all documents (Mil and Federal) in the data base.

Alphabetical Index - Provides a list in alphabetical order of all documents in the base, categorized by document type.

Documents by Preparing Activity - Provides a listing of all documents in the base for which NAVAIR is preparing activity.

Interest other than Preparing Activity - Provides a listing of all documents in the base in which NAVAIR has a registered interest other than Preparing Activity. Identifies NAVAIR's interest, i.e., custodian, review or user.

Referenced by Other Documents - Provides a report listing all of the documents that utilize a given document as a primary reference.

9. Is it a single user or multi-user system?

It is a multi-user system.

10. What procedure is used to maintain the data base?

Weekly indexes (such as IHS of IMI) of documents issued by NPFC are reviewed to identify those documents of interest to NAVAIR. A hard copy of each new document is obtained and that document and its references are added to the backup of "key punch" file. Copies of documents that are revisions or amendments to documents already in the data base are obtained and compared with data already in the base. Changes to references, revision symbols, approval dates, etc. are noted and incorporated into the backup file. Periodically the data in the backup file is auditied, corrected and incorporated into the data base.

11. Is there remote access to the system? What communication links are used?

At the present time there is limited remote access to the data base. Most of the output products are in the form of bulk reports generated at the computer site. However, the system is designed to accommodate remote accessing.

12. Are there planned changes to the system to expand it or to add enhancements?

Planned enhancements to the system include the following:

Design and develop changes to the system to provide for interactive updating of the data in the base. Due to the magnitude of data being entered into the base, it has been more economical to store information in a backup "key punch" file and batch load material into the computer on a periodic basis. This change will provide for direct interactive updating of data in the base.

Identifying primary and reference documents that require the delivery of data. This change will provide a means to identify any document in a System Spec Ref List or a document's pyramid that requires the

delivery of data, so that data managers will have better control and visibility over data requirements to be imposed in contracts through specifications and standards.

Adding Data Item Descriptions (DIDS) to the data base.

Identifying and including a superseding document and its references for any cancelled/superseded document(s) that may appear in a given spec tree.

13. Is system documentation available?

System documentation is available, as is a Users Guide describing procedures for querrying the system and retrieving information.

14. Is a data base management system (DBMS) used?

The ASSIST data base utilizes an Intel Systems Corporation System 2000 (S2K) data base management system. S2K is a hierarchical structured data base.

BRIEFING SYNOPSIS

The Automated Specifications and Standards Information System

The Naval Air Systems Command presents the Automated Specifications and Standards Information System, commonly referred to as ASSIST. This data base and information retrieval system is located at the Naval Air Engineering Center (NAEC), at Lakehurst, New Jersey.

The System Point of Contact is the Systems Engineering and Standardization Department (Code 93) at NAEC, Lakehurst, NJ.

The User Point of Contact is the Naval Air Systems Command (Code AIR-511), Washington, DC.

The System Manager Point of Contact is the Systems Engineering and Standardization Department, Engineering Management Branch, (Code 9322) at NAEC, Lakehurst, NJ.

The data base presently includes all DoDISS information on approximately 32,800 Military and Federal Specifications, Standards, MS's, Bulletins, Handbooks, AN's and AND's together with all of each document's primary references. There are an additional 10,000 documents in the base for which all data except their primary references are included. There is now an aggregate total of 303,850 references and 207,850 keywords loaded in the base.

The system is designed to provide information on specifications, standards and other standardization documents prepared by or of interest to the Naval Air Systems Command (NAVAIR), to provide visibility over documents invoked by reference in acquisition, to support acquisition streamlining initiatives, and to improve the currency, accuracy and management of documents prepared by NAVAIR.

Future enhancements include a means to identify documents requiring delivery of data, adding Data Item Decriptions (DIDs) to the base and indentifying superseding documents and their spec tree.

The system can provide support to a variety of users, including the following:

Standardization Program Managers: To identify and manage documents in assigned FSC/AREAS and other documents for which they are responsible.

Standardization Document Engineers: To identify overage documents; to assist in preparation of documents; to validate currency of references in new/revised documents; to identify documents affected by cancellation of given document, to identify documents requiring QPL; and to identify hazardous or costly materials, e.g., cadmium, platinum.

System Documentation Engineers: To enhance streamlining by identifying all documents to be invoked by the System Spec or Statement of Work (SOW) and to assure the accuracy and currency of all documents to be invoked.

Acquisition Managers: To provide greater visibility over documents to be invoked in procurement; to identify non-product (cost driver) documents to be invoked that should be reviewed for tailoring; to identify documents invoked by reference, i.e. guidance only, that must be specifically cited in the System Specs or SOW as mandatory; and to assure that all cited documents and their references are current and active.

Supply Managers: To determined the currency of documents referenced in technical data packages and to identify applicable documents during breakout or reprocurement.

The following information is included for each document in the base.

Document Number
Issue Indicator -Rev. Amd., Suppl. L/C or Coordinated
Document Date
Document Type - Spec, Std, Ms, etc.
Document Series - Fed, Mil, AN, etc.
Title
All Primary References
FSC/Area Class
Military Interest (MCA)
Validation Date
Status - Active, Cancelled
Agency Interest - PA, CU, Review, User
QPL Requirement

Information for the data base is obtained from the Department of Defense Index of Specifications and Standards (DoDISS), MIL-BUL-544, List of Federal/Military/Industry Specifications and Standards, and NAVAIR Series Documents Approved by the Naval Air System Command, and the Acquisition Management Systems and Data Requirements Control List (AMSDL).

The system is designed to provide a number of preformatted output reports. Although it does not now have an Ad Hoc capability, it can be programmed to provide an output report within the parameters of the data presently in the base. Output reports include the following:

Spec Tree Reports - Provide a spec tree or spec pyramid of all of a primary document's references to the fifth tier.

Ref List Reports - A list of all of a primary document's references to the fifth tier, listing each reference one time at the level at which it first appears as a reference.,

Keyword Report - Provides a report of all documents in the base that have a keyword or words in the title.

QPL Reports - Provides a list of all documents that require the use of a Qualified Product List.

Overage Document Report - Provides a list of all documents by age and cognizant code.

Cog Codes - Provides a list of NAVAIR Cog Codes and the documents for which they are responsible.

Alphabetical List - Provides a list by title in alphabetical order of all documents in the base.

Preparing Activity Report - Provides a listing of all documents in the base for which NAVAIR is Preparing Activity.

Cancelled Documents - Provides cancelled documents and their references.

Other Interest Report - Provides a listing of all documents in the base in which NAVAIR has an interest as Custodian, Review and User Activity.

Age and Cog Code - Provides information on date of last standardization action and the responsible NAVAIR Cog Code.

Ref By Reports - Identifies all documents that use a particular document as a reference.

Future capability will include non-government documents, metric documents and High cost driver documents.

ASSIST is a multi-user data base. There is remote access to the base using a 300/1200 baud voice grade telephone line link, but due to the magnitude of data generated by these output reports the cost of transmission of reports other than "KEYWORD" and "REF BY" by conventional telephone lines would be excessive. The data processing system resides in the IBM 4341 main frame computer located at the Naval Air Engineering Center, Lakehurst, NJ.

The system has DoD wide application to support standardization managers, specifications engineers, systems managers, documentation engineers, acquisition managers, streamlining advocates, data repositories, provisioning specialists and reprocurement technicians.

Future expansion of the base may include increased on-line support for the BOSS program, inclusion of other users, identification of other user needs and unique requirements, development of additional input/output formats and criteria, identification of inter-communication requirements and implementation of a network, and interfacing with other automated data repositories.

ASSIST

AUTOMATED SPECIFICATIONS AND STANDARDS INFORMATION SYSTEM

DOD AUTOMATED STANDARDIZATION WORKSHOP

MAY 13-14, 1986

SYSTEM IDENTIFICATION

NAME OF SYSTEM:
THE AUTOMATED SPECIFICATIONS AND STANDARDS INFORMATION SYSTEM (ASSIST)

SYSTEM POINT OF CONTACT:
THE NAVAL AIR ENGINEERING CENTER
SYSTEMS ENGINEERING AND STANDARDIZATION DEPARTMENT (CODE 93)
LAKEHURST, NJ

USER POINT OF CONTACT:
THE NAVAL AIR SYSTEMS COMMAND (CODE AIR-511)
WASHINGTON, DC

SYSTEM MANAGER POINT OF CONTACT:
THE NAVAL AIR ENGINEERING CENTER
SYSTEMS ENGINEERING AND STANDARDIZATION DEPARTMENT
ENGINEERING MANAGEMENT BRANCH (CODE 9322)
LAKEHURST, NJ

SYSTEM DESIGN

THE SYSTEM AS DESIGNED WILL:

- PROVIDE A VARIETY OF MANAGEMENT INFORMATION ON SPECIFICATIONS, STANDARDS, AND OTHER STANDARDIZATION DOCUMENTS PREPARED BY OR OF INTEREST TO NAVAIR.
- PROVIDE GREATER VISIBILITY OVER DOCUMENTS TO BE INVOKED BY NAVAIR IN THE ACQUISITION PROCESS.
- PROVIDE SUPPORT TO THE ACQUISITION STREAMLINING INITIATIVES.
- IMPROVE THE CURRENCY, ACCURACY AND MANAGEMENT OF THOSE STANDARDIZATION DOCUMENTS PREPARED BY NAVAIR.

FUTURE ENHANCEMENTS:

- ADDING A MEANS TO IDENTIFY DOCUMENTS THAT REQUIRE THE DELIVERY OF DATA
- ADDING DATA ITEM DESCRIPTIONS (DIDs) TO THE BASE
- IDENTIFYING SUPERSEDING DOCUMENTS AND PROVIDING ITS SPEC TREE

SYSTEM USERS

SYSTEM USERS INCLUDE:

STANDARDIZATION PROGRAM MANAGERS:

- TO IDENTIFY AND MANAGE DOCUMENTS IN ASSIGNED FSC/AREAS AND DOCUMENTS FOR WHICH THEY ARE OTHERWISE RESPONSIBLE.

STANDARDIZATION DOCUMENT ENGINEERS:

- TO IDENTIFY OVERAGE DOCUMENTS
- TO ASSIST IN THE PREPARATION OF NEW/REVISED DOCUMENTS
- TO VALIDATE CURRENCY OF REFERENCES IN NEW/REVISED DOCUMENTS
- TO IDENTIFY OTHER DOCUMENTS EFFECTED BY THE CANCELLATION OF A GIVEN DOCUMENT
- TO IDENTIFY THOSE DOCUMENTS REQUIRING QUALIFICATION
- TO IDENTIFY THOSE DOCUMENTS THAT REQUIRED THE USE OF A PARTICULAR MATERIAL eg. (CADMIUM)

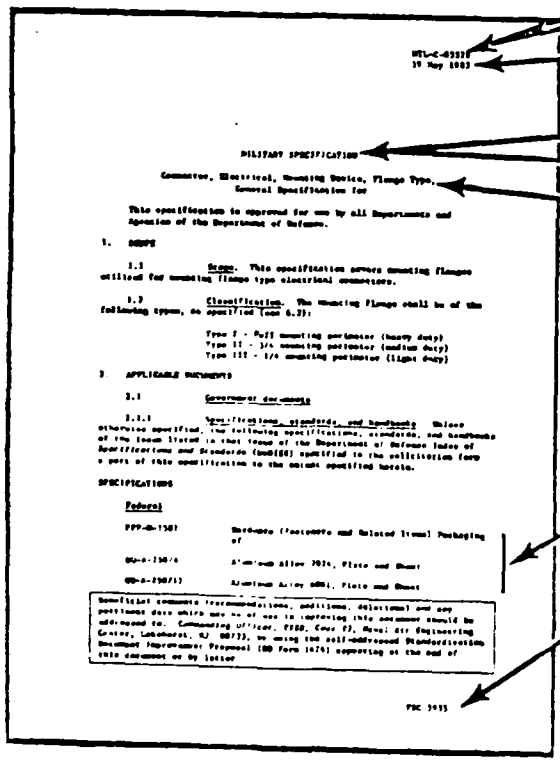
SYSTEMS DOCUMENTATION ENGINEERS:

- TO ASSIST IN THE STREAMLINING PROCESS BY IDENTIFYING ALL DOCUMENTS TO BE INVOKED BY THE SYSTEMS SPECIFICATION
- TO ASSURE THE ACCURACY AND CURRENCY OF ALL DOCUMENTS TO BE INVOKED BY THE SYSTEM SPECIFICATION

NAEC ASSIST SYSTEM DESCRIPTION

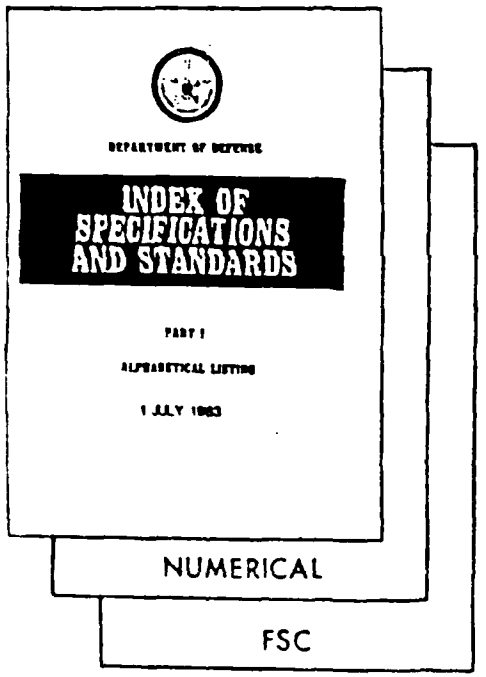
Types of Data in the Base

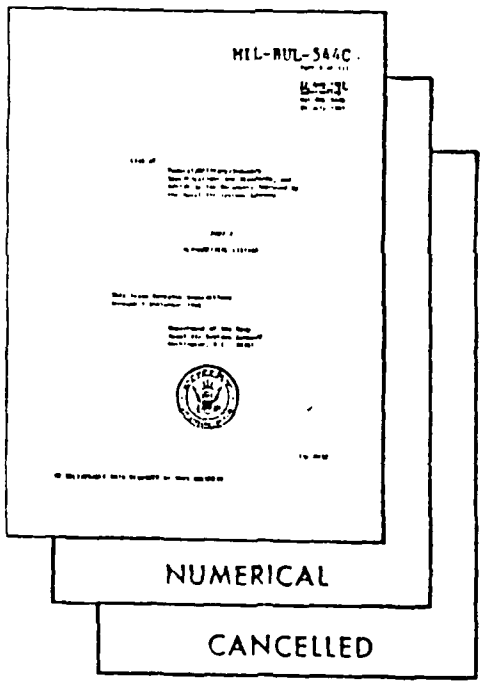
The following information is included for each document in the base:

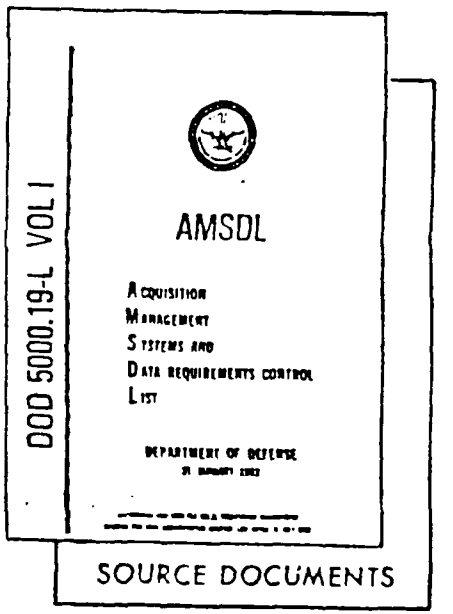


- Document Number
- Issue Indicator (Rev, Amd)
- Approval Date
- Type of Document (Spec, Std, etc.)
- Series (Military, Federal, etc.)
- Document Title
- References
- FSC/Area Classification
- Military Interest (Fed. Specs)
- Validation Date
- Status
- Agency Interest:
  - Preparing Activity
  - Custodian
  - Review/User Activity

BACKGROUND INFORMATION SOURCES







ASSIST REPORTS TYPICAL

SPECIFICATION TREE (PYRAMID)

REFERENCE LISTS
KEYWORD INDEX (IN TITLE)

QPL REQUIREMENTS

OVERAGE DOCUMENTS

COG CODES

ALPHABETICAL INDEX

FUTURE CAPABILITY *

DOCUMENTS AS PREPARING ACTIVITY

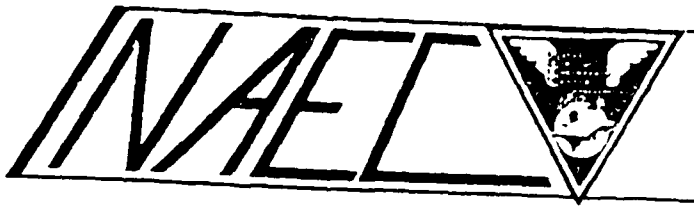
CANCELLED DOCUMENTS
INTEREST OTHER THAN PREPARING ACTIVITY (NAVAIR INTEREST)

AGE AND COG CODE
REFERENCED BY OTHER DOCUMENTS (REF BY)

NON-GOVERNMENT DOCUMENTS *

METRIC DOCUMENTS *

HIGH COST DRIVER *



SYSTEM ACCESSABILITY

ASSIST IS A MULTI-USER SYSTEM

THERE IS PRESENTLY LIMITED REMOTE ACCESS TO THE SYSTEMS, USING A 300/1200 BAUD VOICE GRADE TELEPHONE LINE LINK

THE SYSTEM DOES NOT HAVE AD HOC QUERY CAPABILITIES

IT IS A DATA PROCESSING SYSTEM RESIDING IN AN IBM 4341 MAINFRAME COMPUTER AT NAEC

RECOMMENDATIONS

THIS SYSTEM HAS DOD WIDE APPLICATION TO SUPPORT:

STANDARDIZATION MANAGERS
SPECIFICATION ENGINEERS
SYSTEMS MANAGERS/DOCUMENTATION ENGINEERS
ACQUISITION MANAGERS
DATA MANAGERS
STREAMLINING ADVOCATES
DATA REPOSITORIES
PROVISIONING SPECIALISTS
REPROCUREMENT TECHNICIANS

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ACTIONS:

- EXPAND ON-LINE SUPPORT FOR BOSS
- EXPAND ASSIST TO INCLUDE OTHER USERS
- IDENTIFY OTHER USER NEEDS AND UNIQUE REQUIREMENTS
- DEVELOP ADDITIONAL INPUT/OUTPUT FORMATS AND CRITERIA
- IDENTIFY INTER-COMMUNICATION REQUIREMENTS AND IMPLEMENT NETWORK
- INTERFACE WITH OTHER AUTOMATED DATA REPOSITORIES

COMPUTERIZED STANDARDIZATION SEARCH SYSTEM CS^3

AMTL's Computerized Standardization Search System (CS^3)
Data Base Discussion

1. The MTL data base was originally designed to manage standardization documents and facilitate report preparation. The information system was created to provide storage, retrieval and analyses of related standardization data.

2. The data base stores information and data from over 4,000 materials and materials related standardization documents within AMTL's areas of interest. It enables searches on text and date fields within interrelated groups of documents, test methods requirements, cross-reference material, referenced document or other salient information contained within the body of a specification.

3. The Engineering Standardization staff managers, writers and data entry personnel are the current users of this data base system.

4. Some 4300 standardization documents (specifications, standards, amendments or change notices) are the sources of data for inclusion and cover 543 federal supply classifications.

5. The system hardware used to store our data base is a Digital Equipment Corporation VAX 11/780 computer which is accessed in a time shared environment through multiplexed video terminals which share logic through a single communications circuit.

6. The CS^3 was developed as an application of the DRS managing element. This managing element contains a unique command language which allows users to query and update the system and provides two interactive modes of operation: an automatic menu driven mode, designed for ease of use and a manual mode which provides maximum retrieval flexibility and reporting facilities.

7. MTL's computerized standardization program is externally supported by a contractural effort. A contractor is responsible for loading and maintaining the CS^3 and will continue to provide storage, updating services and general maintenence provisions until such time MTL can handle an in-house operation and assume data base building capabilities and maintenence responsibilities.

8. The CS^3 allows data retrievals from four aggregated record types. The main or master set contains a great number of critical key elements or data fields which can be useful in a preliminary search. In addition, data can be retrieved from any one of three lower record types which contain data items from requirement or quality assurance provisions, comments or referenced document information. The main or master record set is linked to the three lower records and allows interactive data retrievals to be made from a single record or from any combination of parameters.

9. The CS^3 data base is accessed in multi-user environment. A special software program enables the multiplexer hardware to act as a "traffic cop" among the terminals in our distributed system if the need arises. The system may have to delay access to certain files until they become free.

10. The DBC managing element contains programable software which allows special mode screens to be generated for additions or updating purposes. AMTL's screens are designed to coincide with prescribed selections of data entries.

11. Remote computer access equipment was selected which allows several users to share distributed data processing information simultaneously. An eight channel switching statistical multiplexer enhancement with 4800 bps modem utilizes a conditioned communication line which enables optimum terminal performance at an economical fee. Terminals are asynchronous with EIA RS 232 interface which adheres to the standard ASCII code information interchance.

12. The CS^3 is about ready to branch out with document data base enchancements. One is for cancelled documents and one for the maintenance of the industrial documents within MTL's areas of interest.

13. Documentation is available on the description and operation of the CS^3. There are also auxilliary menu driven Help screens built into the data base program for on-line assistance.

14. The CS^3 data base is an application of the DRS data base management system.

SYNOPSIS OF COMPUTERIZED STANDARDIZATION SEARCH SYSTEM CS^3

Army Materials Technology Laboratory (MR) is AMC's lead laboratory in materials, solid mechanics and materials testing technology, and is the manager of AMC's research and exploratory development program in structural materials, mechanics and structural integrity. Its Engineering Standardization Division (ESD), has fiscal and technical responsibility for managing that portion of the defense Specifications and Standardization Program (DSSP) which consists of materials (metallic and non-metallic), materials-related processes and materials test methods.

ESD's managerial and technical responsibilities pertain to documents from 53 federal supply classifications and areas and involve preparation, revision, coordination, or review of documents covering a wide variety of materials such as ferrous and non-ferrous metals, plastics, composites, ceramics, rubber products, finishes, and adhesives as well as materials-related processes and test methods. New specifications are also prepared in support of advanced materials developed for use in weapon systems.

ESD has developed a management information system over the last few years which is called AMTL's "Computerized Standardization Search System (CS^3)". The system was established for the storage, retrieval, and analysis of specification data and operates on the DRS managing element which contains a unique command language for making queries and updating the data base. Information and data from over 4000 materials and materials-related standardization documents within MTL's areas of interest are captured and entered into the computer. The system enables searches on text and date fields within interrelated groups of documents, test methods, requirements, cross-reference material, referenced documents or other salient information contained within the body of a specification or standard. The CS^3 which is stored on the contractor's DEC VAX 11/780 computer is accessed in a time sharing environment through video terminals which share a single communications circuit. The contractor supports the MTL supplied multiplexer hardware and manages the system software used for the multi-user program. The system operates in two interactive modes: an automatic menu driven mode, designed for ease of use, and a manual mode which provides maximum retrieval flexibility. The CS^3 contains data items or fields of key elements which have been aggregated into four main record types. The main or master record set contains a great number of critical key elements or data fields which can be used for a preliminary search. In addition, data can be retrieved from any one of three lower record types which contain data items from requirements or quality assurance provisions, comments or reference document information. The main or master record set is linked to the three lower records and allows interactive data retrievals to be made from a single record or from any combination of parameters.

The ESD computer program requires continued contractual assistance for storage, updating services and general maintenance provisions until such time MTL can handle an in-house operation. Until such time when we can assume our own data base building capabilities, and maintenance responsibilities we need contractual assistance. We are about ready to establish two new document data base enhancements, one for cancelled documents and one for maintaining industrial documents within MTL's areas of interest. We need to utilize the contractor's expertise in setting up these separate data bases but plan to train ESD staff members to carry out the program. The data base enhancements will be designed for on-line updating capabilities. Key personnel within ESD, who are responsible for coordinating project assignments and maintaining records will be trained to add, update or delete documents and records as necessary in order to maintain current information.

AMTL'S CS^3

I OVERVIEW

- O OPERATING SYSTEM
- O CAPABILITIES

II REVIEW OF INFORMATION REQUIREMENTS

III STANDARDIZATION MANAGEMENT RESPONSIBILITIES

- O PRIORITIZING
- O WORKLOAD BREAKDOWN

IV FY 87 GOALS

V SUMMARY AND CONCLUDING REMARKS

CS^3

SEARCH FOR CRITICAL ELEMENTS WITHIN DSSP DOCUMENTS FOR WHICH MTL HAS INVOLVEMENT

PROVIDES INFORMATION

- ACCOMPLISHMENTS
- PERFORMANCE
- VALIDATION
- OVERAGE REVIEW

DEPSO REPORTS

- ANNUAL PLANS
- FY DSSP
- ANNUAL
- QUARTERLY

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C5a

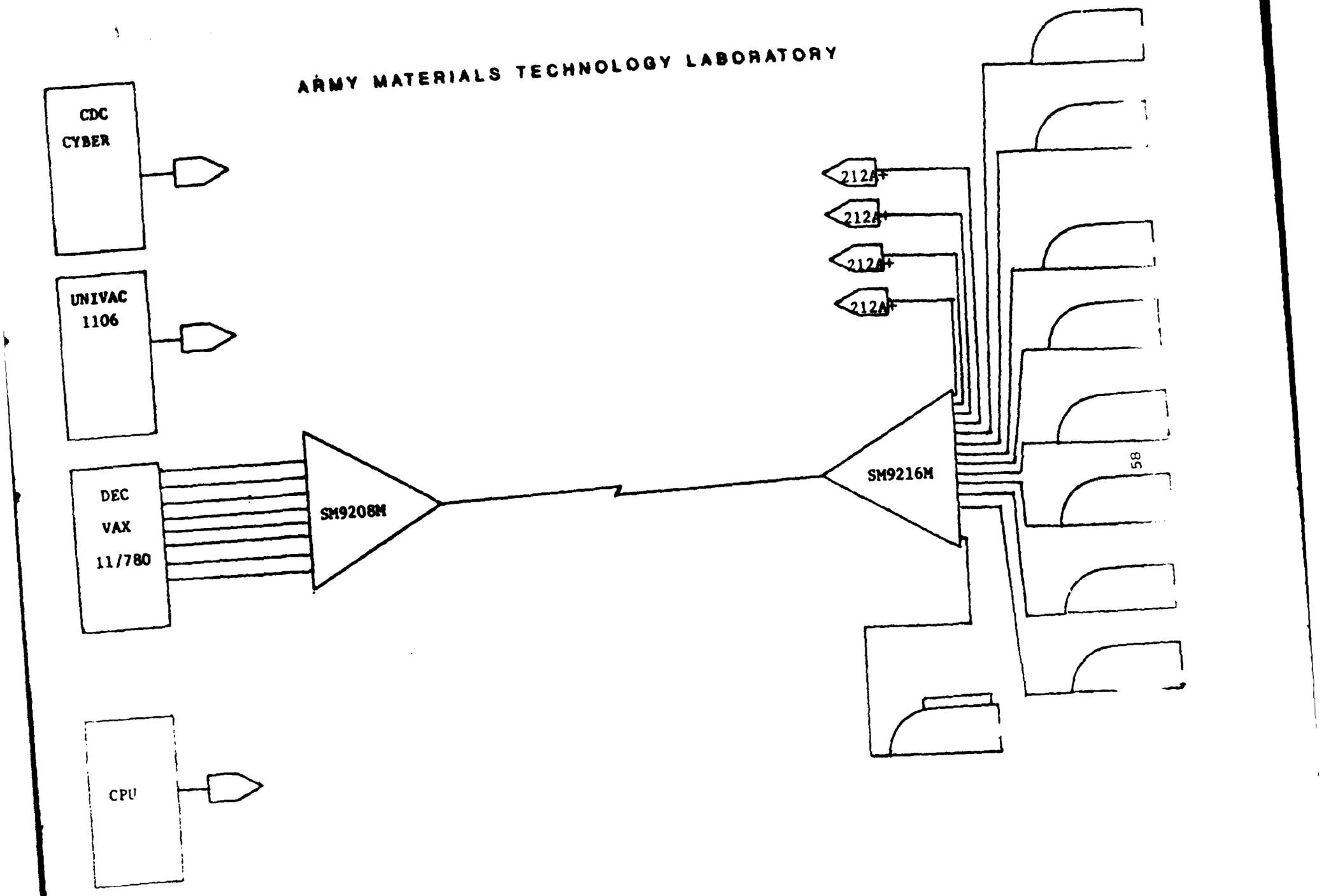
CURRENT ENDEAVORS AND FUTURE PLANS

- O UPDATE AND PROVIDE GENERAL MAINTENANCE PROCEDURES FOR AMTL'S SPECIFICATIONS AND STANDARDS DATA BASE ESTABLISHED UNDER PHASES I-IV

- O REFINE MODIFY AND EDIT PREVIOUSLY CAPTURED AND COMPUTERIZED DATA

- O EXPLORE AVAILABLE TIMESHARING PROGRAMS AT ADVANCED DATA MANAGEMENT (ADM) AND SUBMIT A PLAN WHICH WOULD ALLOW MTL TO ASSUME DATA BASE MANAGEMENT BUILDING AND MAINTENANCE RESPONSIBILITIES

- O DEVELOPMENT OF NEW DATA BASES


ARMY MATERIALS TECHNOLOGY LABORATORY
CDC
CYBER
UNIVAC
1106
DEC
VAX
11/780
CPU
SM9208M
SM9216M
212A+
212A+
212A+
212A+
58

PROJECTION FOR FUTURE

- FACILITY LOCATION OPTIONS

  ADM VS AMTL

  - COMPUTER HARDWARE
  - COMPUTER OPERATING SYSTEM

- DOCUMENT DATA BASE TIMESHARING

  - DRS DATA MANAGEMENT PROGRAM
  - DATA BASE MAINTENANCE CONSIDERATIONS

    EDITING CURRENT CAPTURED RECORDS

    CAPTURING NEW RECORDS

    DEVELOPING AUXILIARY DATA BASES

- PRODUCTION MODE

  VMS CONVERSION TO UNIX

OBJECTIVES

MAINTAIN A CURRENT COMPUTERIZED SPECIFICATIONS AND STANDARDS DATA BANK FOR DATA STORAGE - RETRIEVAL - ANALYSIS

EXPAND DATA BASE ACCESS CAPABILITIES

ACCOMPLISHMENTS

DATA BASE ESTABLISHED

BI-MONTHLY UPDATES PROVIDED FROM THE FSC LISTING DODISS FOR ALL DOD MATERIALS RELATED STANDARDIZATION DOCUMENTS

GOALS FOR FY 87

REFINE, MODIFY AND EDIT KEY INFORMATION PREVIOUSLY CAPTURED

CONTINUE TO PROVIDE UPDATES AND GENERAL MAINTENANCE PROCEDURES FOR AMTL'S CS3

EXPLORE TIMESHARING PROGRAMS AVAILALBE

COMPLETION OF THE TWO NEW DATA BASES AND PLAN FOR THE FUTURE

RELATIONSHIP TO ARMY SYSTEMS NEEDS

MTL'S INVOLVEMENT IN THE DEFENSE STANDARDIZATION AND SPECIFICATION PROGRAM RELATES TO MATERIALS AND MATERIALS PROCESSES SPECIFICATIONS

PERIODIC REVIEW REQUIRED FOR UPDATING

ASSIST AMC WITH DOD INQUIRIES ON IMPORTANT MATTERS SUCH AS MATERIALS UTILIZATION

SUPPLY THE ARMY DEPARTMENT STANDARDIZATION OFFICE (DEPSO) WITH INFORMATION NEEDED TO MAINTAIN MTL'S PORTION OF RESPONSIBILITIES

ATTACHMENT 5

COMUTER-ASSISTED SHIP SPECIFICATION SYSTEM (CASS) AND SPECIFICATION IMPROVEMENT PROGRAM INFORMATION SYSTEM (SIPIS)

NAVSEA "CASS" SYSTEM

1. The Computer Assisted Ship Specification (CASS) System is designed: to be a "living" version of the "General Specifications for Ships of the United States Navy" - GEN SPEC - (it is published only once a year), the Navy's generic ship "building code"; and to be a source for production of the initial version of a specific ship's specification.

2. Each line of the GEN SPEC text is contained in one field of a file. Associated fields contain various "tags" such as the 3-digit specification section number, a subsection identification letter, line number, descriptor codes and other codes which identify additional information contained in the text field. The descriptors indentify whether the text applies to every type ship or to a specific type, e.g., aircraft carrier, diesel, submarine, etc.

The text itself references many of the documents tracked in the SIP Status Files and, in order to be able to identify potential problem references, the embedded document references are flagged. A PL/1 program extracts those records flagged to indicate a reference is mentioned in the text, and compiles a list of each referenced document number along with the section and subsection number where the reference was made.

3. Users include NAVSEA engineers, line managers, ship design managers, and ship acquisition managers.

4. The sources for data in the base are the ongoing stream of GENSPEC changes which come before the NAVSEA Specification Control Board.

5. The hardware used is a leased IBM 3033.

6. The CASS system uses the programming language PL/1 and the database management system IAM (Innovation Access Method).

7. Both internal and external support are used to maintain and operate the database.

8. Output products are:

a) An up-to-the-minute GEN SPEC section, whenever needed.
b) The annual issue of the complete GEN SPEC.
c) The initial version of a specific ship specification .

9. The system is multi-user.

10. The database is updated via 1200 baud dial-up, using YTERM software from IBM PC.

11. See previous item; however, user ID/account is required.

12. The only near-term change planned is a move form the leased IBM 3033 to a newly acquired NAVSEA IBM 3083.

13. System documentation is available.

14. The CASS system uses the database management system IAM (Innovation Access Method) via PL/1 programming language.

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C A S S

(COMPUTER-ASSISTED SHIP SPECIFICATION) SYSTEM

AND

S I P I S

(SPECIFICATION IMPROVEMENT PROGRAM INFORMATION SYSTEM)

NORMAN J. GRIEST
NAVSEA NONCOMBATTANT
S4IP SPECS & DATA DIV

C A S S

POINTS OF CONTACT:

SYSTEM MANAGER POC:	MR. V. R. BURNETT, JR	692-0490
SYSTEM POC:	MR. N. J. GRIEST	692-0490
USER POC:	MR. W. H. DEMPSEY, JR	692-1135

C A S S

WHAT IS IT INTENDED TO DO?

1. BE A LIVING VERSION OF THE "GEN SPEC" (THE GENERAL SPECIFICATIONS FOR SHIPS OF THE UNITED STATES NAVY) - PUBLISHED ONLY ONCE PER YEAR

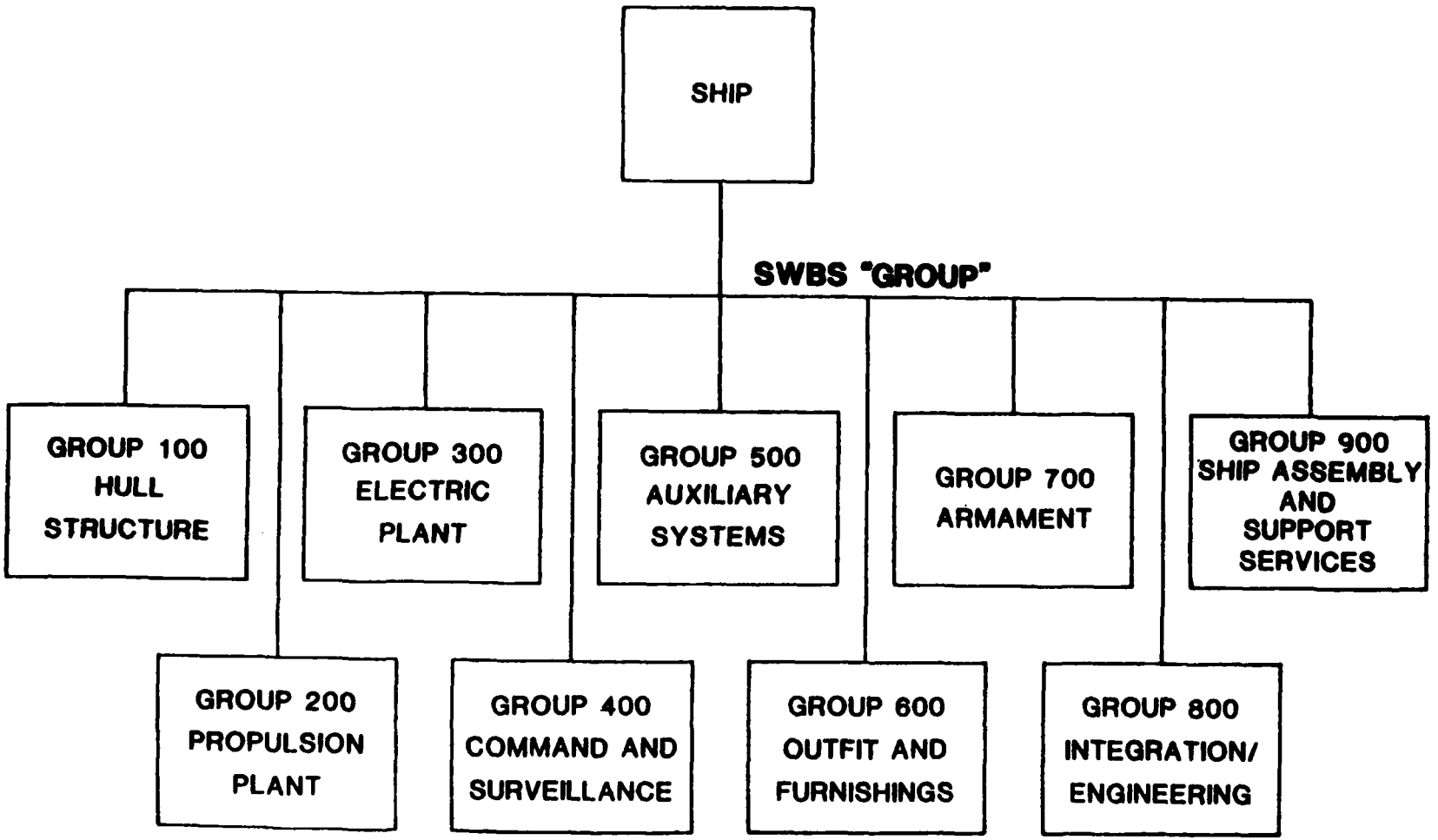
2. BE A SOURCE FOR GENERATING A FIRST DRAFT OF A NEW SHIP'S SPECIFICATION

3. IDENTIFY DOCUMENTS REFERENCED BY GEN SPEC

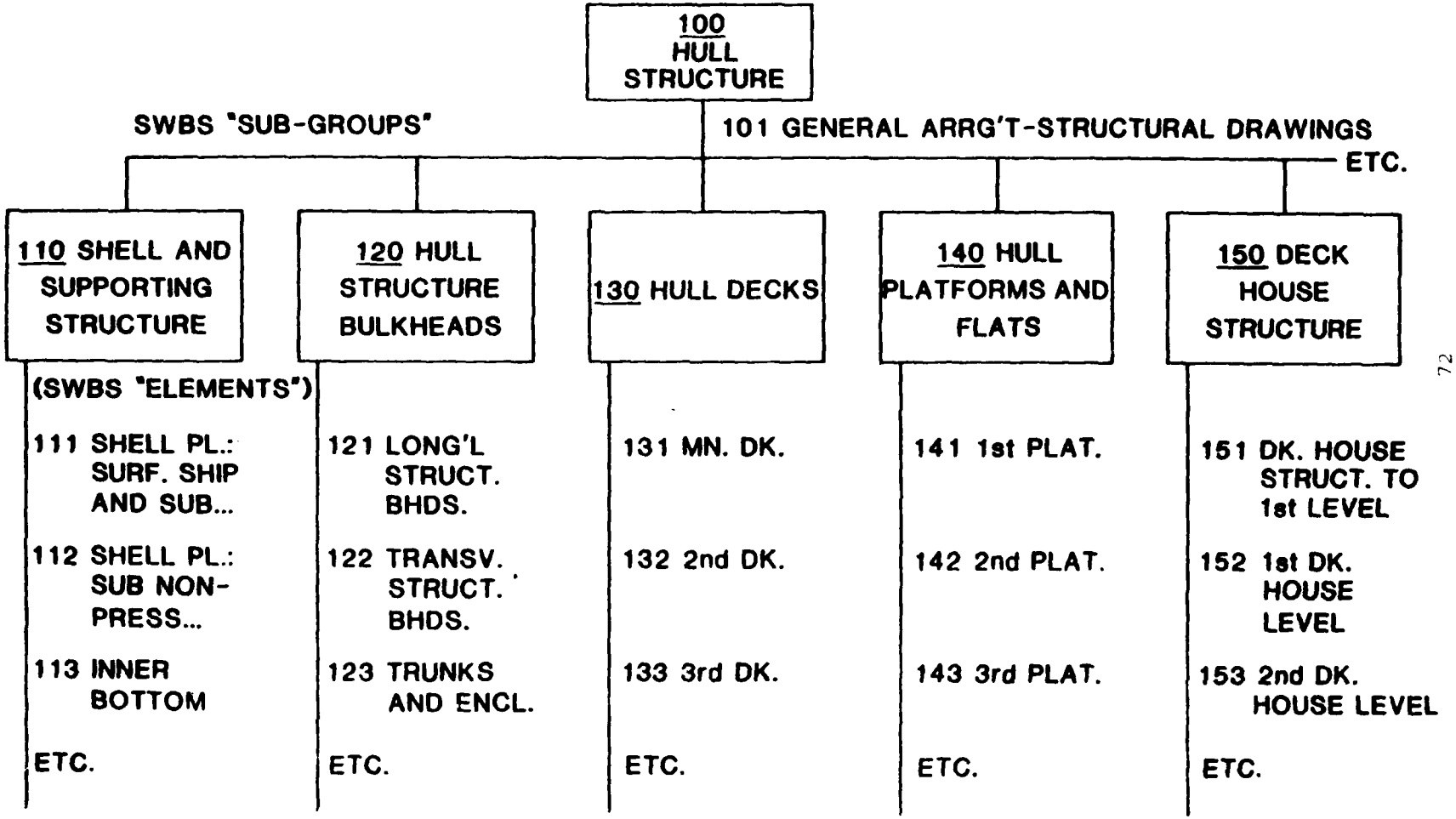
GENERAL SPECIFICATIONS FOR SHIPS OF THE U.S. NAVY (GEN. SPECS.)

- SYSTEM LEVEL REQUIREMENTS FOR SHIP ACQUISITION
- BASIS FOR ALL SHIP SPECIFICATIONS
- DATA BASE FOR COMPUTER PROGRAM (COMPUTER -AIDED SHIP SPECIFICATIONS)
- STANDARD TEXT-FIRST ISSUED-1907
- CONSTANT REVISION THROUGH FEEDBACK
- SHIP WORK BREAKDOWN STRUCTURE FORMAT
- 2,500 REFERENCED DOCUMENTS

SWBS - LEVEL 1 & 2



SWBS LEVEL 3


100 HULL STRUCTURE
SWBS "SUB-GROUPS"
101 GENERAL ARRG'T-STRUCTURAL DRAWINGS
ETC.
110 SHELL AND SUPPORTING STRUCTURE
120 HULL STRUCTURE BULKHEADS
130 HULL DECKS
140 HULL PLATFORMS AND FLATS
150 DECK HOUSE STRUCTURE
(SWBS "ELEMENTS")
111 SHELL PL.: SURF. SHIP AND SUB...
112 SHELL PL.: SUB NON-PRESS...
113 INNER BOTTOM
ETC.
121 LONG'L STRUCT. BHDS.
122 TRANSV. STRUCT. BHDS.
123 TRUNKS AND ENCL.
ETC.
131 MN. DK.
132 2nd DK.
133 3rd DK.
ETC.
141 1st PLAT.
142 2nd PLAT.
143 3rd PLAT.
ETC.
151 DK. HOUSE STRUCT. TO 1st LEVEL
152 1st DK. HOUSE LEVEL
153 2nd DK. HOUSE LEVEL
ETC.

C A S S

WHAT ARE ITS CAPABILITIES?

1. PRODUCES ANNUAL HARDCOPY EDITION OF GEN SPEC

2. BY MEANS OF QUESTIONNAIRE, PRODUCES ROUGHLY TAILORED, BUT STANDARDIZED, FIRST DRAFT OF A SHIP SPEC

3. PRODUCES REFERENCE DOCUMENTS LISTS (NUMERICAL ORDER OR BY SECTION; ALL DOCUMENTS OR JUST SELECTED TYPES)

4. MAINTAINS MISC TRACKING INFO ((DATE OF LAST REV, WHO'S COG, ETC.)

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WHAT CHANGES ARE PLANNED?

NONE PLANNED AT PRESENT

C A S S

USERS:

NAVSEA ENGINEERS, LINE MANAGERS, SHIP DESIGN MANAGERS, SHIP ACQUISITION MGRS

DOD-WIDE APPLICABILITY?

NO

C A S S

WORKING ENVIRONMENT DETAILS:

TRANSITION TO IN-HOUSE IBM-3083 COMPLETE IN 3 MOS. (CURRENTLY TIME-SHARE ON REMOTE IBM-3033

MULTI-USER

REMOTE ACCESS: 1200 BAUD DIAL-UP

LANGUAGES: PL/1, IAM (INNOVATION ACCESS METHOD), AND INQUIRE'S PLI (PROCEDURAL LANGUAGE INTERFACE)

OPERATING MODE IS PRIMARILY AS A DATA PROCESSING SYSTEM, BUT WORD PROCESSING IS USED IN UPDATING

CASS DATA BASE CONSISTS OF

100,000 RECORDS, MADE UP OF

TEXT

SECTION, SUBSECTION, LINE IDENTIFIERS

"TAGS" TO HIGHLIGHT ITEMS OF INTEREST

C A S S

FILE RECORD LAYOUT

1	2	3	4	5	6	7	8	9	10	11	12	13	14 THRU 100
LOCATION TAG								BLANK	DESCRIPTOR			R-CODE	TEXT

EXAMPLE:

611D0010 02 R?805-1934505?, SHALL BE USED IN LIEU OF PADEYES FOR SHIPS CAPABLE OF . . .

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EXAMPLE DESCRIPTORS: 00 = ALL SHIPS 02 = SURFACE SHIPS 06 = SUBMARINES

EXAMPLE R-CODES: R = REFERENCE + = REVISION SINCE PREVIOUS ANNUAL EDITION

```
611 0001 00  .SEC.S.611 .03/03/80          COHEN      6121  1982 EDITION
611 0002 01  <BGENERAL SPECIFICATIONS FOR SHIPS>
611 0003 01  <BOF THE UNITED STATES NAVY>
611 0004 01  <ODEPARTMENT OF THE NAVY>
611 0005 01  .SK01.
611 0006 01  <ONAVAL SEA SYSTEMS COMMAND>
611 0007 00  <OSECTION 611>
611 0008 00  .SK01.
611 0009 00  <OHULL FITTINGS>
611A0001 00  .SEC.<0611a. General>
611A0002 00     This section contains general requirements for hatch davits, padeyes, cleats,
611A0003 00  jackrods, eyebolts, rubbing and chafing plates, corrosion protectors, propeller
611A0004 00  guards, and sounding platforms.
611B0001 00  .SEC.<0611b. Davits>
611B0002 00     <OGeneral.-> Hatch davits shall be provided in number, location, and capacity as
611B0003 00  necessary for the convenient and rapid handling of stores to and from storerooms, and
611B0004 00  for striking down ammunition to magazines.  Hatch davits shall also be suitable for
611B0005 00  handling stores and ammunition over the side of the ship if other
611B0006 00  portable or permanent arrangements are not provided for this purpose.
611B0007 00     In general, all hatch davits shall be portable and furnished complete with tackle.
611B0008 00  Stowage locations for portable davits shall be carefully selected for convenience to
611B0009 00  point of use, so as not to form an obstruction in lines of traffic,
611B0010 00  to be protected from boarding seas, and to eliminate the possibility of davits being
611B0011 00  jarred out of position and falling into the line of fire of guns or missiles.
611B0012 00     The number of sizes of davits shall be kept to a minimum and all davits of the same
611B0013 00  capacity shall be interchangeable.
611B0014 00     <OWorking load.-> Ammunition handling davits shall be designed to handle a working
611B0015 00  load equal to the heaviest piece of ammunition stowed in the magazines served by the
611B0016 00  davit, except that if chain hoists or electric wire rope hoists are attached, the
611B0017 00  davit shall be designed for the capacity and weight of the hoist.
611B0018 00     Stores handling davits shall be designed for a working load of
611B0019 01  1,000 pounds, except that those for destroyer types and smaller ships shall be
611B0020 01  designed for a working load of 500 pounds.
611B0021 00     If the capacity of ammunition davits is approximately that of the stores davits both
611B0022 00  types shall be designed for the heavier working loads.
611B0023 00     Working and test load label plates in accordance with Sect. 602 shall be installed
611B0024 00  on each davit.
611B0025 00     <OSockets for davits.-> Sockets shall be provided at all hatches to be used for
611B0026 00  striking down stores or ammunition. In general, they shall be located at the corners
611B0027 00  of hatches but clear of the corner radius of strength deck hatches.
611B0028 02  Sockets shall also be provided on all superstructure levels for handling material from
611B0029 02  one level to another.
611B0030 00  Sockets shall also be provided in other locations, where necessary, for handling
611B0031 00  machinery parts through hatches between machinery spaces and workshops and engineer
611B0032 00  storerooms.
611B0033 00     For ships not furnished with permanent or other portable arrangements for handling
```


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611B0034 00 stores and ammunition over the side, sockets shall be provided, located port and
611B0035 00 starboard, forward, amidships, and aft, as required to use davits
611B0036 00 for this purpose.
611C0001 02 .SEC.<0611c. Portable weight handling devices>
611C0002 02 Sockets and fittings shall be installed for stepping portable cranes, sheer legs,
611C0003 02 or other portable weight-handling devices, in locations where they can be utilized fo
611C0004 02 handling heavy ammunition, torpedoes, and machinery parts through hatches and over th
611C0005 02 side and for handling stores in cargo nets over the side of the ship.
611D0001 00 .SEC.<0611d. Padeyes>
611D0002 00 Padeyes shall be provided in number, location, and capacity as necessary for
611D0003 00 convenient and rapid handling of stores to and from storerooms and for striking down
611D0004 00 ammunition to magazines.
611D0005 00 Padeyes shall be provided over auxiliary machinery as may be necessary for lifting
611D0006 00 parts of the machines during overhaul and repair.
611D0007 02 Padeyes shall be installed on the outer shell for use in unshipping propellers and
611D0008 02 rudders.
611D0009 02 Below the full load waterline, recessed lifting fittings, drawing, NAVSHIPS No.
611D0010 02 R?805-1834505?, shall be used in lieu of padeyes for ships capable of a sustained spee
611D0011 02 of 20 knots or more.
611D0012 00 Padeyes shall be installed for Jacob's ladders, anchor ladders, and abandon ship
611D0013 00 ladders.
611D0014 00 Padeyes shall be so located and installed that the load will be applied in the
611D0015 00 plane of the eye.
611D0016 00 For replenishment-at-sea padeyes see Sect. 573.
611D0017 00 For lifting requirements for machinery components see Sect. 200.
611E0001 00 .SEC.<0611e. Cleats, jackrods, and eyebolts>
611E0002 00 <0General.-> Cleats and fairleaders shall be installed for the proper leads and
611E0003 00 belaying of signal halyards and rigging.
611E0004 00 + Eyebolts, ringbolts, deck screw reversible eyebolts, cleats, and other fittings
611E0005 00 +necessary for the attachment, working, belaying, and securing of all parts and
611E0006 00 +appliances shall be fitted. All deck screw reversible eyebolts of
611E0007 00 +equal size shall be interchangeable. All deck screw reversible eyebolts and other
611E0008 00 +portable fittings on deck shall be arranged to leave the deck flush when the portable
611E0009 00 +parts are removed and stowed.
611E0010 00 C Sockets and supporting structure shall be designed to safely withstand the largest
611E0011 00 Cload that can be applied to the eyebolt.
611E0012 02 S <0Cleats.-> A galvanized steel cleat shall be provided in a convenient location fo
611E0013 02 Seach hatch fitted with a weight-lifting eye. The cleats shall be welded to the
611E0014 02 Sstructure.
611E0015 02 Cleats shall be provided for checking steadying lines for boats
611E0016 02 and aircraft while they are handled by cranes, and also for securing lines from boats
611E0017 02 alongside.
611E0018 02 Cleats shall not installed on bulwark rails or in other locations where undue
611E0019 02 interference would result when handling material over the side.
611E0020 05 Fittings for securing aircraft in hangar and on flight deck shall be as required b
611E0021 05 Sect. 588.
611E0022 02 <0Jackrods.-> Jackrods shall be fitted for attachment of awnings and weather cloth
611E0023 02 Jackrods shall be fitted to the sides of the ship forward of the accommodation
611E0024 02 ladders to permit the use of boathooks from small boats.

7

SECTION 611
HULL FITTINGS

611a. General

This section contains general requirements for hatch davits, padeyes, cleats, jackrods, eyebolts, rubbing and chafing plates, corrosion protectors, propeller guards, and sounding platforms.

611b. Davits

General.- Hatch davits shall be provided in number, location, and capacity as necessary for the convenient and rapid handling of stores to and from storerooms, and for striking down ammunition to magazines. Hatch davits shall also be suitable for handling stores and ammunition over the side of the ship if other portable or permanent arrangements are not provided for this purpose.

In general, all hatch davits shall be portable and furnished complete with tackle. Stowage locations for portable davits shall be carefully selected for convenience to point of use, so as not to form an obstruction in lines of traffic, to be protected from boarding seas, and to eliminate the possibility of davits being jarred out of position and falling into the line of fire of guns or missiles.

The number of sizes of davits shall be kept to a minimum and all davits of the same capacity shall be interchangeable.

Working load.- Ammunition handling davits shall be designed to handle a working load equal to the heaviest piece of ammunition stowed in the magazines served by the davit, except that if chain hoists or electric wire rope hoists are attached, the davit shall be designed for the capacity and weight of the hoist.

Stores handling davits shall be designed for a working load of 1,000 pounds, except that those for destroyer types and smaller ships shall be designed for a working load of 500 pounds.

If the capacity of ammunition davits is approximately that of the stores davits both types shall be designed for the heavier working loads.

Working and test load label plates in accordance with Sect. 602 shall be installed on each davit.

Sockets for davits.- Sockets shall be provided at all hatches to be used for striking down stores or ammunition. In general, they shall be located at the corners of hatches but clear of the corner radius of strength deck hatches. Sockets shall also be provided on all superstructure levels for handling material from one level to another. Sockets shall also be provided in other locations, where necessary, for handling machinery parts through hatches between machinery spaces and workshops and engineer storerooms.

For ships not furnished with permanent or other portable arrangements for handling stores and ammunition over the side, sockets shall be provided, located port and starboard, forward, amidships, and aft, as required to use davits for this purpose.

611c. Portable weight handling devices

Sockets and fittings shall be installed for stepping portable cranes, sheer legs, or other portable weight-handling devices, in locations where they can be utilized for handling heavy ammunition, torpedoes, and machinery parts through hatches and over the side and for handling stores in cargo nets over the side of the ship.

611d. Padeyes

Padeyes shall be provided in number, location, and capacity as necessary for convenient and rapid handling of stores to and from storerooms and for striking down ammunition to magazines.

Padeyes shall be provided over auxiliary machinery as may be necessary for lifting parts of the machines during overhaul and repair.

Padeyes shall be installed on the outer shell for use in unshipping propellers and rudders.

Below the full load waterline, recessed lifting fittings, drawing, NAVSHIPS No. 805-1834505, shall be used in lieu of padeyes for ships capable of a sustained speed of 20 knots or more.

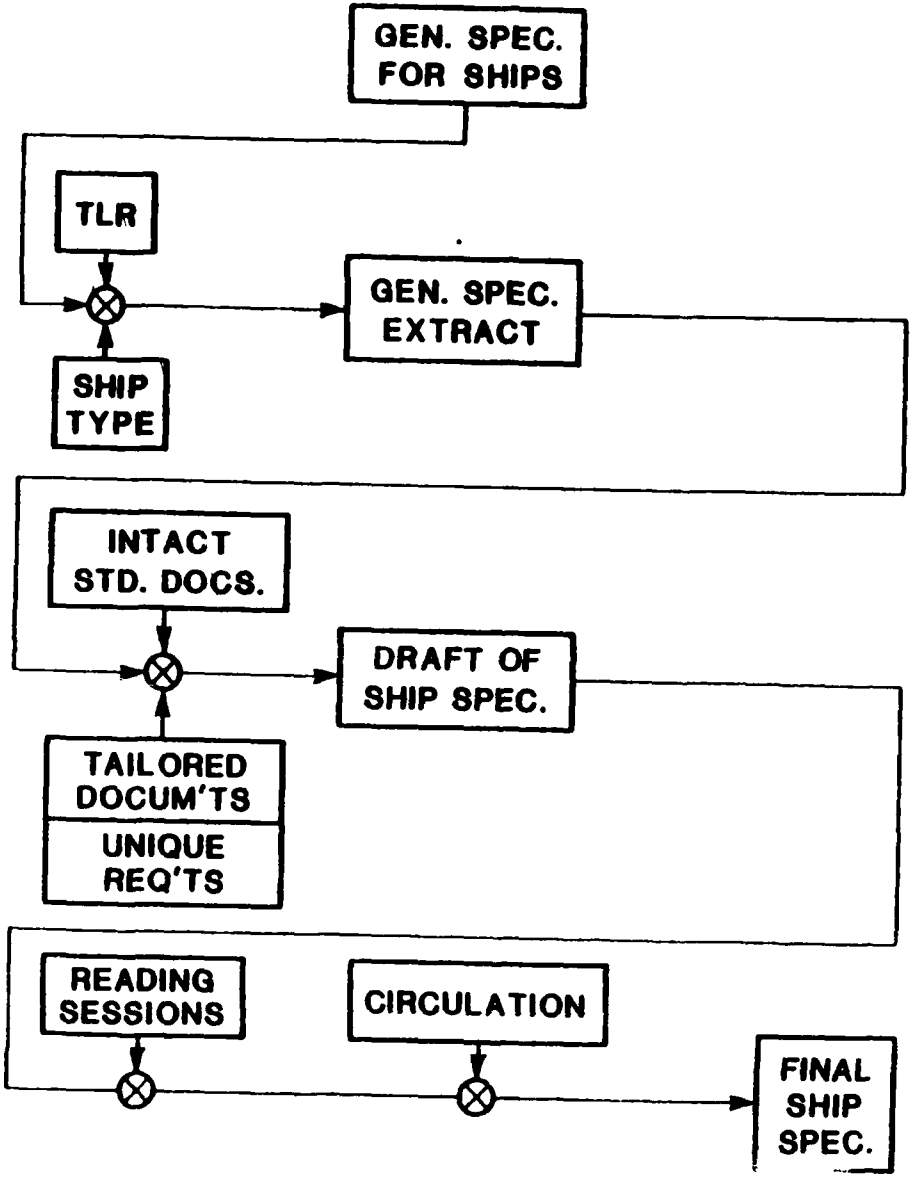
Padeyes shall be installed for Jacob's ladders, anchor ladders, and abandon ship ladders.

Padeyes shall be so located and installed that the load will be applied in the plane of the eye.

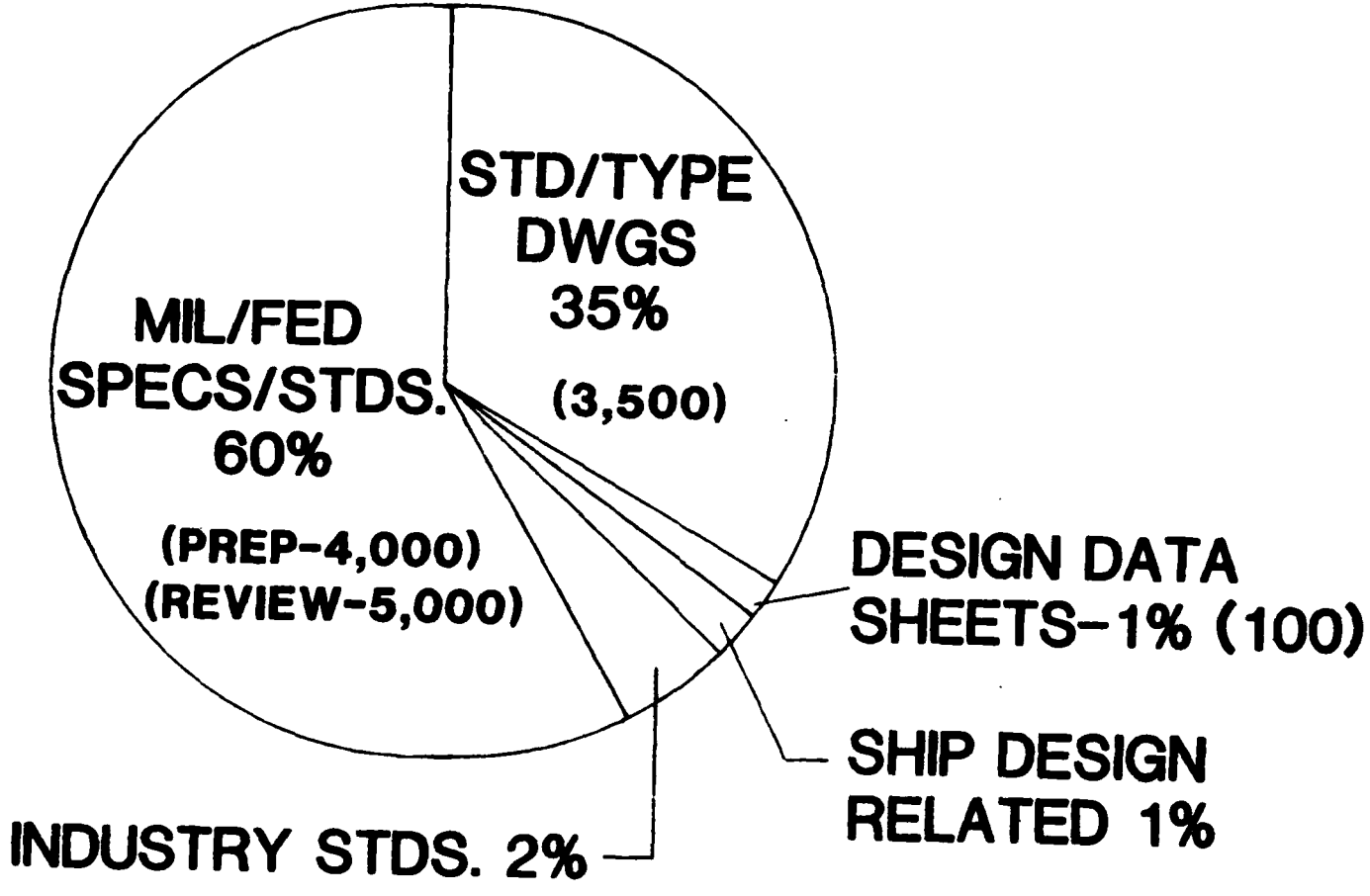
For replenishment-at-sea padeyes see Sect. 573.

8

DEVELOPING SHIP SPECIFICATIONS



REFERENCED DOCUMENTS



REFERENCE SPEC

2. FEDERAL STANDARDS

FED-STD-H-28.....532b
FED-STD-H28.....075a
FED-STD-H28.....075b
FED-STD-H28.....075c
FED-STD-141.....631f
FED-STD-406.....150a
FED-STD-595.....602h
FED-STD-595.....631f
FED-STD-595.....6311
FED-STD-791.....556e

3. MILITARY SPECIFICATIONS

MIL-C-17.....095-404
MIL-C-17.....404c
MIL-C-17.....404d
MIL-R-26.....475d
MIL-F-68.....512d
MIL-P-116.....080g
MIL-P-116.....262f
MIL-B-117.....080g
MIL-F-151.....516c
MIL-W-151.....100f
MIL-F-163.....644e
MIL-V-173.....631j
MIL-F-243.....663b
MIL-H-370.....571c
MIL-H-370.....571d
MIL-I-631.....305h
MIL-B-674.....421e
DOD-E-698.....6311
DOD-E-699.....6311
DOD-E-700.....6311
MIL-I-742.....509f
MIL-I-742.....635b
MIL-S-862.....100f
MIL-R-900.....562f
MIL-R-900.....624c
MIL-R-900.....624d
MIL-R-900.....624f
MIL-R-900.....625d
MIL-S-901.....072a1
MIL-S-901.....072a3
MIL-S-901.....072a11
MIL-S-901.....072a16
MIL-S-901.....625d
MIL-S-901B.....072a11
MIL-S-901C.....072a11
MIL-S-901C.....072a16

REFERENCE DOCUMENTS
SORTED BY SPECIFICATION NUMBER

DATE: 2/8/82 PAGE 11

REFERENCE SPEC

*****SECTION 100 *****

Military Specifications

Military Standards

Design Data Sheets

Industry Standards

Miscellaneous

NAVSEA "SIP" INFORMATION SYSTEM

1. The Computer Assisted Ship Specification (CASS) System is designed to provide information concerning documents critical to NAVSEA acquisitions, including Federal and Military Specifications and Standards, NAVSEA Standard Type Drawings, Design Data Sheets, and miscellaneous other documents.

2. Information stored in this database includes number, title, type of document, issue/last revision date, validation date, status (up-to-date, minor revision required, substantial revision required, etc.), estimated cost for revision required, interest (preparer, user, etc.), cognizant NAVSEA code, and for documents under revision various milestones and other data associated with the revision. Tiering relationships are not currently contained within the INQUIRE database, and we are using instead ORACLE for that aspect of our specification information.

3. Users include NAVSEA engineers, line managers, ship design managers, and ship acquisition managers.

4. The sources for data in the base are the ongoing stream of revisions to specifications, standards, handbooks, design data sheets, and standard drawings which come before the NAVSEA Specification Control Board; and DODISS updates.

5. The hardware used is a leased IBM 3033.

6. The SIP information system uses primarily the INQUIRE database management software.

7. Both internal and external support are used to maintain and operate the database.

8. Output products are:

a) Printouts containing numbers, titles, last revision date, cognizant code, etc., for those Federal and Military Specifications and Standards, NAVSEA Standard and Type Drawings, Design Data Sheets, and other documents critical to NAVSEA acquisitions.

b) Printouts containing milestones for documents currently being revised by NAVSEA.

9. The system is multi-user.

10. The database is updated via 1200 baud dial-up, using YTERM software from IBM PC.

11. See previous item; however, user ID/account is required.

12. The only near-term change planned is a move from the leased IBM 3033 to a newly acquired NAVSEA IBM 3083.

13. System documentation is available.

14. INQUIRE is the primary data base management software used by the STP information system.

NAVSEA "SIP" INFORMATION SYSTEM

1. The Specification Improvement Program (SIP) information system designed to provide information concerning documents critical to NAVSEA acquisitions, including Federal and Military Specifications and Standards, NAVSEA Standard Type Drawings, Design Data Sheets, and miscellaneous other documents.

2. Information stored in this database includes number, title, type of document, issue/last revision date, validation date, status (up-to-date, minor revision required, substantial revision required, etc.), estimated cost for revision required, interest (preparer, user, etc.), cognizant NAVSEA code, and for documents under revision various milestones and other data associated with the revision. Tiering relationships are not currently contained within the INQUIRE database, and we are using instead ORACLE for that aspect of our specification information.

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13. System documentation is available.

14. INQUIRE Is the primary data base management software used by the SIP information system.

S I P I S

WHAT IS IT INTENDED TO DO?

PROVIDE INFO CONCERNING SPECS, STDS, DRAWINGS, ETC. CRITICAL TO NAVSEA ACQ'NS

WHAT ARE ITS CAPABILITIES?

PREPARES REPORTS FOR INFO AND CONTROL OF SPEC-RELATED WORK AND PROCUREMENTS
PREPARES AD-HOC INFORMATION ON A CASE BASIS

WHAT INFO IS CONTAINED IN DATABASE?

SPEC/DOC'T NUMBER, TITLE, TYPE OF DOCUMENT, ISSUE/LAST RESISION DATE, VALIDATION DATE, STATUS (UP-TO-DATE, MINOR REVISION REQUIRED, MAJOR REVISION REQUIRED, ETC.) ESTIMATED COST FOR REVISION, INTEREST, COGNIZANT NAVSEA CODE

SPECIFICATION IMPROVEMENT PROGRAM — DATA CURRENT AS OF 04/22/86

MASTER FILE RECORDS — REPORT NUMBER : 01

UMENTS SORTED BY DOCUMENT TYPE AND DOCUMENT NUMBER

M NUMBER	REV	DOCUMENT TITLE	INT	PRI	ISSUE	CODE	COST	FSC
S-.31		PROPULSION STEAM TURBINES	P	3	780101	56X21	20.0	
SS-233		PROPULSION INTERNAL COMB.ENGINES	P	0	630101	56X33	0.0	
SS-234		PROPULSION GAS TURBINE ENGINES	P	9	850419	56X3	0.0	
SS-235		PROPULSION SYSTEMS,ELEC.SUBS&SRF SHP	P	1	730101	56Z31	10.0	
SS-241		PROPULSION REDUCTION GEARS	P	5	760101	56X44	10.0	
SS-242		PROPULSION CLUTCHES & FLEX COUPLINGS	P	5	630101	56X44	10.0	
SS-243		PROPULSION SHAFTING	P	2	730101	56X7	20.0	
SS-244		PROPULSION SHAFT BEARING & SEALS	P	0	850101	56X43	16.0	
SS-245		PROPELLERS	P	2	730101	56X7	30.0	
SS-251		DRAFT SYSTEMS,FORCED	P	9	630101	56Y23	0.0	
SS-252		CONTROL STATIONS,MACHINERY	P	9	840101	56X5	0.0	
SS-253		STEAM SYSTEMS	P	9	850219	56Y3	0.0	
SS-[illegible]		STEAM CONDENSERS AND AIR EJECTORS	P	9	630101	56X23	0.0	
SS-255		CONDENSATE AND FEED WATER SYSTEMS	P	9	840101	56Y3	0.0	
SS-256		SEAWATER SYSTEMS,FOR MACHY & COOLING	P	9	850201	56Y31	0.0	
SS-259		AIR AND EXHAUST SYSTEMS,INT.COMB.ENG	P	9	750101	56X5	0.0	
SS-262		LUBRICATION SYSTEMS	P	9	851007	56Y32	0.0	
S-300		REQUIREMENTS,ELECTRIC PLANT	P	9	850101	56Z2	0.0	
SS-302		ELECTRIC MOTORS AND EQUIPMENT	P	9	840101	56Z2	0.0	
SS-303		ELECTRIC CIRCUITS,PROTECTIVE DEVICES	P	5	790101	56Z2	0.0	
S-304		ELECTRIC CABLE	P	0	851004	56Z2	0.0	
SS-305		DESIGNATING AND MARKING,ELECTRICAL	P	9	840101	56Z22	0.0	
SS-310		GENERATOR SETS,SHIP SERVICE & EMERG	P	5	660101	56Z2	0.0	
S-3[illegible]		STORAGE BATTERIES&SERVICING FACILITS	P	9	850101	56Z33	0.0	
SS-314		CONVERSION EQUIPMENT,ELEC PWR SUPPLY	P	5	630101	56Z2	0.0	
SS-32		REQUIREMENTS,ELEC POWER DIST SYSTEMS	P	0	851007	56Z2	0.0	
S-324		SWITCHBOARDS&PANELS,ELEC POWER&LIGHT	P	5	750101	56Z2	0.0	
S-331		REQUIREMENTS,LIGHTING SYSTEMS	P	0	851007	56Z2	0.0	
S-[illegible]		REQUIREMENTS,ILLUMINATION	P	0	851005	56Z2	0.0	
S-[illegible]		REQUIREMENTS,ELECTRONIC SYSTEMS	P	0	850101	61Z4	31.9	
S-[illegible]		SECURE SYSTEMS,ELEC & PROCESS CENT	P	9	790101	61X4	10.0	
S-403		PERSONNEL SAFETY	P	2	850101	61X1	0.0	
S-[illegible]		TRANSMISSION LINES&FITTINGS,RAD FREQ	P	9	850101	61Z4	0.0	
S-[illegible]		ANTENNA REQUIREMENTS	P	9	850101	61X4	0.0	
S-406		GROUNDING AND BONDING	P	9	850101	61X4	0.0	
S-407		ELECTROMAGNETIC INTERFERENCE REDUCTN	P	0		61X42	12.0	
S-409		COMBAT SYSTEM INTEGRATION	P	4		61X2	20.0	
S-[illegible]		GEN.REQTS FOR NAVIGATION SYSTEMS	P	4		61Z	6.0	
S-421		NON-ELECTRICAL/NON-ELEX NAV AIDS	P	2		61Z	7.0	
S-422		LIGHTS,NAV & SIGNAL & SEARCH	P	9	850101	56Z2	0.0	
S-423		ELECTRONIC NAVIGATION SYS, RADIO	P	2		61Z	1.0	
S-424		ELECTRICAL NAVIGATION SYS, ACOUST	P	2		61Z	1.0	
S-[illegible]		ELECTRICAL NAVIGATIONAL SYSTEMS	P	2		61Z	1.0	
S-427		INERTIAL NAVIGATION SYSTEMS	P	2		61Z	1.0	
SS-430		REQUIREMENTS,INT COMM SYSTEMS	P	2	750101	61X23	4.0	
SS-431		SWITCHBOARDS,INT COMM SYSTEMS	P	2	730101	61X23	7.0	
S-[illegible]		TELEPHONE SYSTEMS	P	9	840101	61X23	0.0	

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SPECIFICATION IMPROVEMENT PROGRAM

DATA CURRENT AS OF 04/22/86

MASTER FILE RECORDS

REPORT NUMBER : 01

DOCUMENTS SORTED BY DOCUMENT TYPE AND DOCUMENT NUMBER

DOC NUMBER	REV	DOCUMENT TITLE	INT	PRI	ISSUE	CODE	COST	FSC
MIL-D-51083	NC	DETECTOR TKT,ANTICHOLINESTERASE AGT	C		840919	05M4	0.0	6665
MIL-F-51095		FILTER MATERIAL GAS-AEROSOL C18	C		640930	55X2	0.0	4240
MIL-C-51096		CORE MATERIAL,C18	C		640930	55X2	0.0	4240
MIL-B-51097		BACKING MATERIAL, C18	C		640930	55X2	0.0	4240
MIL-S-51189	2B	SOLUTION,SUBSTRATE,AND DISPENSER	C		840919	05M4	0.0	6665
MIL-I-51325	B	ICTCD,CHLORPYRIFOS EMULSIFIABLE	U		840119	05M4	0.0	6840
MIL-E-51454		ETHYL ALCOHOL, ETHANOL	C		791012	05M4		6810
MIL-B-52061	1	SHIP'S BELLS (SMALL CRAFT)		9	650702	56W44	0.0	6350
MIL-N-52110	F	NOZ,FUEL&OIL SERVICING NAUTO	G		820225		0.0	4930
MIL-N-52111		NOZZLES NONAUTO SHUT OFF	U		641104	56Y2	0.0	4930
MIL-C-52130		CHAINS, DETACHABLE LINK, POWER	U		670726	56W4	10.0	3020
MIL-S-52201	1	CANCELLED - USE MIL-D-3898	P	G	850411	61Z2	0.0	6675
MIL-A-52247		ADHESIVE PAPER LABEL	U		620618	05M3	0.0	8040
MIL-V-52392		VULCANIZER, KIT, CABLE REPAIR	U		640930	56Z3	0.0	4940
MIL-C-52404		CONNECTION,HOSE FIRE AND WATER	R		770817	56Y2	0.0	4210
MIL-F-52666	D	FILTER-SEPARATOR,LIQUID FUEL		4	810825			4330
MIL-T-52698	A	TRUCKS,LIFT FORK 2000, 2500 LBS	R		700821	0703	0.0	3930
MIL-H-52750		HORNS ELEC AND FLUID	C		730314	61Y2	0.0	6350
MIL-S-52846		SEPARATORS, OIL-WATER, COALESCER	C		750303	56Y43	0.0	4330
MIL-E-52847		FILTER ELEMENTS FLUID PRESSURE	U		750224	56Y23	0.0	4330
MIL-T-52864	1A	TRUCKS, LIFT, FORK	U		850715	56W4	0.0	3930
MIL-T-52864/1		TRUCK, LIFT, FORK	U		750616	56W4	0.0	3930
MIL-T-52864/2	A	TRUCK, LIFT, FORK	U		830601	56W4	0.0	3930
MIL-T-52864/3		TRUCK, LIFT, FORK	U		750616	56W4	0.0	3930
MIL-T-52864/5	A	TRUCK,LIFT FORK	U		830601	56W4	0.0	3930
MIL-T-52864/6	A	TRUCK,LIFT FORK	U		830601	56W4	0.0	3930
MIL-T-52864/7	A	TRUCK,LIFT FORK	U		830601	56W4	0.0	3930
MIL-S-52868	1B	SENSOR,CAPACITANCE PROX. DT-5	U		810122	09B4	0.0	6350
MIL-S-52871	2B	SENSOR GROUP, VIBRATION	U		840320	6131		6350
MIL-C-52876	1B	CABINETS,MONITOR	U		840622	61Z1	0.0	6350
MIL-A-52878	B	ALARM-MONITOR GROUP	U		790921	6131		6350
MIL-C-52913		CONTROL,ELECTRONIC ACCESS	G		761005	56W44	0.0	6350
MIL-T-52932	C	TRUCK,LIFT,FORK	U		850508	56W4	0.0	3930
MIL-T-52941	1	TRUCK,LIFT,FORK DIESEL 4000 LBS CAP	U		780222	56W4	0.0	3930
MIL-P-52971		PALLETS, MATERIAL HANDLING, GENERAL	R		791001	05M3		3990
MIL-P-52995		PRIMER COATING, SYNTHETIC LACQUER	U		810917	05M1	0.0	8010
MIL-G-53006	2	GASOHOL,AUTO,LEADED-UNLEADED	R		831201	05M4	0.0	9130
MIL-A-53009	3	ADDITIVE ANTIFRZ EXT.LIQ.COOLING SYS	C		840126	05M4	0.0	6850
MIL-G-53042		GUM PREVENTIVE COMPOUND,GASOLINE	U		840709	05M4	0.0	6850
MIL-P-54001		PLUGS PIPE MAGNET HEADLESS IRON	U		730309	56Y2	0.0	4730
MIL-S-55041	C	SWITCHES WAVEGUIDE GENL SPEC	R		840110	61Z1	0.0	5985
MIL-S-55041/3	A	SWITCHES,WAVEGUIDE,SP2T,FAIL-SAFE	U		840110	61Z1	0.0	5985
MIL-S-55041/4	A	SWITCH WAVEGUIDE TRANSFER	U		840110	61Z1	0.0	5985
MIL-S-55041/6	A	SWITCHES,WAVEGUIDE,1P2T,FAIL-SAFE	U		840110	61Z1	0.0	5985
MIL-S-55041/7	A	SWITCHES,WAVEGUIDE,2P2T,FAIL-SAFE	U		840110	61Z1	0.0	5985
MIL-S-55041/8	A	SWITCHES,WG ,2P2T,FAIL-SAFE,115 VOLT	U		840110	61Z1	0.0	5985
MIL-S-55041/9	A	SWITCHES,WAVEGUIDE,1P2T,MNL. OPR.	U		840110	61Z1	0.0	5985

SPECIFICATION IMPROVEMENT PROGRAM

DATA CURRENT AS OF 04/22/86

MASTER FILE RECORDS

REPORT NUMBER : 01

DOCUMENTS SORTED BY DOCUMENT TYPE AND DOCUMENT NUMBER

DOC NUMBER	REV	DOCUMENT TITLE	INT	PRI	ISSUE	CODE	COST	FSC
DDS150-1		STRUCTURAL DESIGN,SHOCK LOADS	P	4	640301	55Y3	10.0	
DDS161-1		STRUTS,SHAFT	P	9	821115	55W3	0.0	
DDS161-XXXX2		PROPULSION SHAFT FAIRINGS	P	0		55W3	0.0	
DDS162-XXXX1		STACK SIZING	P	3		55W3	30.0	
DDS163-XXXX1		SEA CHESTS & HULL OPENINGS	P	3		55W3	30.0	
DDS166-XXXX1		SPONSON DESIGN	P	4		55W3	20.0	
DDS170-0		MAST DESIGNS	P	0	800701	55Y1	0.0	
DDS180-XXXX1		SURFACE SHIP FOUNDATION	P	0		55Y3	0.0	
DDS185-1		FOUNDATIONS DESIGN,ASST.GEAR SHEAVES	P	9	750801	56W22	0.0	
DDS200-1		REQUIREMENTS,SRF.SHIP FUEL ENDURANCE	P	9	820301	56X1	0.0	
DDS221-1		ENG.BOILER INLET&EXH.PRES.LOSS DATA	P	9	721001	56X1	0.0	
DDS243-1		PROPULSION SHAFTING	P	0	600101	56X71	24.0	
DDS243-XXXX2		MAIN PROPULSION SHAFTING SYSTEM	P	0		56X71	39.4	
DDS244-XXXX1		APPLICATION FOR QUIET BALL BEARING	P	3		56X43	10.0	3110
DDS245-XXXX1		CONTROLLABLE PITCH PROPELLERS	P	0		56X72	0.0	
DDS251-1		FORCED DRAFT BLOWERS,DUCT WORK FOR	P	9	350601	56Y22	0.0	
DDS254-1		STEAM CONDENSERS	P	5	531015	56X23	15.0	
DDS300-1		FAULT CURRENT CALCULATIONS,DC-SYSTEM	P	9	701201	56Z2	0.0	
DDS300-2		FAULT CURRENT CALCULATIONS,AC-SYSTEM	P	0	620901	56Z22	10.0	
DDS300-XXXX3		INTERFACE PARAMETER CALCULATION	P	0		56Z22	53.0	
DDS302-1		REQUIREMENTS,MTR&CONTROLER APPS.A-DC	P	4	790503	56Z2	10.0	
DDS304-1		VOLTAGE DROP CALCULATIONS,ELEC.CABLE	P	0	631101	56Z22	26.2	
DDS304-2		RATINGS&CHARACTERISTICS ELEC.CABLE	P	9	840515	56Z22	0.0	
DDS305-1		DESIGNATION&MARKING OF ELEC.SYSTEMS	P	5	700501	56Z2	0.0	
DDS310-1		ELEC.SYS.LOAD & POWER ANALYSIS,	P	9	800701	56Z2	0.0	
DDS311-1		FREQUENCY REGULATION,SHIP SERV.PWR	P	9	701201	56Z2	0.0	
DDS311-2		VOLTAGE REGULATION,SHIP SERV.E.PWR.	P	9	721001	56Z2	0.0	
DDS311-3		PROTECTIVE DEVICES,SHIP.SERV.EL.PWR.	P	5	620901	56Z2	0.0	
DDS313-XXXX1		SUBMARINE BATTERY ENDUR. CALCS.	P	0		56Z21	0.0	
DDS314-1		PROTECTIVE DEVICES.400HZ.SERV.EL.PWR	P	9	770815	56Z2	0.0	
DDS314-4		TEST PROCEDURE,400HZ.ELEC.PWR.SYS.	P	0	800701	56Z22	28.6	
DDS320-XXXX1		ELECTRIC POWER DISTRIBUTION	P	0		56Z22	31.5	
DDS430-1		COMMUNICATION SYSTEMS,INTERIOR	P	4	851218	61X2	0.0	
DDS430-2		PROCEDURES FOR SYNC.SYSTEM LOAD CAP.	P	4	681202	61X2	0.0	
DDS430-3		SHIPBOARD FIRE DETECTION SYSTEM		9	860219		0.0	
DDS505-1		PIPING,FRICTION PRESS.DROP	P	5	600101	56Y3	14.0	
DDS511-1		HEATING,METHOD OF DESC&EQMNT SELECTN	P	3		56Y12	20.0	
DDS511-2		HEAT TRANSFER COEFFICIENTS	P	3	481201	56Y12	50.0	
DDS512-1		VENTILATION,PRESS DROP IN FITTINGS.	P	3	500722	56Y12	50.0	
DDS512-2		VENTILATION DUCTS,SIZE DETERMINATION	P	3	510118	56Y12	30.0	
DDS512-3		DESIGN OF SLOTTED DUCT TERMINALS	P	3		56Y12	20.0	
DDS514-1		CANCELLED -	P	C	840515	56Y1	0.0	
DDS516-1		REFRIGERATING EQUIPMENT,STO&HEAT&SEL	P	3	670201	56Y15	20.0	
DDS522-1		SPRINKLING SYSTEMS,SHIPBOARD	P	1	571105	56Y51	25.0	
DDS531-1		DISTILLING PLANT SIZING DETAILS	P	9	840515	56Y3	0.0	
DDS562-XXXX1		CONTROL SURFACE DESIGN	P	0		55W3	0.0	
DDS562-XXXX2		CONTROL SURFACE STRUCTURAL DESIGN	P	0		55W3	0.0	

SPECIFICATION IMPROVEMENT PROGRAM

DATA CURRENT AS OF 04/22/86

MASTER FILE RECORDS

REPORT NUMBER : 01

DOCUMENTS SORTED BY DOCUMENT TYPE AND DOCUMENT NUMBER

DOC NUMBER		REV		DOCUMENT TITLE	INT	PRI	ISSUE	CODE	COST	FSC
1363776	805	T		COVER,ACCESS,ROUND-AQ-NT-DUCT	P	9	590129	56Y11	0.0	
1363779	805	T	C	LADDERS,PILOT	P	8	680502	56W44	6.0	
1363948	804	T	G	CANCELLED - USE 5184163 AND 5000902	P	C	810715	56W44	0.0	
1363949	805	T	D	FENDER,SHIP,PNEUMATIC	P	M	670718	56W44	0.0	
1372250	S7108			SHIP CABLING MARKING	P	8		61X3	0.0	
1385500	S5101	S	J	EXPANDERS,TUBE,BOILERS,ASSY,DETAILS	P	M	640408	56X6	0.0	
1385500.6	S5101	S	H	EXPANDERS,TUBE,BOILERS,ASSY,DETAILS	P	M	620608	56X6	0.0	
1385500.7	S5101	S	A	EXPANDERS,TUBE,BOILERS,ASSY,DETAILS	P	M	620613	56X6	0.0	
1385501	S9102	T	C	TABLES, TEST FOR VALVES	P	C	630918	56X52	0.0	
1385503	S4823	S	A	STAINERS,BASKET FOR SW SERV 100 PSI	P	9	540707	56Y23	0.0	
1385506	810	S	C	SCHEDULE,HOSE FOR SHIPBOARD SERVICES	P	3	700720	56Y23	0.0	
1385507	810	S	A	FLANGES,BRONZE,USE ON WATER SYSTEMS	P	8	570726	56Y23	0.0	
1385508	S1500	T	C	CANCELLED	P	C	831101	56Y3	0.0	
1385509	S4824	T	C	LOCKING DEVICES VALVES	P	9	581022	56Y23	0.0	
1385510	S4802	T	A	TANK,INSPEC,OIL HEATING DRAINAGE SYS	P	9	531001	56Y3	0.0	
1385511	S5101	S	A	PLATES,MANHOLE,PARTS FOR BOILERS	P	5	530717	56X6	6.0	
1385512	S4824	S	C	VALVES,CAST STEEL,FLANGED,GLOBE,ANGL	P	8	580911	56Y23	0.0	
1385513	S4824	S	E	VALVES,CAST STEEL,FLANGED,GLOBE,ANGL	P	8	600309	56Y23	0.0	
1385514	S4824	S	D	VALVES,1/4 INCH,B-215	P	8	630523	56Y23	0.0	
1385515	S4824	S	D	VALVES,1/2 INCH,B-215	P	8	630523	56Y23	0.0	
1385516	S4824	S	D	VALVES,3/4 INCH,B-215	P	8	630523	56Y23	0.0	
1385517	S4824	S	D	VALVES,1 INCH,B-215	P	8	630523	56Y23	0.0	
1385518	S4824	S	D	VALVES,1-1/4 INCH,B-215	P	8	630523	56Y23	0.0	
1385519	S4824	S	D	VALVES,1-1/2 INCH,B-215	P	8	630523	56Y23	0.0	
1385520	S4824	S	D	VALVES,2 INCH,B-215	P	8	630523	56Y23	0.0	
1385521	S4824	S	D	VALVES,2-1/2 INCH,B-215	P	8	630523	56Y23	0.0	
1385522	S4824	S	E	VALVES,3 INCH,B-215	P	8	630523	56Y23	0.0	
1385523	S4824	S	E	VALVES,3-1/2 INCH,B-215	P	8	630523	56Y23	0.0	
1385524	S4824	S	D	VALVES,4 INCH,B-215	P	8	630523	56Y23	0.0	
1385525	S4824	S	C	VALVES,4-1/2 INCH,B-215	P	8	590917	56Y23	0.0	
1385526	S4824	S	C	VALVES,,5 INCH,B-215	P	8	590917	56Y23	0.0	
1385527	S4824	S	C	VALVES,5-1/2 INCH,B-215	P	8	590917	56Y23	0.0	
1385528	S4824	S	B	VALVES,6 INCH,B-215	P	8	590917	56Y23	0.0	
1385529	S4824	S	B	VALVES,6-1/2 INCH,B-215	P	8	530917	56Y23	0.0	
1385530	S4824	S	C	VALVES,7 INCH,B-215	P	8	630528	56Y23	0.0	
1385531	S4824	S	B	VALVES,7-1/2 INCH,B-215	P	8	630518	56Y23	0.0	
1385532	S4824	S	B	VALVES,8 INCH,B-215	P	8	630518	56Y23	0.0	
1385533	S4824	S	B	VALVES,8-1/2 INCH,B-215	P	8	630518	56Y23	0.0	
1385534	S4824	S	B	VALVES,9 INCH,B-215	P	8	630518	56Y23	0.0	
1385535	S4824	S	B	VALVES,9-1/2 INCH,B-215	P	8	630518	56Y23	0.0	
1385536	S4824	S	C	VALVES,10 INCH,B-215	P	8	630518	56Y23	0.0	
1385537	S4804	T	D	CANCELLED - NO REPLACEMENT DOCUMENT	P	C	710203	56Y3	0.0	
1385540	803	S	F	VALVES,BRONZE FLANGED,B-135,GLOBE	P	9	790904	56Y23	0.0	
1385571	S4824	S	B	VALVES CAST STEEL FLANGED %B-137<	P	8	540611	56Y23	0.0	
1385612	4824		F	CANCELLED - USE 2177917-803	P	C	820110		0.0	
1385617	810	T	B	VENT,CONDENSERS,DRY TYPE	P	4	571029	56Y2	10.0	
1385618	S5904	S	A	CANCELLED	P	C	540405	56Y15	0.0	

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SPECIFICATION IMPROVEMENT PROGRAM — DATA CURRENT AS OF 05/05/86

MASTER FILE RECORDS, INTEREST = PREPARER — REPORT NUMBER: 19

DOCUMENTS SORTED BY CODE, PRIORITY, TYPE, AND DOC NUMBER

DOCUMENT NUMBER	REV	ISSUED	DOCUMENT TITLE	INT	PRI	CODE	COST	FSC	TO SCB	VALID
GSS-503		750101	PUMPS	P	0	56Y21	0.0		8612	
GSS-514			AIR CONDITIONING EQUIPMENT	P	0	56Y1	0.0		8709	
GSS-521		840101	SERVICE SYSTEMS, SEAWATER	P	0	56Y51	0.0		8704	
GSS-532		850415	SERVICE SYSTEMS, FRESH WATER	P	0	56Y3	0.0		8505	
GSS-555		840101	FIRE EXT SYSTEM	P	0	56Y51	0.0		8704	
GSS-593		840101	ENVIRONMENTAL POLLUTION CONTROL	P	0	56Y36	0.0		8710	
MIL-F-1183	H	830617	FITG TUB-BRONZ SILV BRAZ	P	0	56Y23	0.0	4730	8703	
MIL-F-1183/3		830617	FITTING TUBE	P	0	56Y23	0.0	4730	8703	
MIL-F-1183/7		830617	FITTING TUBE	P	0	56Y23	0.0	4730	8703	
MIL-F-1183/8		830617	FITTING TUBE	P	0	56Y23	0.0	4730	8703	
MIL-F-1183/10		830617	FITTING TUBE	P	0	56Y23	0.0	4730	8703	
MIL-F-1183/11		830617	FITTING TUBE	P	0	56Y23	0.0	4730	8703	
MIL-V-1189	3C	590501	VALVE, GATE, BRONZE, FLANGED ENDS	P	0	56Y23	0.0	4820	8706	8412
MIL-A-5912			AUX.TURB.OVERSPEED PROTECTION SYS.	P	0	56Y22	0.0		8702	
MIL-C-XXX98			COUPLING, PIPE, HEAT RECOVERABLE	P	0	56Y23	0.0	4730	8701	
MIL-H-XX118			HOSE, THERMOPLASTIC FIBER REINFORCED	P	0	56Y23		4720	8802	
MIL-P-XX134			PUMP,CENTRIFUGAL,CANNED	P	0	56Y21	0.0	4320	0	
MIL-V-XX168			VALVES,(MONEL),BOILER BLOW	P	0	56Y23	0.0	4820	8702	
MIL-C-XX180			COMPRESSOR ROTARY MOTOR DRIVEN	P	0	56Y22	4.0	4310	0	
MIL-M-XX192			MONITORING SYS.II CENTRAL ATMOSPHERE	P	0	56Y13	0.0		8709	
MIL-F-XX196			FLASKS, COMPRESSED AIR,SPHERICAL	P	0	56Y23	0.0	8120	0	
MIL-G-XX229			GLASS BULB CLOSED SPRINKLER HEADS	P	0	56Y51	0.0		8704	
MIL-P-XX230			PURIFIERS,SOLIDS EJECTING(SLFCLN)	P	0	56Y32	0.0	4330	8606	
MIL-F-XX231			FITTINGS,BTWLD,SMLS,NI-CR-MO-CB ALY	P	0	56Y23	0.0	4730	0	
MIL-N-XX235			NOZZLE HOLDDOWN DEVICE,1 1/2 & 2 1/2	P	0	56Y51	10.0		0	
MIL-S-XX239			SEALS, MECHANICAL	P	0	56Y21	0.0	4320	0	
MIL-D-XX244			DEHYDRATOR,PRESS AIR,COND-FILTER LOW	P	0	56Y22	0.0	4460	0	
MIL-D-XX247			DISTRIBUTED ISOLATION MATERIAL	P	0	56Y6	0.0	5330	0	
MIL-V-XX259			VALVE,FLOATING BALL CHECK	P	0	56Y2	0.0		0	
MIL-S-XX269			STEAM TURBINE ELECTRONIC SYSTEM	P	0	56Y22	0.0	2825	0	
MIL-T-15301		700615	TANKS, PRESSURE, 600 PSI	P	0	56Y23	0.0	4310	0	8401
MIL-E-15330	1D	780121	EXPANSION JOINT, PIPE FIRE RETARDANT	P	0	56Y23	0.0	4730	0	8306
MIL-V-15508	1B	841210	VALVES, REMOTE CONTROL	P	0	56Y23	35.0	4810	0	
MIL-R-15917		670531	REEL, FUELING HOSE, MANUAL	P	0	56Y23	0.0	4930	0	8108
MIL-G-16265		751118	GASKETS, METALLIC-ASBESTOS	P	0	56Y23	0.0	5330	8712	8104
MIL-P-16359	2C	850531	PUMP CENTRIFUGAL GAS.ENG(P/PE 250)	P	0	56Y21	0.0	4320	8710	8105
MIL-F-16552		640720	FILTERS AIR ENVIRONMENTAL CONTROL	P	0	56Y12	0.0	4130	8703	8204
MIL-V-17360	2D	670201	VALVES CYLINDER GAS CARB	P	0	56Y51	0.0	4210	0	8007
MIL-V-17501		760324	VALVES GLOBE HYDRAULIC	P	0	56Y51	0.0	4810	8703	8106
MIL-M-17508		770222	MOUNTS,RESILIENT,TYPES 6E2000,6E9	P	0	56Y6	0.0	5340	0	8208
MIL-T-17523	1D	820601	TURBINE, STEAM, AUXILIARY	P	0	56Y22	0.0	4320	8702	
MIL-V-17547		760911	VALVE CHECK BRONZE,LP AIR,WATER,OIL	P	0	56Y23	0.0	4820	8706	8204
MIL-P-17840	C	860310	PUMPS CENTRIFUGAL CLOSE-COUPLED	P	0	56Y21	0.0	4320	8612	8204
MIL-P-17881		721031	PUMPS CENTRIFUGAL,BOILER FEED	P	0	56Y21	0.0	4320	8704	8105
MIL-V-18116		780320	VALVES GATE CAST STEEL	P	0	56Y23	0.0	4820	8709	
MIL-P-18144		640121	PUMPS CENTRIFUGAL CARGO	P	0	56Y21	0.0	4320	8603	8205
MIL-P-18472	5F	850822	PUMPS CENTRIFUGAL CONDENSATE	P	0	56Y21	0.0	4320	8701	8204

SPECIFICATION IMPROVEMENT PROGRAM

IN-PROCESS RECORDS

DATA CURRENT AS OF 04/18/86

REPORT NUMBER: 15

DOCUMENTS SORTED BY CODE, PRIORITY, DOC TYPE, AND DOC NUMBER

DOC NUMBER / TITLE / COMMENTS	PRI	CODE	ENGINEER ACT	EXTNS	TAR FUNDINGS	TASK START	DRAFT TO55Z	CIRCULATION REVIEW	CUT-OFF	COMMENTS CODE	TO 55Z	TO SCB	ISSUE DATE
GSS-514 AIR CONDITIONING EQUIPMENT	0	56Y1				0 *	8609	0	0	0	0	8709	
MIL-M-XX192 MONITORING SYS, II CENTRAL ATMOSPHERE	0	56Y13	VERDERAME N		WR03551.2 1	850303*	8609	0	0	0		8709	
MIL-F-16552 FILTERS AIR ENVIRONMENTAL CONTROL	0	56Y12	GOODIS R			0 *	8603	8509*	8512*	0	0	8703	640720
MIL-F-18953 FANS VANEAXIAL AND TUBEA	0	56Y11	SAAVEDRA	2	1	0 0*	8110*	8303*	8304*	8305*	0	0	700928
MIL-F-18953 FANS VANEAXIAL AND TUBEA	0	56Y11	SAAVEDRA R			0 *	8210*	8303*	8305*	8305*	0	0	700928
MIL-A-19865 A/C MECHANICALLY REFRIGERATED	0	56Y15	MEROLD R	4	5A714 1	830101*	8601	0				8701	660208
MIL-H-22881 HEATERS, WATER, STEAM HEATED	0	56Y15	MEROLD R	1	2	850202*	8703	0	0	0		8803	711013
MIL-P-23638 PLANT FOR PRODUCING OXYGEN	0	56Y14	WANGER			0 *	8603*	0	0	0	0	0	631011
MIL-S-23639 SYSTEM FOR LIQUID OXYGEN NITROGEN	0	56Y14	SIKES R		1	850404*	8610	0	0	0		8710	721011
MIL-P-23917 PRECIPITATOR VENT FOG	0	56Y13	RICHTER R	2	1	840202*	8505A	0	0	0		8706	670621
MIL-R-24085 REFRIGERATING UNIT	0	56Y15	GOODHUE R	2	50888 1	810416*	8607	0*	0*	8504*	0	8707	751017
MIL-P-24384 PLANT, FOR PRODUCING LIQUID	0	56Y14	SIKES R		1	850404*	8608	0	0	0		8708	771004
MIL-M-24605 METER, ELECTRONIC, WET BULB GLOBE TEMP	0	56Y12	PRIEST R	3	P001658 2	830606*	8606	0	0	0		8706	810522

DATE SUFFIX KEY: DRAFT TO55Z- "*" = DOCUMENT RECEIVED BY 55Z, OTHERWISE ACTION STILL REQUIRED.
TO SCB- "*" = DELIVERED TO SCB, "A" = APPROVED, "S,R,K" = APPROVED W/CHANGES, "W" = WITHDRAWN.
OTHER DATES- "*" = EVENT HAS BEEN COMPLETED, OTHERWISE ACTION STILL REQUIRED.

SPECIFICATION IMPROVEMENT PROGRAM

DATA CURRENT AS OF 01/12/86

MASTER FILE RECORDS

REPORT NUMBER : 93

DOCUMENT TYPES 1-' WITH INTEREST P AND PRI NOT C. SORTED BY CODE, ISSUE DATE, DOCTYPE.

DOC NUMBER	REV	DOCUMENT TITLE	INT	PRI	ISSUE	VALID	CODE	COST	FSC
MIL-A-18001	J	ANODES CORROSION PREVENTIVE ZINC	P	2	831125		05M1	10.0	5340
QQ-B-654	1A	BRAZING ALLOYS, SILVER	P	9	840210		05M1	0.0	3439
MIL-D-24483	3A	DECK COVERING, SPRAY-ON, NONSLIP	P	8	840402		05M1	0.0	5610
DOD-P-24631		PAINT,CAMOUFLAGE,SUBS,GEN	P	9	840413		05M1	0.0	8010
DOD-P-24631/1		PAINT,CAMOUFLAGE,SUBS,FORM. 184	P	9	840413		05M1	0.0	8010
DOD-P-24631/2		PAINT,CAMOUFLAGE,SUBS,FORM. 185	P	9	840413		05M1	0.0	8010
DOD-P-24631/3		PAINT,CAMOUFLAGE,SUBS,FORM. 186	P	9	840413		05M1	0.0	8010
DOD-P-24631/4		PAINT,CAMOUFLAGE,SUBS,FORM. 187	P	9	840413		05M1	0.0	8010
DOD-P-24631/5		PAINT,CAMOUFLAGE,SUBS,FORM. 188	P	9	840413		05M1	0.0	8010
DOD-P-24631/6		PAINT,CAMOUFLAGE,SUBS,FORM. 189	P	9	840413		05M1	0.0	8010
MIL-E-15090	2 C	ENAMEL, EQUIP.LIGHT GRAY	P	8	840725		05M1	0.0	8010
DOD-E-24635		ENAMEL,GRAY,SILICONE ALKYD COPOLYMER	P	9	840913		05M1	0.0	8010
MIL-S-24528	B	BARS AND FORGINGS,STEEL,NICHMO	P	9	841221		05M1	0.0	9510
DOD-E-24607	3	ENAMEL, SEMI-GLOSS (METRIC)	P	9	841228		05M1	0.0	8010
MIL-D-24613	2	DECK COVERING MAT, INT.	P	9	850301		05M1	0.0	5610
MIL-D-3134	6H	DECK COVERING,TYPE II	P	9	850313		05M1	0.0	5610
MIL-D-3135	3G	DECK COVERING UNDERLAY MATERIALS	P	9	850408		05M1	0.0	5610
MIL-P-22299		PAINT FORMULA 134	P	9	850615		05M1	0.0	8010
MIL-P-22298	A	PAINT, BLACK FORMULA 133	P	9	850617		05M1	0.0	8010
DOD-P-24648		PRIMER COATING ZINC DUST PIGMENTED	P	9	850716		05M1	0.0	8010
DOD-C-24654		COATINGS,EPOXY,POTABLE WATER TANKS	P	9	850725		05M1	0.0	8010
DOD-E-18210		ENAMEL, INTERIOR, DECK, RED, NO 23	P	8	850814	8304	05M1	3.0	8010
DOD-C-24596	3	COATING COMPOUNDS, FIRE PROTECTIVE	P	9	850823		05M1	30.0	8010
DOD-P-23236	1 A	PAINT COATING SYS,STEEL SHIP	P	0	850826		05M1	25.0	8030
MIL-P-24351		PRIMER, COATING, BLUE, NO. 6N35-2	P	9	850827		05M1	0.0	8010
DOD-P-24655		PAINT,UNDERWATER&HULL,ANTICORROSION	P	9	850920		05M1	0.0	8010
MIL-P-15145		PAINT, ZINC DUST, FW TANKS	P	9	850920		05M1	0.0	8010
MIL-P-15931	1E	PAINT, ANTI-FOULING VINYL	P	0	851025		05M1	0.0	8010
MIL-A-15206		ALUMINUM STEARATE	P	9	860127	8202	05M1	3.0	6810
DOD-P-24647			P	9	860130		05M1	0.0	8010

S I P I S

REFERENCE TIERING PRINTOUT EXAMPLE FROM "ORACLE"

SPEC	LEVEL
MIL-T-7928	1
MIL-W-22759	2
TT-I-735	3
PPP-P-1892	4
PPP-D-705	5
TT-E-485	6
VV-L-800	6
PPP-D-732	5
TT-E-485	6
TT-E-516	6
VV-L-800	6
PPP-D-711	6
PPP-D-736	6
MIL-G-432	6
MIL-STD-105	6
MIL-STD-129	6

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ATTACHMENT 6

COMPUTER GENERATED ACQUISITION DOCUMENTS SYSTEM (CGADS)

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS ELECTRONIC SYSTEMS DIVISION (AFSC)
HANSCOM AIR FORCE BASE, MASSACHUSETTS 01731-5000

REPLY TO ATTN OF: ALE (R. O'Neil)

7 MAR 1986

SUBJECT: Request for Information on CGADS

TO: Hq AFSC/PLEQ

1. Reference the following letters:

a. Office of Assistant Secretary of Defense Memo, "Study of Specifications and Standards Related Computer Systems," 19 Feb 86.

b. Hq USAF/RDXM Ltr, same subject, 26 Feb 86.

c. Hq AFSC/PLEQ endorsement to 1.b above.

2. Please provide ESD/ALE (Mr. O'Neil) a copy of the responses from the other data base users. The following information is provided in response to referenced requests. The questions, copied from reference 1.a., Attachment 1, are answered in the same order they were asked.

Q1. What was the system originally designed to do?

A1. CGADS is a software program used to prepare drafts of system acquisition and management documents. Users do not need to know anything about computer programming and minimal system acquisition experience is adequate. Requirements are tailored and uniquely created for any acquisition phase. Duplication is discouraged by providing guidance to put tasking in the the most appropriate document, i.e. SOW, specification, CDRL, or contract schedule etc. For example, technical requirements should appear in the specification only and not be repeated anywhere else.

Q2. What information is presently stored (e.g. document designation, references, approval date, etc.)?

A2. CGADS stores questions, answers, action messages, and actual paragraph text. References to applicable MIL-standards/specifications and staff specialists OPRs are identified.

Q3. Who are the system users, i.e. acquisition/procurement offices, standardization managers, specification writers, maintenance, logistics?

A3. Primary users are acquisition/procurement offices which includes engineering, R&M, configuration, data, logistics, etc. CGADS assists standardization managers by carrying out tailoring. Specification writers may use it as a reference to understand how the SOW and CDRL were created. Personnel may also access the EED plan.

Q4. What are the sources for data included in the base?

A4. ESD staff specialists create the data base information. For example, the staff systems engineer writes the system engineering section of the SOW.

Q5. What hardware is used for the system?

A5. System hardware consists of a DEC VAX 11/780 mini-computer, VT-100 terminal or compatibles, and dedicated word processors (e.g., Wang, CPT).

Q6. What types of programs/languages are used?

A6. FORTRAN 77

Q7. Is internal or external support used to load and maintain the data base?

A7. We do not use any other program to load CGADS. Currently only contractor engineers can load and maintain the data base. We intend to have clerks trained to do routine data base updating.

Q8. What output products are obtained from the system?

A8. Statement of Work - all phases.
CDRL
Program Management Plan
SEO Plan
Reliability Centered Maintenance (RCM) - develop and track scheduled maintenance.
Output is usually a printed copy which may first be viewed on a CRT before printing. Staff points of contact and applicable references (MIL-standard/specifications) are identified. Output may be transferred to dedicated word processors to be completed.

Q9. Is it a single user or mulit-user system?

A9. CGADS is a multi-user system. Anyone who can access the system (see #11) may use it simultaneously with other users.

Q10. What procedures are used to maintain the data base?

A10. Staff specialists update the data base text. The system administrator approves data base changes. A support contractor incorporates approved changes into the CGADS data base. (See also #7)

Q11. Is there remote access to the system? What communication links are used?

A11. Remote access is accomplished by dialing any one of several phone numbers via voice quality autovon or commercial phone lines. See #5 for hardware requirements.

Q12. Are there planned changes to the system to expand it or to add enhancements?

A12. In the near term, we plan to modify CCADS so that a clerk may make routine updates to the data base (see #7). At that time, we will update the data base to include the effects of DOD-STD-2167, Defense System Software Development, 4 June 85, and other policy changes. Expansion of CCADS to prepare the system specification is the next planned major effort. Interface with other systems such as Contract Data Management System (CDMS) are being considered.

Q13. Is system documentation available?

A13. Limited documentation is available.

a. Source Code and data base listing
b. Description and Operation Booklet
c. Requirements Documents (not authenticated)
d. Users Manual (not authenticated)

Q14. Is a data base management system (DBMS) used?

A14. No.

Robert M. Stanton

ROBERT M. STANTON
Director, Engineering and Test
Deputy for Acquisition Logistics
and Technical Operations

Synopsis of

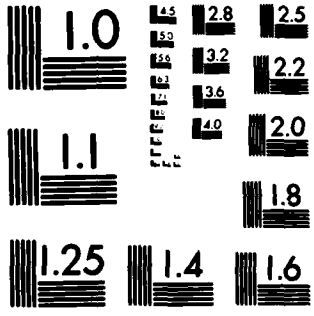
Computer Generated Acquisition Documents System (CGADS)

CGADS is an automated software system used to generate technical and mangement acquisition documents, such as the SOW and CDRL. No computer experience and minimum acquisition experience is required. Using autovon or commercial telephone lines, local ESD and remote access is possible. Documents containing minimum requirements can be prepared in minutes and are specifically tailored to individual acquisitions. ESD staff prepared the data base and simple questions/answers for each of their specialties. Users answer these questions by replying Yes, No, or Undecided which creates the text. They may view what they have created on their local terminal. The documents may be printed on local or remote printers or may be Transferred to a dedicated word processor for completion

The CGADS data base must be updated by staff to reflect new policy and to simplify its maintenance so that other than an engineer/programmer may update it. The software may be extended to create other acquisition products having DOD wide application or tailor new or existing documents for unique service/agency use.

AD-A171 326 PROCEEDINGS OF THE DOD AUTOMATED STANDARDIZATION WORKSHOP HELD IN ARLINGT..(U) KILKEARY SCOTT AND ASSOCIATES INC ARLINGTON VA 13 MAY 86 N00140-85-D-E034 2/3

UNCLASSIFIED F/G 5/2 NL



SYSTEM IDENTIFICATION

COMPUTER GENERATED ACQUISITION DOCUMENTS SYSTEM (CGADS)

CGADS OPR. RICH O'NEIL. ESD/PLEA. X2843

CGADS OPERATIONS. FRED SANTINO. ESD/SIP. X5745

"HELP" DESK. X5573

USAF

AIR FORCE SYSTEMS COMMAND (AFSC)

ELECTRONIC SYSTEMS DIVISION (ESD)

HANSCOM AFB. MA 01731-5000

(617) 377-XXXX

AV 478-XXXX

SYSTEM DESIGN

- PREPARES ACQUISITION AND MANAGEMENT DOCUMENTS
- SPECIFIES MINIMUM REQUIREMENTS
- USER FRIENDLY
- PLANNED UPDATES AND EXPANSIONS

SYSTEM CHARACTERISTICS AND USAGE

- DESCRIPTION
- USERS
- PRODUCTS
- OPERATIONS

STATUS AND RECOMMENDATIONS

- **STATUS**
  - CGADS NOW USED DOD WIDE

- **RECOMMENDATIONS**
  - ADD MORE CGADS PRODUCTS FOR DOD
  - TAILOR CGADS FOR SERVICE/AGENCY USE
  - ADD ENHANCEMENTS

CHART #1 SYSTEM IDENTIFICATION

CALL ME FOR GENERAL QUESTIONS ABOUT CGADS

CALL FRED SANTINO FOR TECHNICAL QUESTIONS SUCH AS COMPATIBILITY OF YOUR LOCAL EQUIPMENT WITH ESD'S

CALL THE "HELP DESK" IF YOU THINK YOU ARE DOING EVERYTHING ALL RIGHT, BUT CGADS APPEARS NOT TO BE WORKING.

CHART #2 SYSTEM DESIGN

PREPARES ACQUISITION AND MANAGEMENT DOCUMENTS

SUCH AS SOW, CDRL AND OTHER TECHNICAL AND MANAGEMENT PLANS

DESIGNED TO SIMPLIFY AND AUTOMATE RFP PREPARATION

STANDARDIZES FORMAT

SPECIFIES MINIMUM REQUIREMENTS

REQUIREMENTS ARE TAILORED

UNIQUE RFP CREATED FOR EACH ACQUISITION

USER FRIENDLY

PERSONS WITH NO COMPUTER EXPERIENCE AND MINIMUM ACQUISITION EXPERIENCE CAN USE IT.

PLANNED UPDATES AND EXPANSIONS

ADD ENHANCEMENTS

ADD OTHER DOCUMENTS

ASSIST IN DOD EXPANSION

CHART #3 SYSTEM CHARACTERISTICS AND USAGE

DESCRIPTION

INFORMATION STORED: QUESTIONS, ANSWERS, ACTION MESSAGES, ACTUAL PARAGRAPH TEXT

ORIENTED TO ANSWERING SIMPLE YES OR NO QUESTIONS

APPLICABLE MIL-SPECS, STDS IDENTIFIED BY TITLE/DATE

APPROPRIATE DID'S FOR EACH TECHNICAL AREA IDENTIFIED

STAFF OPR'S NAME/PHONE GIVEN FOR EACH TECHNICAL SPECIALITY

WHO CREATES DATA: ESD STAFF SPECIALISTS CREATE THE TEXT FOR THEIR SPECIALTY

AD HOC: USERS CANNOT FORMULATE THEIR OWN QUESTIONS. MUST USE ONLY THE QUESTIONS IN CGADS.

STRUCTURE: THERE IS NO SEPARATE DATA BASE. DATA BASE IS EMBEDDED IN THE CGADS SOFTWARE.

EDITING: MUST BE TRANSFERED TO A DEDICATED WORD PROCESSOR.

MAINTAIN DATA BASE: STAFF SPECIALISTS UPDATE THE DATA BASE TEXT. I'M THE SYSTEM ADMINISTRATOR AND APPROVE THE FORM OF THE CHANGES. A SUPPORT CONTRACTOR INCORPORATES APPROVES CHANGES INTO THE CGADS DATA BASE.

DOCUMENTATION AVAILABLE:
A. SOURCE CODE AND DATA BASE LISTING
B. DESCRIPTION AND OPERATION BOOKLET
C. REQUIREMENTS DOCUMENTS (NOT AUTHENTICATED)
D. USERS MANUAL (NOT AUTHENTICATED)

SYSTEMS USERS: PRIMARY USERS ARE ACQUISITION/PROCUREMENT OFFICES WHICH INCLUDES ENGINEERING, R&M, CONFIGURATION, DATA, LOGISTICS, ETC. CGADS ASSISTS STANDARDIZATION MANAGERS BY CARRYING OUT TAILORING. SPECIFICATION WRITERS MAY USE IT AS A REFERENCE TO UNDERSTAND HOW THE SOW AND CDRL WERE CREATED. PERSONNEL MAY ALSO ACCESS THE EEO PLAN.

OPERATIONS:

OPERATES ON THE ESD VAX 11/780 MINI-COMPUTER

REMOTE ACCESS

DIAL AV 478-XXXX OR (617) 377-XXXX :2102, 2231, 2368, 2454

TYPE ESDVAX, NO SPACES. HIT CARRIAGE RETURN ONCE. HEAR TONE.

PROMPT USER NAME: TYPE ESDRFP, NO SPACES. HIT CARRIAGE RETURN ONCE.

PROMPT PASSWORD: TYPE CGADSUSER, NO SPACES. HIT CARRIAGE RETURN ONCE. I REQUESTED THIS PROMPT BE REMOVED

EQUIPMENT NEEDED

VT-100 TERMINAL OR COMPATIBLE

DEDICATED WORD PROCESSOR, IF WANT TO DOWNLOAD AND DO WORD PROCESSING WITH CGADS OUTPUT

PRODUCTS

1. SOW/CDRL FOR THE CONCEPTUAL PHASE
2. SOW/CDRL FOR THE VALIDATION

3. SOW/CDRL FOR THE FULL SCALE DEVELOPMENT
4. SOW/CDRL FOR THE PRODUCTION
5. SOW/CDRL FOR THE DEPLOYMENT
6. RELIABILITY CENTERED MAINTENANCE (RCM) ANALYSIS
7. MULTI-YEAR AFFIRMATIVE ACTION PROGRAM MINI-PLAN
8. PROGRAM MANAGEMENT PLAN
9. ACQUISITION PLAN
10. TEST AND EVALUATION PLAN (TEMP)

CHART #4 STATUS AND RECOMMENDATIONS

STATUS:

CGADS NOW USED DOC WIDE

AIR FORCE
NAVY
ARMY
GOV'T AGENCIES

WE HAVE AN OPERATIONAL SYSTEM AND HAVE A CONTRACTOR ON BOARD TO ASSIST US.

RECOMMENDATIONS:

ENHANCEMENTS

ON LINE EDITING

SIMPLIFY DATA BASE UPDATING - BY DATA ENTRY CLERK VS ENGINEER/PROGRAMMER

UPDATE DATA BASE - NEW POLICY

ADD MORE PRODUCTS

TASK ORDERS, SYSTEM ENGINEERING TECHNICAL ASSISTANCE (SETA) CONTRACTS

SOURCE SELECTION FACTORS AND STANDARDS

INSTRUCTIONS FOR PREPARATION OF PROPOSALS (IFPP)

SYSTEM SPECIFICATION ("A" SPEC)

OPERATIONS AND MAINTENANCE (O&M) RFPs.

TAILOR CGADS FOR SERVICE/AGENCY USE. NOTE DATA BASE IS EMBEDDED IN THE SOFTWARE.

PRESENTLY, ESD CAN ONLY PROVIDE UNMODIFIED CGADS SOFTWARE AND WHAT DOCUMENTATION WE HAVE. EACH USER DO WHAT THEY WISH WITH IT.

ESD DOCUMENT CGADS MORE FULLY. ESD MAKE AVAILABLE NEW DOCUMENTATION AND UNMODIFIED CGADS SOFTWARE.

ESD, THROUGH ITS CONTRACTOR, MODIFY CGADS S/W FOR SERVICE/AGENCY UNIQUE USE. EACH AGENCY FUND ESD CONTRACTOR EFFORT.

TECHNICAL AND MANAGERIAL SUPPORT ENVIRONMENT/DOCWRITER (TEMSE/DOCWRITER)

DATA BASE TOPICS

1. The TEMSE/Docwriter system was originally designed to aid the preparation of A-level specifications, in accordance with MIL-STD 490, and Statements of Work. Soon after start of development it was generalized to aid in the preparation of any document with numbered paragraphs.

2. Information stored falls in three categories:

a. High level tutorial on SOW preparation.

b. Description and by-paragraph tailoring guidance of MIL-STDs.

c. Technical and managerial support information for each paragraph of the document in preparation.

d. Specification, CDRL an WBS Modules are under development and close to completion.

3. TEMSE users are individuals in or supporting acquisition or procurement offices who are preparing SOWs, CDRLs, System Specifications, and other structured documents such as Computer Resources Integrated Support Plans (CRISPs).

4. The sources of data in the Corporate Memory data base are the acquisition and logistics staff personnel.

5. TEMSE runs on IBM mainframes and can be transported to an IBM PC AT/370. The potential to rehost to a Zenith PC AT is under investigation.

6. TEMSE is programmed in PASCAL, PL/1, and SPITBOL.

7. External support to load and maintain the data base is currently provided by an FCRC, The Aerospace Corp.

8. SOWs and CDRLs have been generated and made contractural documents. A series of eleven CRISPs are currently in preparation.

9. TEMSE is a multi-user system.

10. Configuration control banners label each corporate memory data base field as a means to control the contents of the data base and indicate currency of the information to users.

11. The system can be accessed remotely with ASCII terminals via commercial telephone lines.

12. TEMSE is a multi-faceted operational tool. There are minor enhancements in progress.

13. A copy of the TEMSE Users Manual accompanies this letter.

14. TEMSE contains its own tri-structural, mechanical DBMS which was designed to accomodate unlimited expansion of paragraphs and subparagraphs of document as they evolve, expand, and are restructured.

SYNOPSIS TEMSE* DOCWRITER

1. SYSTEM IDENTIFICATION

The name of this system is TEMSE/DOCWRITER. The system point of contact for design aspects is Mr. A. Matt, the user point of contact is Ms. V. Sugar, and the system manager is Mr. M. Lubofsky; all from The Aerospace Corporation. The Space Division Program Manager is Mr. Gerald Hyman, SD/AL.

2. SYSTEM DESIGN

TEMSE is designed to help write and manage structured documents including specifications, CDRLs, SOWs, and WBS. In addition, the system is a repository of corporate knowledge and will support and augment a variety of training applications.

What makes TEMSE unusual and especially useful is its capability to enter and store information related to each requirement along side the actual text of the requirement itself. It is a user-friendly, menu-driven system which is designed for a person with little computer experience.

Planned changes include studying the migration to the PC, optimizing the runtime efficiency, and improving the audit trail capability.

3. SYSTEM USERS

Prime users are acquisition managers who must prepare structured documents for general and contractual application. The system has been used to prepare SOWs, CDRLs, specs, CRISPs, and application program users' manuals.

4. SYSTEM DESCRIPTION

The corporate memory database is comprised of staff analysis of acquisition management systems, DIDs, tutorials, and specimen paragraphs from a variety of documents.

In addition to generating standard and user-defined contract-ready documents, the system provides traceability and verification matrices and accountability, sort and content analysis reports.

The system is multi-user, permitting remote access using standard phone lines. The system provides both data processing and word processing capabilities and is mainframe-based.

5. RECOMMENDATIONS

This system was recommended for DOD-wide application by the Inspector General in their laudatory write-up. The system can be effectively used to promote streamlining, tailoring, and standardization because of its wide variety of applications as a managerial tool for the creation and control of requirements for all DOD activities.

*Technical and Managerial Support Environment

System Identification

- TEMSE/DOCWRITER
  - SYSTEM POINT OF CONTACT:
    A. MATT, THE AEROSPACE CORPORATION
  - USER CONTACT:
    V. SUGAR, THE AEROSPACE CORPORATION
  - SYSTEM MANAGER:
    M. LUBOFSKY, THE AEROSPACE CORPORATION
  - SPACE DIVISION MANAGER:
    G. HYMAN, SD/AL

System Design

- TEMSE IS AN INTEGRATED WORD PROCESSOR, DBMS*, AND REPORT GENERATOR
  - AUTHOR AND MANAGE STRUCTURED DOCUMENTS
  - REPOSITORY FOR CORPORATE KNOWLEDGE
  - TRAIN ACQUISITION MANAGERS

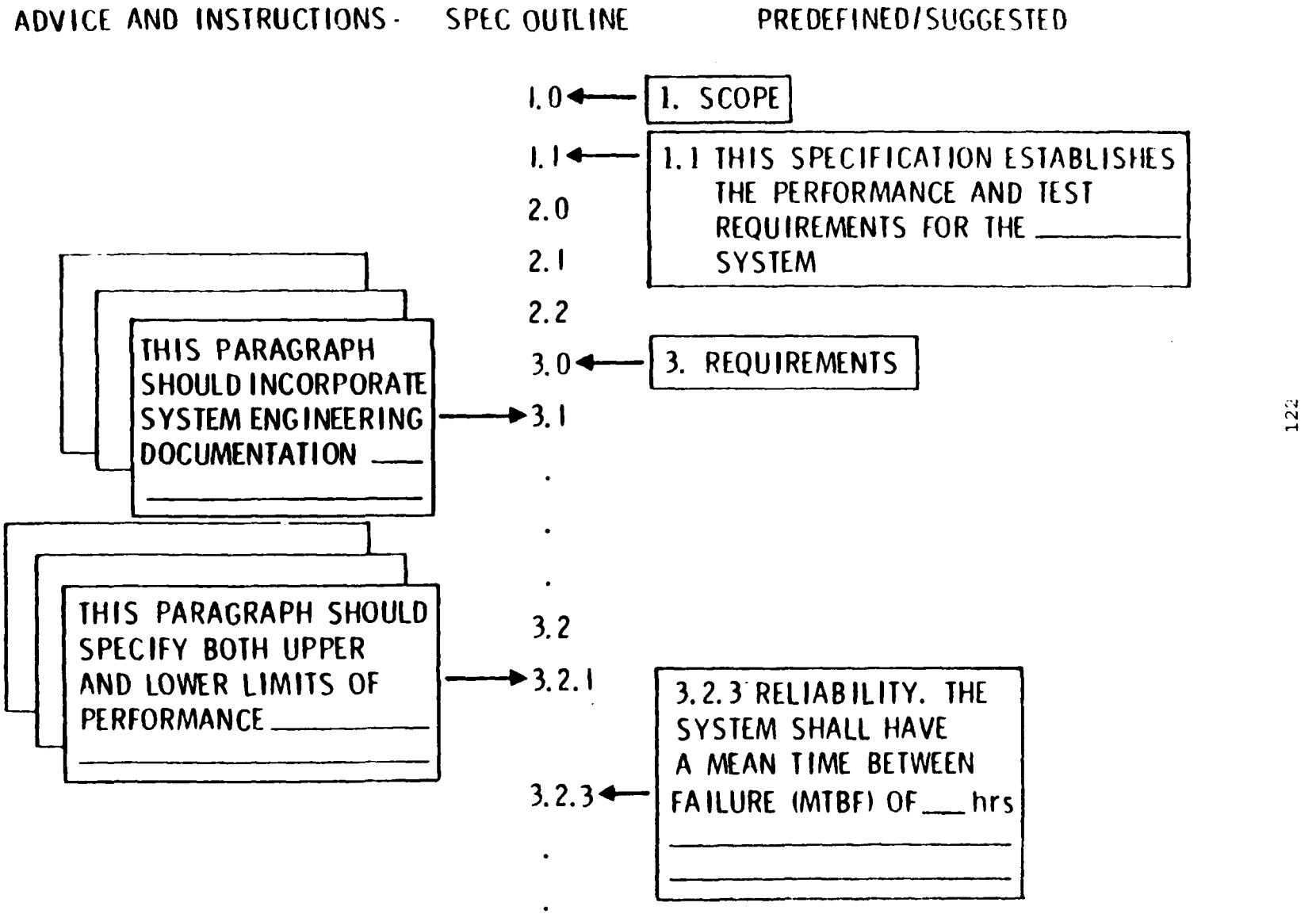
*DBMS = Data Base Management System

System Design

- CREATES STRUCTURED DOCUMENTS
- PROVIDES TUTORIALS ON WRITING SOWs, SPECS, AND CDRLs
- ALLOWS MANAGERS TO WRITE ADVICE TO AUTHORS
- PROVIDES THE CAPABILITY FOR A MANAGER TO MONITOR THE WRITING OF HIS DOCUMENT
- PRINTS DOCUMENTS, MATRICES, MANAGERIAL REPORTS
- GENERATES SORT REPORTS
- PERFORMS CONTENT ANALYSIS
- MAINTAINS AUDIT TRAIL

G2812

System Specification Skeleton



System Design

STATEMENT OF WORK (SOW) TEMPLATE

TECHNICAL	DOCUMENT REVISION, NOTICE, AMENDMENT NUMBERS AND DATES DOCUMENT TAILORING INSTRUCTION ASSOCIATED DATA: CDRL SEQUENCE NUMBERS
MANAGERIAL	PARAGRAPH AUTHOR — NAME/OFFICE/PHONE RATIONALE/REASON FOR CITING DOCUMENT TAILORING SOURCE — NAME/OFFICE SYMBOL/PHONE TAILORING RATIONALE/REASON RATIONALE/REASON FOR EACH CDRL ITEM OPEN ISSUES
CORRELATION/ TRACEABILITY	PROGRAM BREAKDOWN STRUCTURE CWBS A-LEVEL SPECIFICATION B-LEVEL SPECIFICATION(S) PROPOSAL EVALUATION CRITERIA

System Design

SYSTEM SPECIFICATION TEMPLATE*

TECHNICAL	PARAGRAPH TEXT VERIFICATION METHOD(s)
MANAGERIAL	NAME/ORGANIZATION/PHONE SCHEDULE STATUS SUBSTANTIATING STUDIES
CORRELATION	TRACEABILITY TO HIGHER LEVEL SPECIFICATIONS INTERNAL/EXTERNAL INTERFACES RECOMMENDED SOW TASKS/CDRL ITEMS PROPOSAL PREPARATION INSTRUCTIONS PROPOSAL EVALUATION CRITERIA
CONFIGURATION MANAGEMENT	SPECIFICATION CHANGE NUMBER (SCN) CONTRACT AUTHORIZATION (ECP) EFFECTIVE DATE

•
•
•

*For a given document DOCWRITER provides up to 64 template elements

System Design

- ENHANCEMENTS
  - INSTALL TURBO TEMSE
  - IMPROVE AUDIT TRAIL
  - STUDY MIGRATION TO PC

System Users

- PROGRAM OFFICERS AND ENGINEERING SUPPORT
  - PREPARE STRUCTURED DOCUMENTS FOR CONTRACTUAL APPLICATION
  - PREPARE INTERNAL DOCUMENTS

System Description

- INFORMATION BASE
  - HIGH LEVEL TUTORIALS
  - SOW, SPEC, CDRL OUTLINES AND GUIDANCE
  - ACQUISITION MANAGEMENT SYSTEMS ANALYSES
  - SAMPLE DOCUMENTATION

System Description

INFORMATION BASE

SOW TUTORIAL

TABLE OF CONTENTS

System Description

INFORMATION BASE

SOW OUTLINE

TABLE OF CONTENTS

System Description

INFORMATION BASE

*MSAM FOR MIL-E-6051D

3.1.1	Electromagnetic compatibility board This is a SOW item but should be included only for a multicontractor situation where an integrating or associate contractor is involved. For single contractor situations a working group consisting of contractor and program office personnel is often used.	N A A M N	
3.1.1.1	no title	N A A M N	
3.1.1.2	no title	N A A N N	
3.2	System requirements This section outlines the major areas of emphasis for an EMC program. These topics should be included in the EMC program plan. Change "f. Bonding and Grounding" to read: "f. Bonding, grounding and power and signal circuit referencing." We added reference to power and signal circuit referencing to address common mode effects involving the spacecraft, support equipment, and facilities.	N M M M N	DI-R-7096

*MSAM = Management Systems Application Matrix

System Description

INFORMATION BASE

Hardware Data Transfer Time

Suggested Text

"Computer hardware data transfers shall, using worst-case propagation delays, not exceed (m) percent of the time available in a clock cycle while operating in worst-case temperature and radiation environments."

Guidance

The range of values selected for (m) in general should fall between 50 to 75 percent.

Rationale

Integrated-circuit parametric degradation in space can result in longer propagation delays.

Lessons Learned

Long-term cumulative effects from radiation have caused memory access timing difficulties in previous systems

Verification Method

Analysis and test

Contributor

M. Thimlar, J. Hafford

System Description

· GUIDANCE/SUGGESTIONS >

Suggested Text

"Computer hardware data transfers shall, using worst-case propagation delays, not exceed (m) percent of the time available in a clock cycle while operating in worst-case temperature and radiation environments."

Guidance

The range of values selected for (m) in general should fall between 50 to 75 percent.

Rationale

Integrated-circuit parametric degradation in space can result in longer propagation delays.

< CONTENT >

Computer hardware data transfers shall, using worst-case propagation delays, not exceed (m) percent of the time available in a clock cycle while operating in worst-case temperature and radiation environments.

System Description

- SOURCES OF DATA
  - ACQUISITION MANAGEMENT SYSTEMS
  - STAFF INPUTS
  - DIDs
  - REFERENCE MATERIAL

System Description

- OUTPUT PRODUCTS
  - SOWs
  - SPECs
  - CDRLs
  - CRISPs
  - WBS (near term)
  - ANY STRUCTURED DOCUMENT

Types of Reports

- THE DOCUMENT
- MANAGEMENT REPORTS
- MATRICES
  - VERIFICATION TEST MATRICES
  - TRACEABILITY MATRICES
- SORT AND TEXT ANALYSIS REPORTS
- AUDIT TRAIL

Allocation Matrix

TABLE F-1 REQUIREMENTS TRACEABILITY MATRIX

MASTER	SDC	SDPC	CS	VS	HCS	SS	FS
e.						3.2.5b	
f.						3.2.5a1 3.2.5a2	
g.			x				
h.						x	x
3.2.6. Environmental Conditions	3.2.6 3.2.7	x	x	x	x	x	x
						3.2.7	
3.2.6.1. Non-Operating and Storage Conditions	3.2.7.1						
						3.2.4.2 1.5.4	
a.	x	x	x	x	x	3.2.7.1a	x
b.	x	x	x	x	x	3.2.7.1b	x
c.	x	x	x	x	x	3.2.7.1c	x
3.2.6.2 Operating conditions	3.2.7.2						
a	x	x	x	x	x	x	x
1.	x	x	x	x	x	3.2.7.2a1	x
2	x	x	x	x	x	3.2.7.2a2	x
b	x	x	x	x	x	x	x

Verification Cross Reference Matrix

Verification Methods :
I = Inspection, A = Analysis, D = Demonstration, T = Test,
N/A = Not Applicable
Test Category
DT = Development Test, QT = Qualification Test,
IT = Integration Test, AT = Acceptance Test

Section 3 Reference		Verification Method					Test Category				Section 4 Reference
Paragraph	Title	I	A	D	T	N/A	DT	QT	IT	AT	Test Paragraph
3.4.1	Specifications	x									
3.4.2	Drawings										
	a.	x									
	b.	x									
3.5	Logistics										
	a.		x								
	b.										
	1.		x								
	2.		x								
	c.	x									
	d.	x									
3.6	Personnel and Training										
3.6.1	Personnel										
	a.		x								
	b.		x								
	c.		x								
	d		x								
	e.		x								
	f.		x								
3.6.2	Training		x								
3.7	Functional Area Characteristics										
	a				x				x	x	
	b				x				x	x	
	c.				x				x	x	
	d.				x				x	x	
	e				x				x	x	
	f				x				x	x	
3.7.1	Uninterruptible Power Supply										

System Description

- MULTI-USER
- REMOTE ACCESS (standard phone line)
- AD HOC QUERY CAPABILITIES
- DATA PROCESSING AND WORD PROCESSING
- MAINFRAME BASED

Recommendations

- SYSTEM HAS DOD-WIDE APPLICATIONS
  - AIR FORCE INSPECTOR GENERAL LAUDATORY
  - NATC/DSMC* REVIEW
- MANAGERIAL TOOL THAT PROMOTES:
  - STREAMLINING
  - TAILORING
  - STANDARDIZATION

*NATC = Naval Air Test Center
DSMC = Defense System Management College

Recommendations

TEMSE FEATURES THAT IMPROVE PRODUCTIVITY

- A SINGLE, COMPATIBLE STORAGE FORMAT FOR ALL DOCUMENTS
- FACILITIES THAT ALLOW QUICK SURVEYS OF PROGRESS
- ALLOWS UPDATING OF DOCUMENTS WITHOUT DESTROYING THE ORIGINALS
- INTERFACES NEW DOCUMENTS TO EXISTING INFORMATION
- USER CAN EXAMINE CROSS SECTIONS OF THE AVAILABLE INFORMATION BASE
- DOCUMENTATION DERIVED AUTOMATICALLY — NOT A SEPARATE AND UNRELATED ACTIVITY

4. DATA BASE MANAGEMENT

4.1 Data Base and Main Memory Schemas

Two characterizations of any data base are its schema (i.e., its logical description) and its physical implementation. We are more concerned with the data base schema here, since the level of detail involved in the implementation exceeds that intended for this overview. In the discussion that follows, we use "implementation" to mean a mapping from a schema to a particular type of data structure and its associated operations in main memory.

Logically, a project's data base consists of the following seven files:

- o Large data file
- o Document file
- o Paragraph file*
- o Personnel file
- o Item file
- o Template file
- o Template element file

A file's description is referred to as its schema. A schema for a given file is a collection of fields (i.e., atomic variables) describing, simultaneously, two kinds of objects associated with that file. The first is a tuple which is an instance (i.e., a particular set of field values) of the schema in the file and therefore in the data base. The second object type is a node which is an instance of the schema in main memory and therefore in neither the file nor the data base.

Being described by the same schema, tuples and nodes are similar in content. For a given schema, however, nodes contain all of the fields in that schema while tuples do not. Thus, the set of tuple fields is a proper subset of the set of node fields. We refer to those fields belonging to both tuples and nodes as "data base" fields and to those belonging just to nodes as "main memory" fields.

An example of a "main memory" field would be the variables of type pointer which are used to link together the nodes as they are read into main memory.

Each field in a schema is of a particular type or, in other words, it belongs to a particular domain. A field's domain dictates, among other things, what values (e.g., integers, strings, etc.) may be assigned to that field.

We summarize our terminology below:

- o Field - atomic variable (i.e., repository for data)
- o Tuple - collection of fields in the data base
- o Node - collection of fields in main memory
- o File - collection of tuples
- o Schema - description of a data base file
- o Domain - type or description of a field

All files are implemented as linked lists. The document file, for example, has the structure:

doc 1 ---- doc 2 ---- . . . ---- doc n

where the project contains n documents.

*The paragraph file is organized as a tree structure. This is discussed in more detail in Subsection 4.1.3.

The data base is given structure as a whole by defining links between files. These links exist as pointers from tuples in one file to tuples in another. Hence, the links have an implied "direction" associated with them.

In Subsections 4.1.1 through 4.1.7, we discuss each of the seven data base files in terms of its schema and inter-file links.

4.1.1 Large Data File

The large data file is used to store "general text" associated with documents and their paragraphs. For a given document, general text consists of the extended document title and the general text for all of its paragraphs.

For a given paragraph within the document, general text includes advice for that paragraph and the general text for all template elements assigned to that paragraph.

For a given template element, general text includes advice, predefined text, suggested text, and finally the actual text (i.e., user data) written for that element.

Note that since one document contains, in general, many paragraphs and a given paragraph contains many template elements, a tree structure would be the most natural representation of the large data file. As we shall see, however, it is not necessary to define the required links explicitly, since the large data file "innerits" a tree structure from the paragraph file.

The large data file contributes little to the overall data base structure, since it contains no pointers to other files. It assumes the role of final repository for textual data.

4.1.2 Document File

The document file is used to store information about documents including:

- Document title
- Due date
- Document manager
- Template defined for this document
- First paragraph of document
- Next document in linked list

4.1.3 Paragraph File

The paragraph file is used to store information about document paragraphs. It is implemented in main memory both as a linked list and as a tree of paragraph nodes. Figures 3 and 4 contrast the two structures.

In Figure 3, the paragraph file is shown as a linked list. This implementation facilitates data base operations that are transparent to the user, such as copying paragraph tuples to and from main memory.

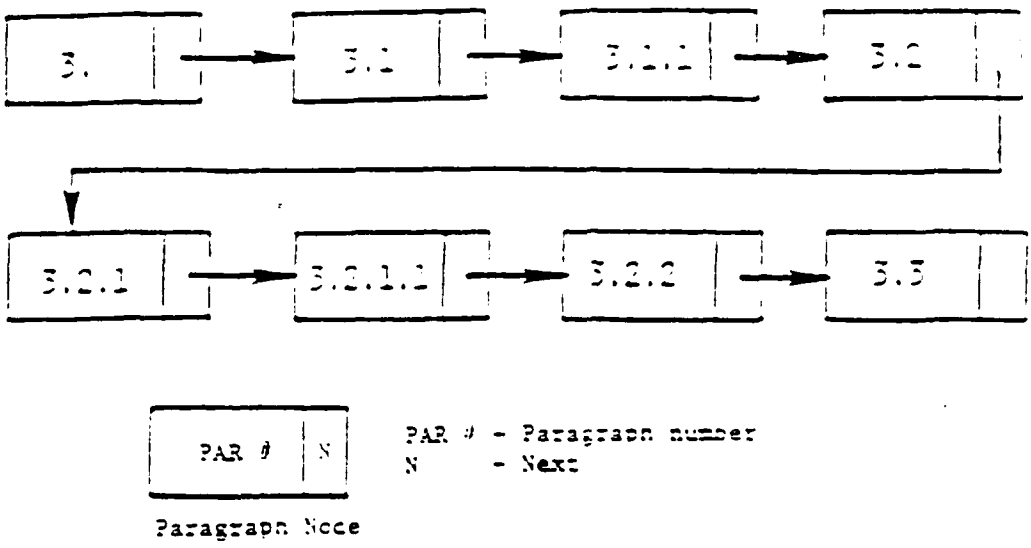


Figure 3. Paragraph File as Linked List

The tree of Figure 4 is the more meaningful implementation from the user's viewpoint. To see why it is desirable to store paragraphs in a tree, suppose an author wants to renumber, within a document, a particular paragraph (e.g., 3.2). Then, assuming that some contextual structure exists between that paragraph and its descendant paragraphs (e.g., 3.2.1, 3.2.1.1, 3.2.2, etc.), the author will typically desire to maintain that structure using the paragraph numbers. This necessitates renumbering the descendants as well. The tree structure clearly expedites this renumbering process.

The required information can be generated at the time of implementation as follows: The parent link of any paragraph can be determined either immediately (e.g., the paragraph is the first child) or inductively via parent-equivalency of sibling paragraphs. Thus, the tree of Figure 4 can be generated from the CHILD and SIBLING data base fields. Next, the linked list of Figure 3 can be obtained by a left-to-right pre-order traversal of the tree of Figure 4.

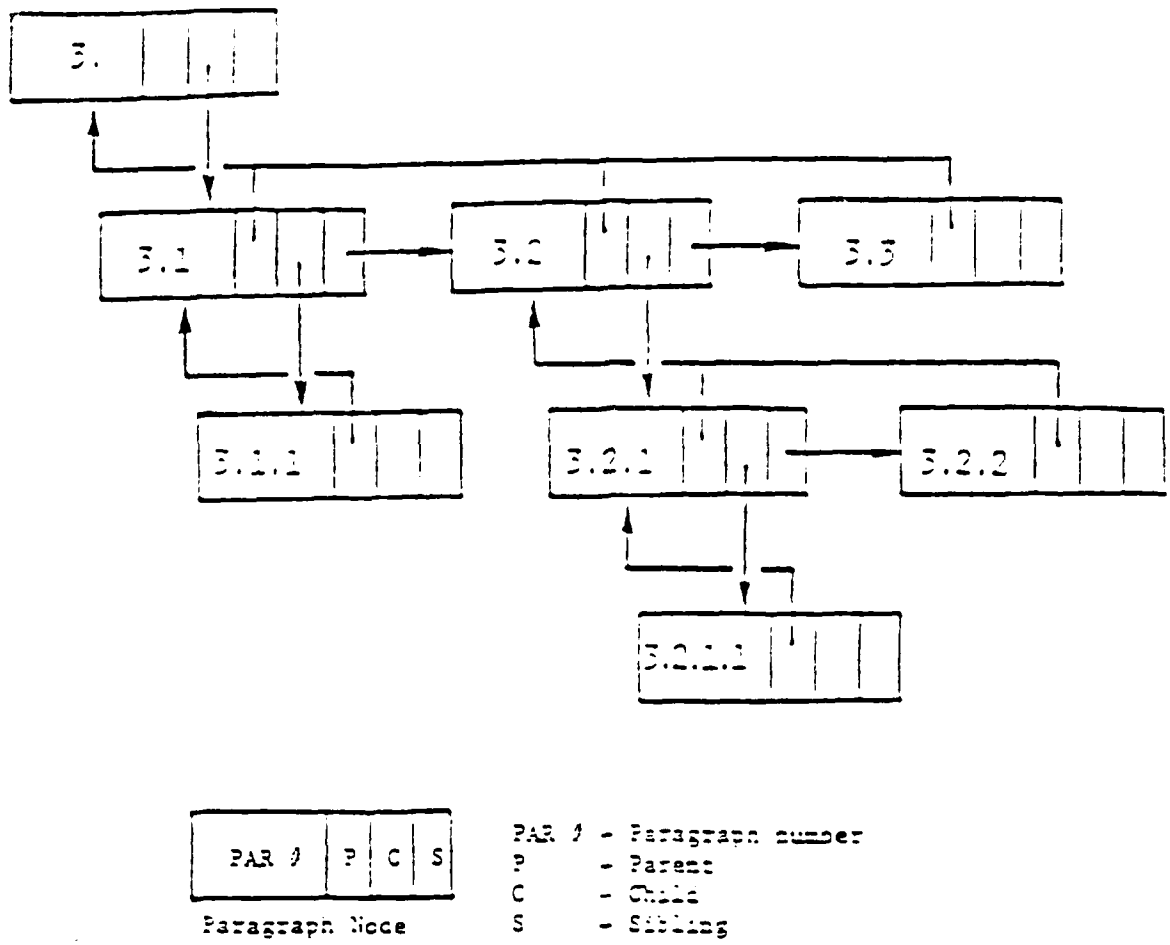


Figure 4. Paragraph File as Tree

4.1.4 Personnel File

The personnel file is used to store information about project personnel, including authors, managers, and members of the administrative staff. Associated with each person in the personnel file are the following fields:

- o Person's name (first, middle initial, last)
- o Person's phone number
- o Person's mail station
- o Person's employee number
- o Person's cost code
- o Person's supervisor
- o Next person in the personnel file

4.1.5 Item File

The items file is used to store information about template elements assigned to the current paragraph. This file should not be confused with the template element file (see Subsection 4.1.7) which is used to store information about template elements contained in the document template.

In general, there are many more item file records than template element file records, since a project has many documents, a given document has many paragraphs, and each paragraph points to a unique linked list of assigned template elements. The number of records in the template element file, on the other hand, exactly equals the number of elements in the document template. Thus, the number of records is independent of the number of paragraphs in the document.

4.1.6 Template File

The template file is used to store information about templates associated with the project. Since two or more documents may share the same template, one's first inclination is to assume that there are at least as many documents as templates in the data base. This is not necessarily true, however, since it is possible for a given template to describe no currently existing documents.

4.1.7 Template Element File

The template element file is used to store information about template elements contained in the current document template. We reiterate the distinction made in Subsection 4.1.5 between this file and the item file.

4.2 Data Base Routines

Routines for manipulating data base objects (i.e., tuples and nodes) are categorized by the files on which they operate. The functions of the routines vary little from file to file. For the most part, only the types of nodes and tuples they operate on make them different.

In particular, five of the files (all but the large data and personnel files) have exactly five routines that are specific versions of the generic routines.

4.3 Audit Trail

It was stated in Subsection 3.2 that certain data base modifications are logged in an audit trail. There is an "audit trail facility" which consists of routines for storing and retrieving audit trail data.

When one of the data base routines of Subsection 4.2 is called, DOCWRITER automatically calls a corresponding audit trail routine which writes to an audit file information about changes to the data base. The audit file exists as a direct access dataset and contains the following information:

- User I.D. - Identifies user who made the modification
- Doc I.D. - Identifies modified document
- Paragraph number - Identifies modified paragraph
- Timestamp - Time and date of modification
- Item number - Identifies modified template element
- Old data - Template element data as they existed before modification

The audit file is periodically archived to secondary storage in order to save disk space.

Audit trail records can be accessed via user queries. For example, a user could obtain all modifications to the third template element of paragraph 3.2.1 of document "DOC-001" that occurred between the dates 1-10-82 and 2-20-82.

ATTACHMENT 8

AUTOMATED ENGINEERING DOCUMENT PREPARATION SYSTEM (AEDPS) AND MICOM INTEGRATED DOCUMENTATION AND STANDARDIZATION SYSTEM (MIDAS)

1. What was the system originally designed to do? Provide Military Specification Exception documents to be used with an accepted military specification for procurements of nonstandard parts. Intended to provide visibility to existing documentation and prepare time-and-cost-effective documentation if none already exists.

2. What information is presently stored? (a) Standard text paragraph data and DOD-STD-35 codes used to prepare an MSE for any 1 of 124 families of parts; (b) Codes and values used in the preparation of all existing MSEs; (c) User data; (d) Sources of supply: Mfgr Part Number, FSCM, Name; (e) Management Information Data; (f) Document designation, date, references; (g) Tracking and control data.

3. Who are the system users? Every major/subcontractor that the U.S. Army Missile Command (MICOM) is involved with, every project/commodity manager at Redstone Arsenal, and the Standardization Activity of MICOM.

4. What are the sources for data included in the data base? (a) User generated requirements; (b) DODISS; (c) CDRL 1423 (on all MICOM contracts); (d) Approved deliver extraction data (i.e., ECP, Drawings, Specifications)

5. What hardware is used for the system? Honeywell Level 6 computer with (a) 2,048,000 bytes central memory; (b) 736 MB on-line disk storage; (c) 300 BAUD remote input capability; (c) 900 LPM line printer; (d) 55 cps letter quality printer; (d) DEST optical character reader; (e) 9 track 1600 bpi magnetic tape drive (used exclusively for backups); (f) GCOS 400 operating system (software).

6. What types of programs/languages are used? COBOL with some ASSEMBLER subroutines.

7. Internal or external support? A mix of both in-house as well as contractor effort.

8. Output Products? (Explained in accompanying vugraphs.)

a.	Reports	d.	STARS	g.	DNA	j.	Item Reduction
b.	Specifications	e.	WASP	h.	Review/Prepare	k.	Nomenclature
c.	Tracking Data	f.	CID	i.	GIDEP		

9. Single or multi-user? Multi-user.

10. What procedures are used to maintain the data base? (a) MSE processing automatically updates much of the data. (b) Revisions or change notices to DOD-STD-35 dash part books.

11. Is there remote access to the system? Yes.
What communications links are used? Asynchronous RS232C

12. Planned changes/enhancements? Page scanning capability - faster band rate - currently planned to make the system the cornerstone of MICOM's Parts Control and Standardization Program.

13. Is system documentation available? Yes.

14. Is a data base management system used? No. However, AEDPS is designed to provide key linkages between data files such that all data relevant to a specific data item can be retrieved for document preparation, inquiry, and system tracking and control.

SYNOPSIS

The AEDPS prepares exception documentation that, together with an existing military specification, can be used for procurement purposes. AEDPS takes advantage of the fact that most special or unique application items call for relatively minor exceptions to an existing military specification.

Standard paragraphs have been written that cover many exceptions and that permit fills, write-ins or the completion of sentences. These paragraphs are stored in a computer along with identifying codes. By inputting the selected codes and values required, the user can have the computer print an exception document. The exception document along with its base document can be used for procurement of the unique part.

The characteristics used to generate AEDPS documents are stored in computer memory. Inherent in the AEDPS program is the ability to search thru all specifications residing in memory and compare any number of selected characteristics. Thus, all existing specifications are made visible and duplications are prevented.

The system includes extensive management information reports and a user inquiry capability for status of a document in-process.

Input requests for AEDPS processing can be from a remote location and can consist of full input requirements or message type input requesting AEDPS action.

All documents are stored in computer memory and can be easily revised as required. The AEDPS documents can contain multiple parts (tabulated documents).

The AEDPS consists of 12 major data files requiring approximately 50 MB of on-line storage.

The current AEDPS document file contains 4,649 documents.

The MIDAS system was devised to capture and manipulate a great amount of data in a short time. MICOM has numerous data requirements in all contracts, and the MIDAS system captures that data and automatically manipulates it for greater awareness and control in the Standardization, Parts Control, and Engineering Documentation management systems. The key to the system is that it includes 18 major data files and 30 cross reference files. The system feeds off AEDPS but is separate and apart in use and content. The system lends itself to active management at the local level for the parts control arena as well as providing remote access for system users.

AUTOMATED ENGINEERING DOCUMENTATION PREPARATION SYSTEM (AEDPS)

MICOM INTEGRATED DOCUMENTATION AND STANDARDIZATION SYSTEM (MIDAS)

AEDPS BASED ON

- MAJOR CHARACTERISTICS IN EXISTING DOCUMENTATION
- APPLICATION IS AN EXCEPTION TO EXISTING DOCUMENTATION

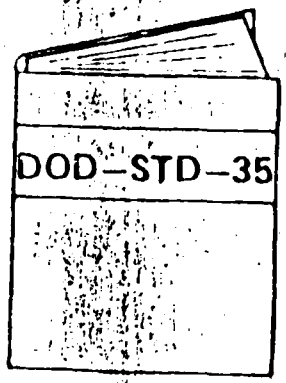
AEDPS OBJECTIVES

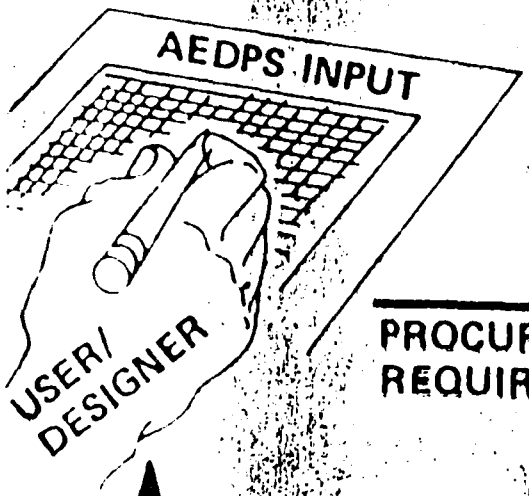
- REDUCE COST
- PREVENT PROLIFERATION OF NON-STANDARD DOCUMENTATION
- STANDARIZE DOCUMENT FORMAT AND CONTENT
- FREE ENGINEERING SKILLS FOR ENGINEERING
- PROVIDES FEED BACK TO PREPARING ACTIVITIES FOR UPDATING SPECS

WHAT IS IT?

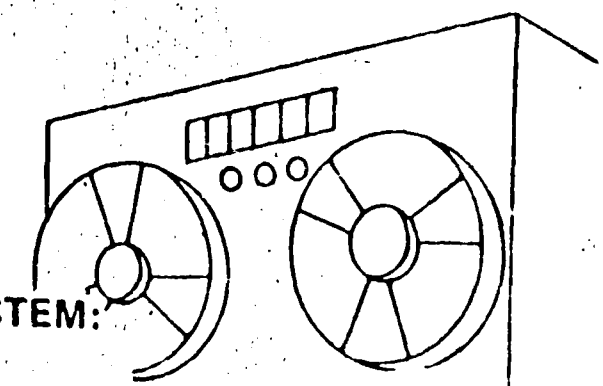
- A SYSTEM UTILIZING A COMPUTER TO PRODUCE ENGINEERING DOCUMENTS
- USER INSTRUCTIONS PROVIDED IN DOD–STD–35
- PROVIDES A MEANS OF CONTROLLING NONSTAND. PART DOCUMENTATION
- INTRODUCES STANDARDIZATION IN DESIGN STAGE

SYSTEM OPERATION



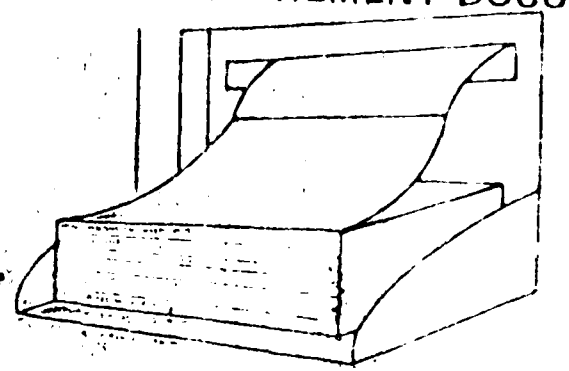


PROCUREMENT
REQUIREMENTS



AEDPS SYSTEM:

1. EDIT
2. PUNCH CARDS
3. ASSEMBLY PROGRAM DECK
4. PREPARE OR PULL DRAWING
5. EXERCISE PROGRAM
6. FURNISH PROCUREMENT DOCUMENT



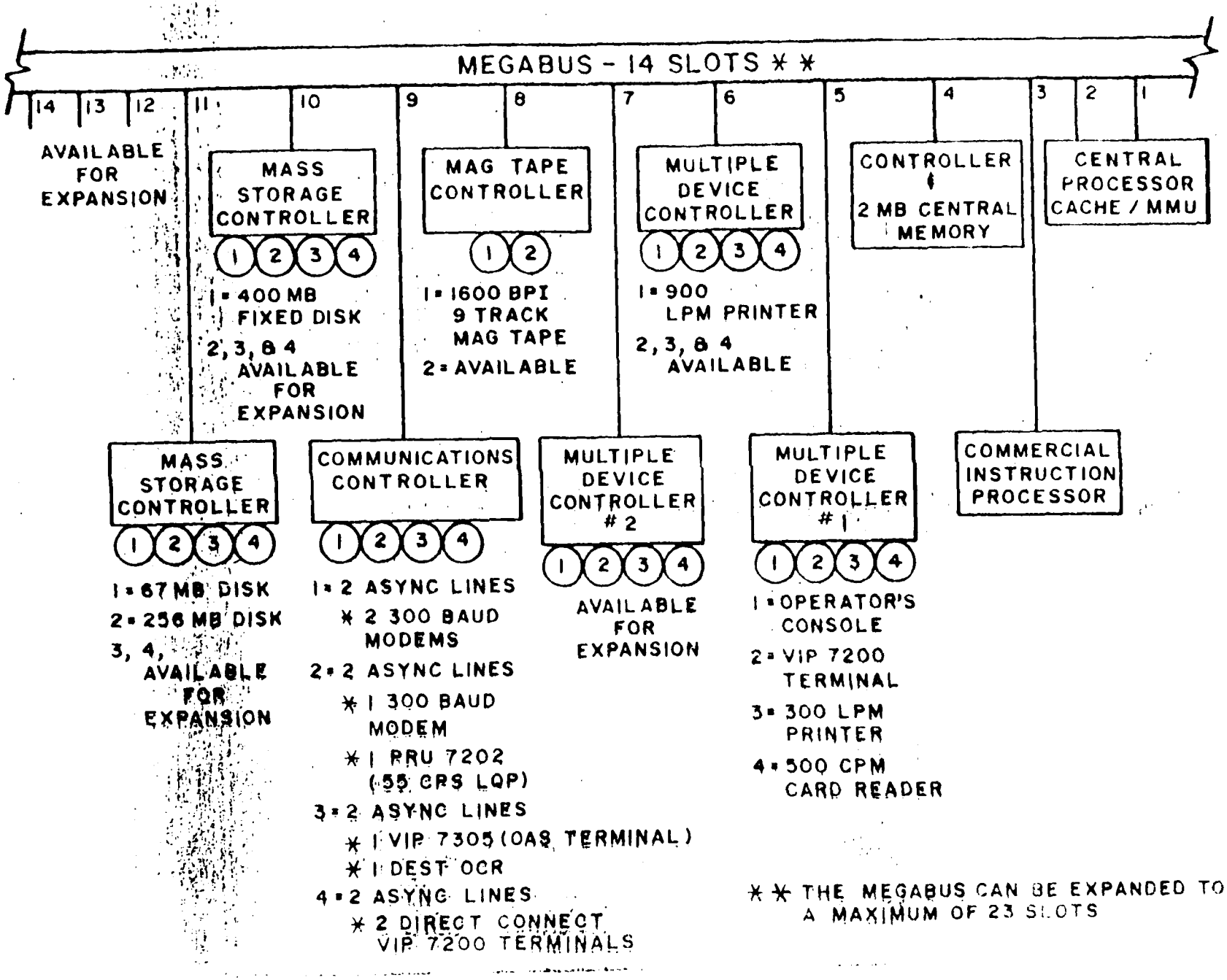
PROCUREMENT DOCUMENTATION

SYSTEM DESIGN

CAPABILITIES

- 2 MB of Error Detection and Correction (EDAC) Central Processing Memory
- 300 MB of On-Line Disk Storage
- RS232C Remote Asynchronous Communications
- OCR Optical Character Reader (OCR)
- 900 and 300 lpm Line Printers
- 55 Copies Letter Quality Printer
- Office Automation System (OAS)
- Three (3) Universal Data Systems (UDS) 300 Baud Modems
- 9 Track, 1600 bpi, Magnetic Tape

HONEYWELL LEVEL 6/57 SYSTEM CONFIGURATION



MICOM INTEGRATED DOCUMENTATION & STANDARDIZATION SYSTEM (MIDAS)

- NON-STANDARD PARTS (STARS)
- WEAPONS SYSTEM APPLICABLE SPECIFICATIONS PROGRAM (WASP)
- MISSILE SPECIFICATIONS (MS)
- COMMON ITEM DRAWINGS (CID)
- GOVERNMENT/INDUSTRY DATA EXCHANGE PROGRAM (GIDEP)
- AUTOMATED ITEM REDUCTION STUDY (AIRS)
- 2052 SUSPENSE FILE (SUSPMF)
- DRAWING CONTROL FILE (DCFLE)
- ENGINEERING DOCUMENT DATA (EDD)
  - DATA ITEMS (DI)
  - DOCUMENT SUMMARY LIST (DS)
- DOCUMENT NUMBER ASSIGNMENT (DNA)
- DATA ITEM COST (DICOST)
- OFFICIAL NOMENCLATURE RECORDING & REPORTING SYSTEM (NOMEN)
- STANDARDIZATION DOCUMENT PREPARING ACTIVITY PROJECT RECORDING & REPORTING SYSTEM (PREPARE)
- STANDARDIZATION DOCUMENT REVIEW PROJECT RECORDING & REPORTING SYSTEM (REVIEW)
- MIDAS INQUIRY
- AUTOMATED ENGINEERING DOCUMENTATION PREPARATION SYSTEM (AEDPS)

CHANGES/ENHANCEMENTS

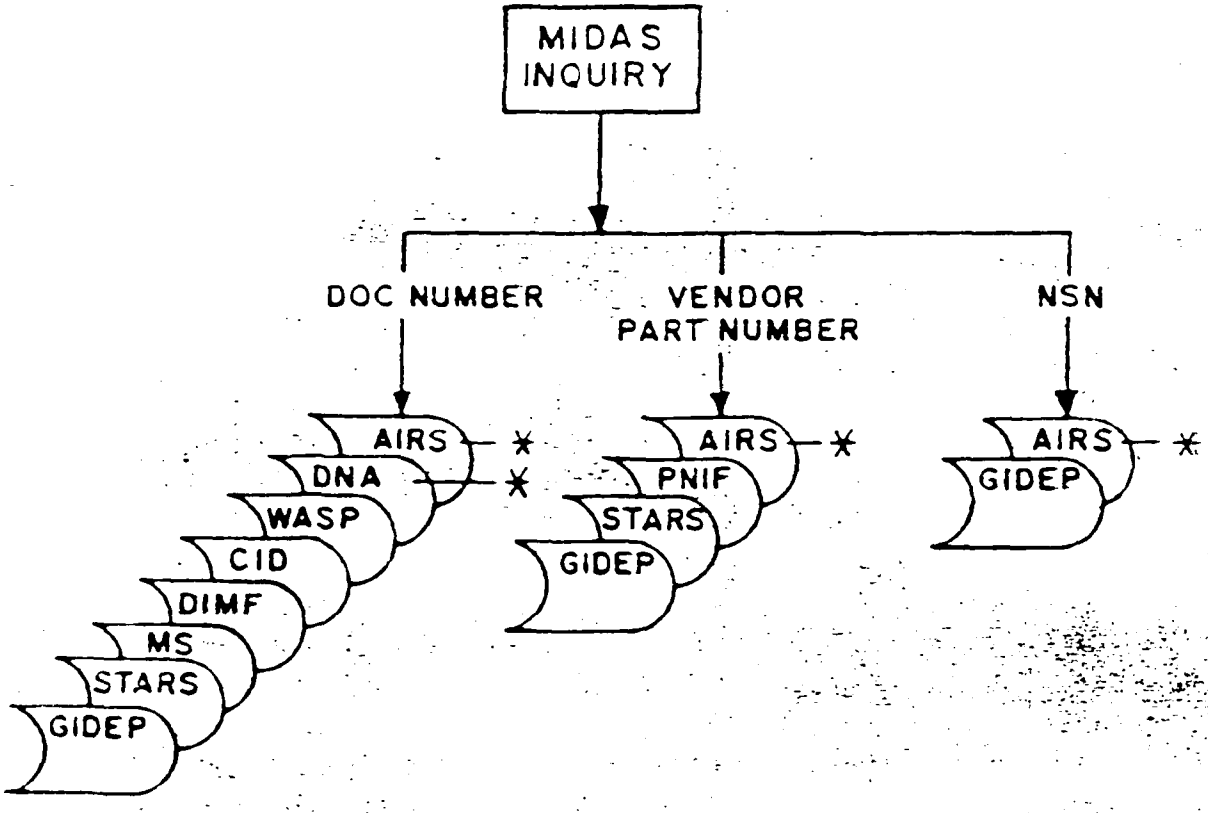
MICOM INTEGRATED DOCUMENTATION AND STANDARDIZATION (MIDAS) SYSTEM

The MIDAS system is currently made up of 14 subsystems, each containing a specific type of data. These systems were designed to provide better control and faster access to information needed in the standardization process.

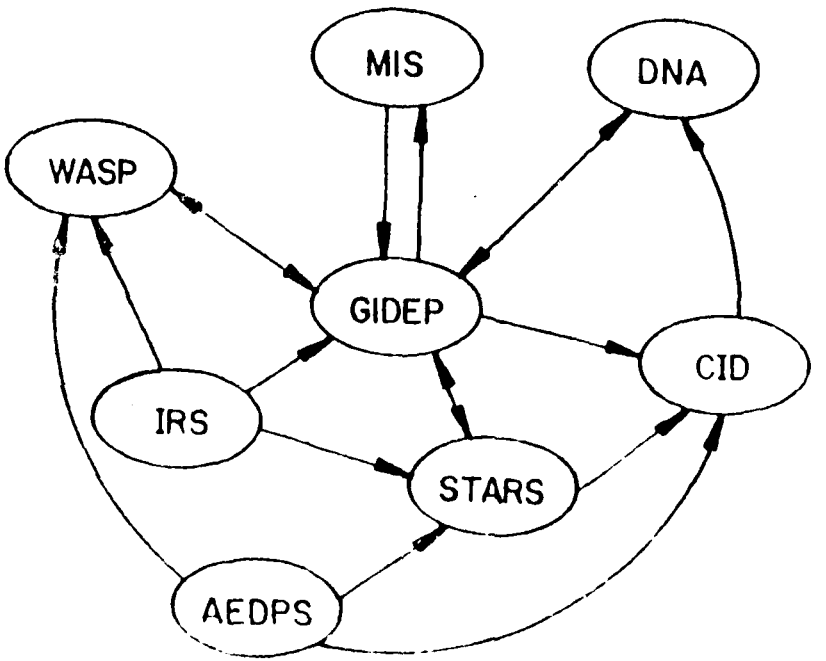
Each system provides reports in various sequences, either total file or selected data. Inquiries use menus for inquiry type selection and displayed prompts for user entry of required data. An example of this will be shown later.

A recent addition to the MIDAS system is multi-file inquiry capability that provides information from various MIDAS files by document number, vendor part number or NSN. More about this capability later.

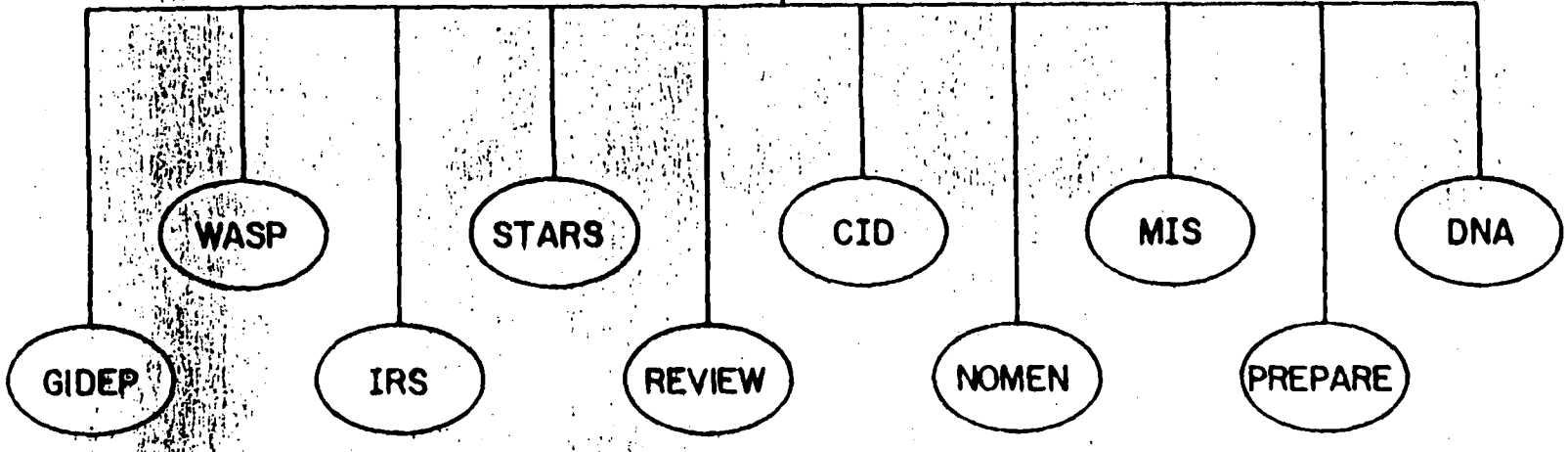
Combined, the MIDAS systems include 18 major data files and 30 cross reference files requiring approximately 200 megabytes of on-line disk storage. All are processed on a Honeywell Level 6 Model 57 computer and all have remote access, multi-user capability.


MIDAS INQUIRY
DOC NUMBER
VENDOR PART NUMBER
NSN
AIRS
DNA
WASP
CID
DIMF
MS
STARS
GIDEP
AIRS
PNIF
STARS
GIDEP
AIRS
GIDEP
* = USER OPTION

MICOM INTEGRATED DOCUMENTATION AND STANDARDIZATION (MIDAS) SYSTEM



MICOM INTEGRATED DOCUMENTATION AND STANDARDIZATION (MIDAS) SYSTEM

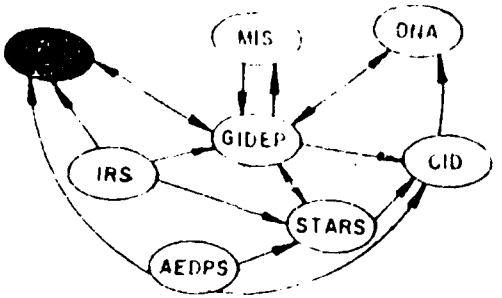


PREPARE

- STANDARDIZATION DOCUMENT PREPARING ACTIVITY PROJECT RECORDING AND REPORTING SYSTEM
- DOCUMENTS CURRENT STATUS
- OVERAGE DOCUMENT REPORT

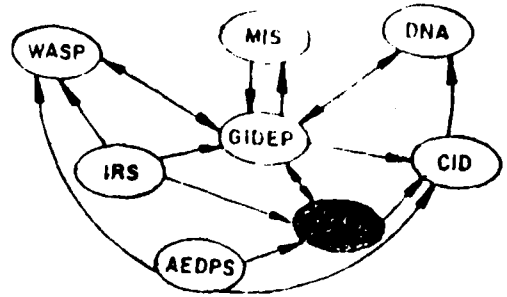
REVIEW

- STANDARDIZATION DOCUMENT REVIEW PROJECT RECORDING AND REPORTING SYSTEM
  - AUTOMATED SUSPENSE FILE
  - STANDARDIZATION ACCOMPLISHMENT REPORT
  - OVERAGE DOCUMENT REPORT



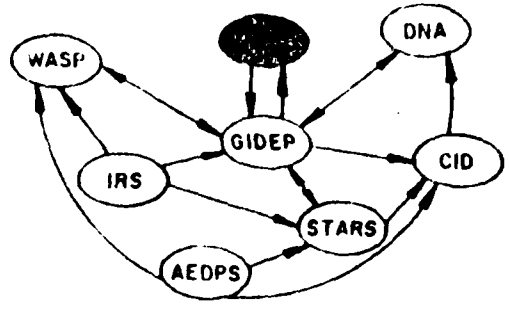
WASP

- WEAPON SYSTEM APPLICABLE SPECIFICATIONS PROGRAM
- USERS OF DOCUMENT
- DOCUMENTS USED BY WEAPON SYSTEMS
- SUB-SEARCH FOR GIDEP FILE



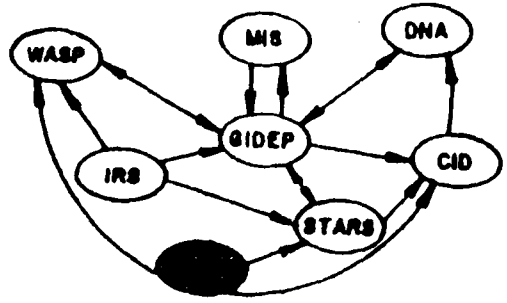
STARS

- STANDARDIZATION RECORDING AND SCREENING SYSTEM
- USERS OF VENDOR PARTS
- USERS OF GOVERNMENT DRAWING NUMBERS
- SUB-SEARCHES FOR CID AND GIDEP FILE
- PARTS CONTROL



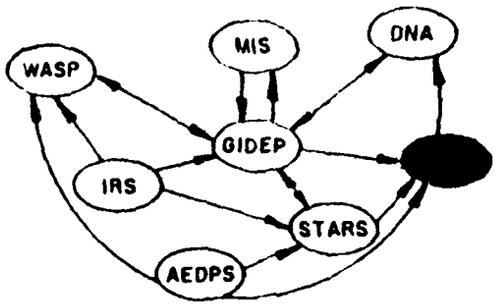
MIS

- MISSILE SPECIFICATIONS
- SUB-SEARCH OF GIDEP FILE



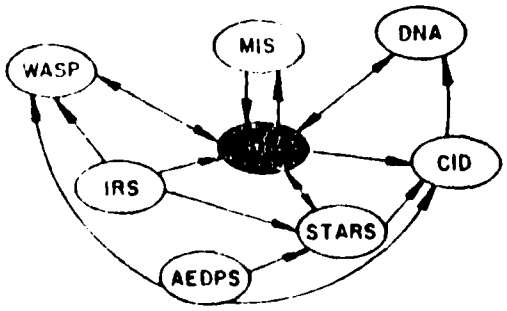
AEDPS

- AUTOMATED ENGINEERING DOCUMENT PREPARATION SYSTEM
- SUB-FILE OF AEDPS
- GOVERNED BY DOD/MIL-STD-35
- USE SRS TO CREATE P-DOCUMENT (FORMERLY MSE)



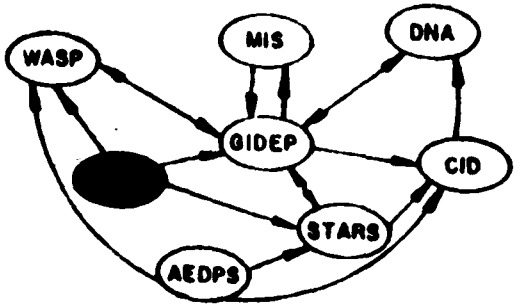
CID

- COMMON ITEM DRAWINGS
- CROSS SEARCH WITH STARS



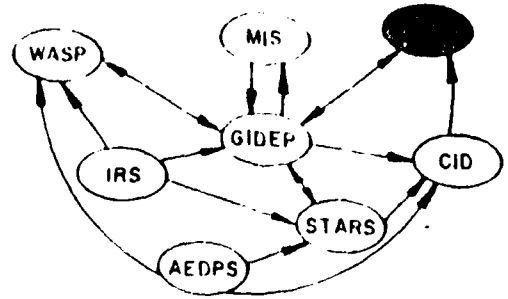
GIDEP

- GOVERNMENT-INDUSTRY DATA EXCHANGE PROGRAM
- FILE OF "ALERTS" GENERATED THROUGH GIDEP
- SUB-SEARCH CAPABILITIES
- PARTS CONTROL



IRS

- ITEM REDUCTION STUDIES



DNA

- DRAWING NUMBER ASSIGNMENT

NOMEN

- NOMENCLATURE
- TRACKING FILE OF APPROVED NOMENCLATURES AND TYPE DESIGNATORS

TECHNICAL DATA/CONFIGURATION MANAGEMENT SYSTEM (TD/CMS)

Note: Statements are keyed to the questionnaire.
Technical Data/Configuration Management System (TD/CMS)

1. The system was designed to maintain an integrated digital data base of technical data in support of engineering and procurement actions and provide identification, control, and status accounting functions for engineering documentation.

2. The information stored in the TD/CMS includes data elements extracted from the engineering documentation. Examples of TD/CMS data include document identification data, revisions, nomenclature, manufacturers' part numbers, Federal Supply Code for Manufacturers (FSCM), document size, numerous related dates, and number of sheets.

3. System users include design and production engineers, standardization and procurement offices, configuration management personnel, and data repository staff.

4. Engineering source documents which provide input to the TD/CMS data base include engineering drawings and associated lists; change actions including Engineering Change Proposals (ECPs), waivers, deviations, and Notices of Revisions; and Military and Industry Specifications and Standards.

5. The system is presently installed on a Control Data Corporation (CDC) Cyber 835 computer at Fort Belvoir. It will be transferred to an IBM 4341 computer at Fort Belvoir during this fiscal year.

6. The TD/CMS programs are written in the ANSI Standard COBOL language.

7. External (i.e. Contractor) support is used to maintain the data base.

8. Output products include over 30 user requested engineering technical data reports and over 30 other reports used for quality control of data and the system. (See attached).

9. The TD/CMS is a single-user or batch processing system.

10. All new and revised engineering source documents, including change actions, which pertain to end items and subassemblies for which Belvoir Research, Development, and Engineering Center is responsible are routinely entered into the TD/CMS to maintain the currency of the data base. Data elements are extracted from the documents, keypunched, or keyed via terminal, and transmitted for batch edit/update.

11. The Contractor has remote access to input and retrieve data via a Data 100 Remote Job Entry (RJE) device. Remote access is also available for data input and system support via telephone line communication links from terminals with modems. The batch processing steps to update the data base and extract output for reports are done twice a week.

12. The system is continuously being expanded and enhanced to add new capabilities as they are identified by the users.

13. Complete documentation is available as follows:
    Computer Operation Manual - ADSM-18-L99-JD-CDC-OM
    System/Subsystem Manual - ADSM-18-L99-JD-CDC-SS
    Program Maintenance Manual - ADSM-18-L99-JD-CDC-MM

14. The TD/CMS does not use a Data Base Management System (DBMS).

SYNOPSIS OF

The Technical Data/Configuration Management System (TD/CMS)

U. S. Army Belvoir Research, Development,
and Engineering Center
Fort Belvoir, Virginia

System Manager POC - Richard H. Goehner
(703) 664-5789
AV 354-5789

System/User POC - Norman E. Lekang
(703) 664-2071
AV 354-2071

The TD/CMS maintains an integrated digital data base of technical data in support of engineering and procurement actions and provides identification, control, and status accounting functions for engineering documentation. Source documents which comprise the Technical Data Package (TDP) and provide input to the TD/CMS include: engineering drawings, associated lists including parts lists, and Military and Industry Specifications and Standards. Engineering Change documents are also entered into the TD/CMS. These include: Engineering Change Proposals (ECPs), Waivers, Deviations, Specification Change Notices, and Notices of Revision.

The TD/CMS establishes, maintains, and reports baselines for end items and subassemblies. These reports are used to confirm that a TDP is complete and adequate for procurement. The system also provides reports for selected documents including Specifications, Standards, Control Drawings, and Change Actions.

NARRATIVE - TD/CMS BRIEFING
Sheraton National Hotel
Arlington, Virginia
May 13, 1986

Slide	Key Points
1	I am here to present you with information concerning the Belvoir Research, Development, and Engineering Center Technical Data/Configuration Management System. The System Point of Contact (POC) is Norman Lekang who also acts as the User POC. He has been involved with the system since its initial design. The System Manager POC is Richard Goehner, Chief of the Configuration and Engineering Data Management Division at Belvoir. Areas we will cover include: o What the system was designed to do, o How the system relates to Standards and Specifications, and o Why TD/CMS is relevant to all DOD activities.
2	TD/CMS was developed in the 1960's in response to problems which resulted from data accumulation, growth in the rate of generated information, changes in engineering equipment, and advanced technology which included the initial routine use of computers to generate, store, and print data.

3. These factors resulted in the Configuration Management challenge - how can we identify the configuration of equipment, maintain control of changes, and provide accurate, current status accounting information?

4. The answer was TD/CMS. TD/CMS was designed to maintain an integrated digital data base of technical data in support of engineering and procurement actions and provide identification, control, and status accounting functions for engineering documentation. The design was based on current DOD engineering specifications and standards plus input from Belvoir (then MERADCOM) engineers concerning their operational requirements. The system operates on a large mainframe computer and incorporates indexed sequential files.

5. Perhaps a definition is in order . . . (read slide).

6. TD/CMS input is extracted from the actual source documents which define the hardware items. For example, this generator requires drawings, associated parts lists, Federal, Military, and Industry Standards and Specifications, DODISS information, engineering changes to correct deficiencies and incorporate enhancements, and FSCM data.

7. The scope of the TD/CMS related documentation includes more than 40 different drawing types, such as you see here.

8. A single Level 3 drawing provides extensive data including:

   - o the data elements which identify the drawing (the identification number, FSCM, drawing size, nomenclature, number of sheets, date, revision level),
   - o Related Specifications and Standards which appear in the notes or the List of Material, and
   - o Parts with their IDs, quantities, and item or find number.

9. Data is also extracted from Standards, including Federal, Military, and Industry standards you see here.

10. All Federal, Military, and Industry Specifications which apply to TD/CMS end items, are entered into the TD/CMS files. Data extracted from the End Item Specifications includes the identification of applicable documents as indicated in Section 2.

11. In addition, information is extracted from Change documents including Specification Change Notices, ECPs, Waivers, Deviations, and NORs.

12. Standards and Specifications are a key part of the TD/CMS and many data elements are captured from these documents. The currency of the TD/CMS records is maintained from information derived from the DOD Index of Specifications and Standards and the National Standards Association Bulletin. The TD/CMS reports show the document status

(active, superceded, cancelled, replaced) and provide information concerning changes, notices, amendments, and supplements.

13. All of these documents contribute to the Technical Data package which defines the required design configuration and assures adequacy of item performance.

14. The most important aspect of the TD/CMS is its capability to function as a gatekeeper who ensures that the documentation is complete and that the changes are identified. This allows TD/CMS to maintain the baseline technical documentation, track changes, generate status reports, and facilitate update of the baseline for new procurement.

15. In TD/CMS . . . (read slide).

16. For example, TD/CMS allows the user to determine the impact of a hardware change from a rivet to a bolt in all applicable end items. The same capability exists for tracking changes to both end item and reference specifications or standards.

17. The TD/CMS manages the data entries by cross-referencing input from source documents to all applicable end items and subassemblies.

18. Output products include over 30 user requested reports and over 30 other reports used for quality control of data and the system.

TD/CMS reports are available which specifically address Standards and Specifications. They also appear on reports for end items or subassemblies. For example, specifications and standards are related to a specific TDP and correlated to individual drawings on the TDPL report.

19. In summary, TD/CMS supports . . .

20. TD/CMS puts you, the user, in control!

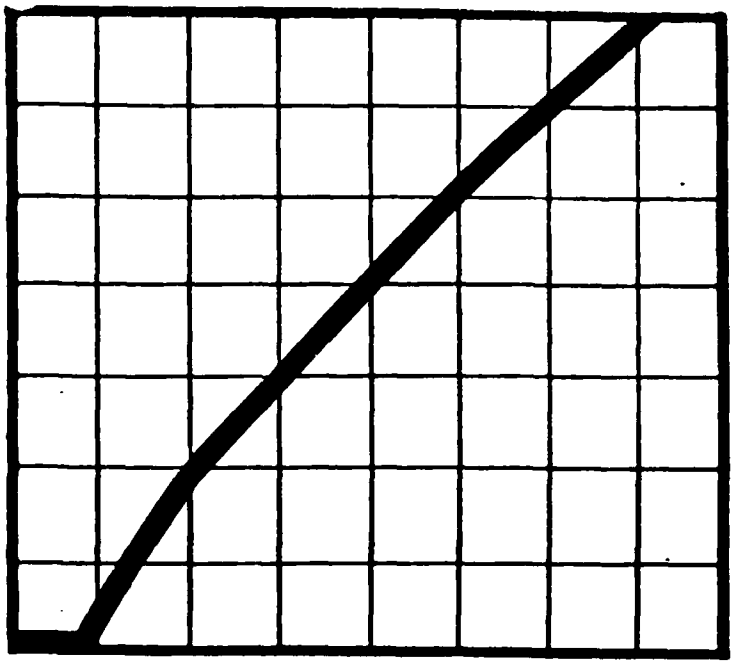
TD/CMS has been used by Belvoir Research, Development, and Engineering Center for nearly 20 years and has proven to be a cost-effective contributor to the management of engineering documentation. The data base content has met the test of time and usefulness.

At present, reports are provided on a scheduled basis. Ad hoc queries are provided as requested. Enhancements are made continuously to incorporate up-to-date capabilities. We are also monitoring the efforts underway in the DOD DSREDS (Digital Storage and Retrieval Engineering Data System)/EDCARS (Engineering Data Computer Aided Retrieval System) program and the Army Material Command Commodity Standard System (CCSS). Additional improvements under investigation include a direct, online interactive capability.

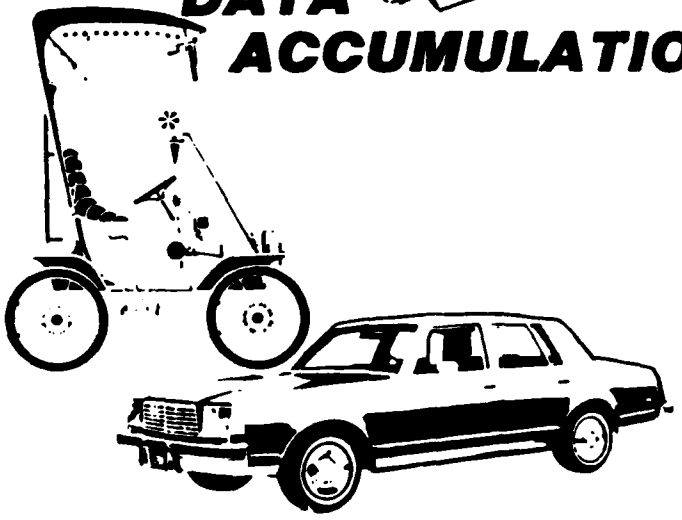
TD/CMS

TECHNICAL DATA/CONFIGURATION MANAGEMENT SYSTEM

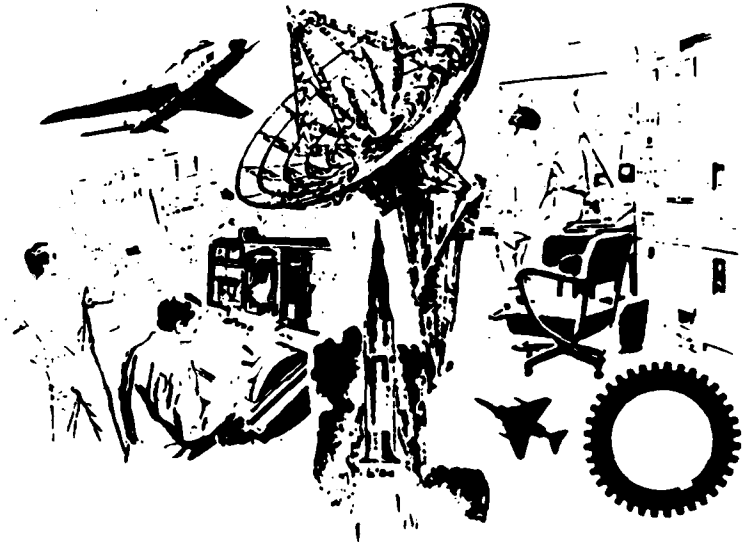
DATA ACCUMULATION



GROWTH

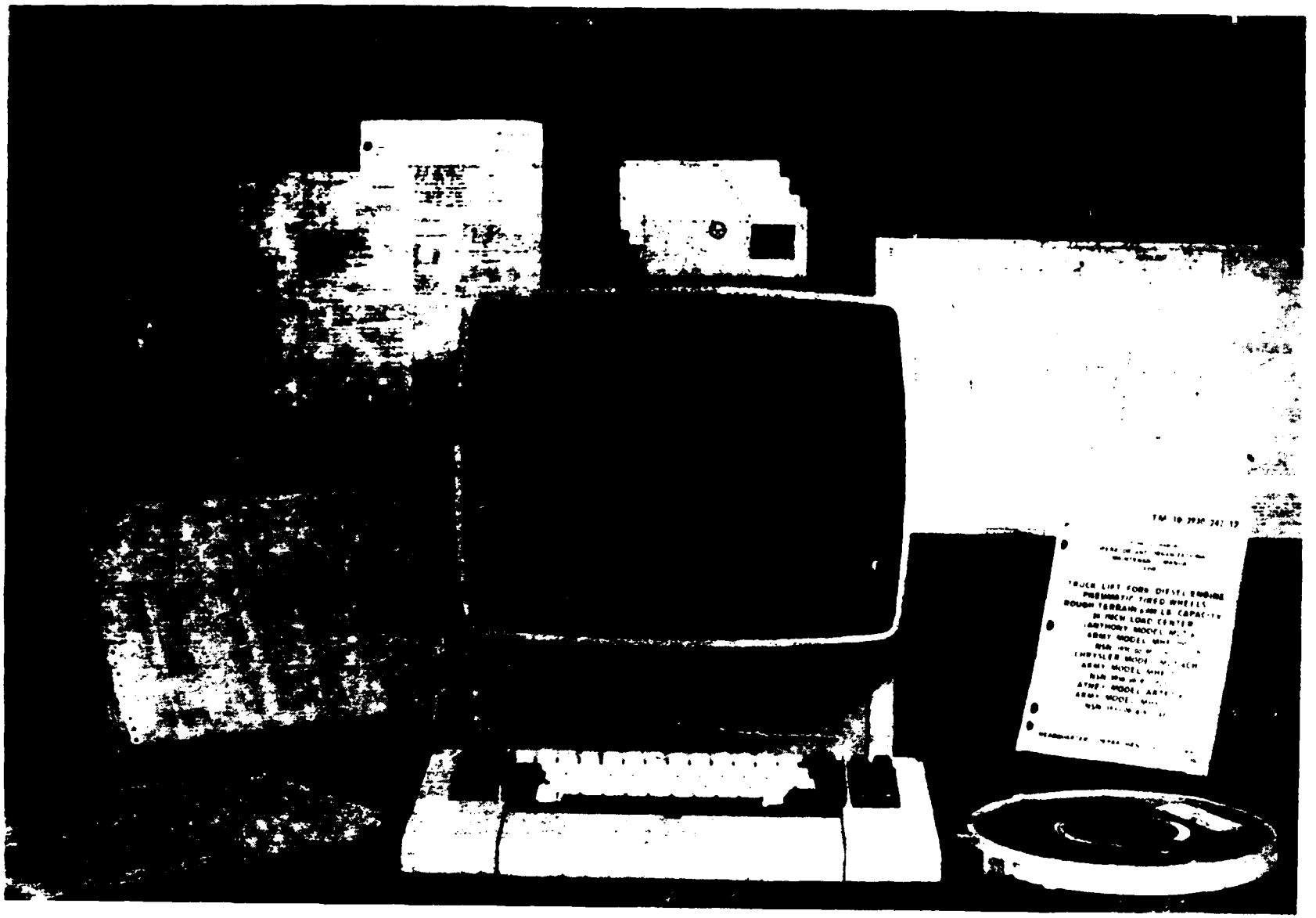


CHANGE



ADVANCED TECHNOLOGY

THE CONFIGURATION MANAGEMENT CHALLENGE



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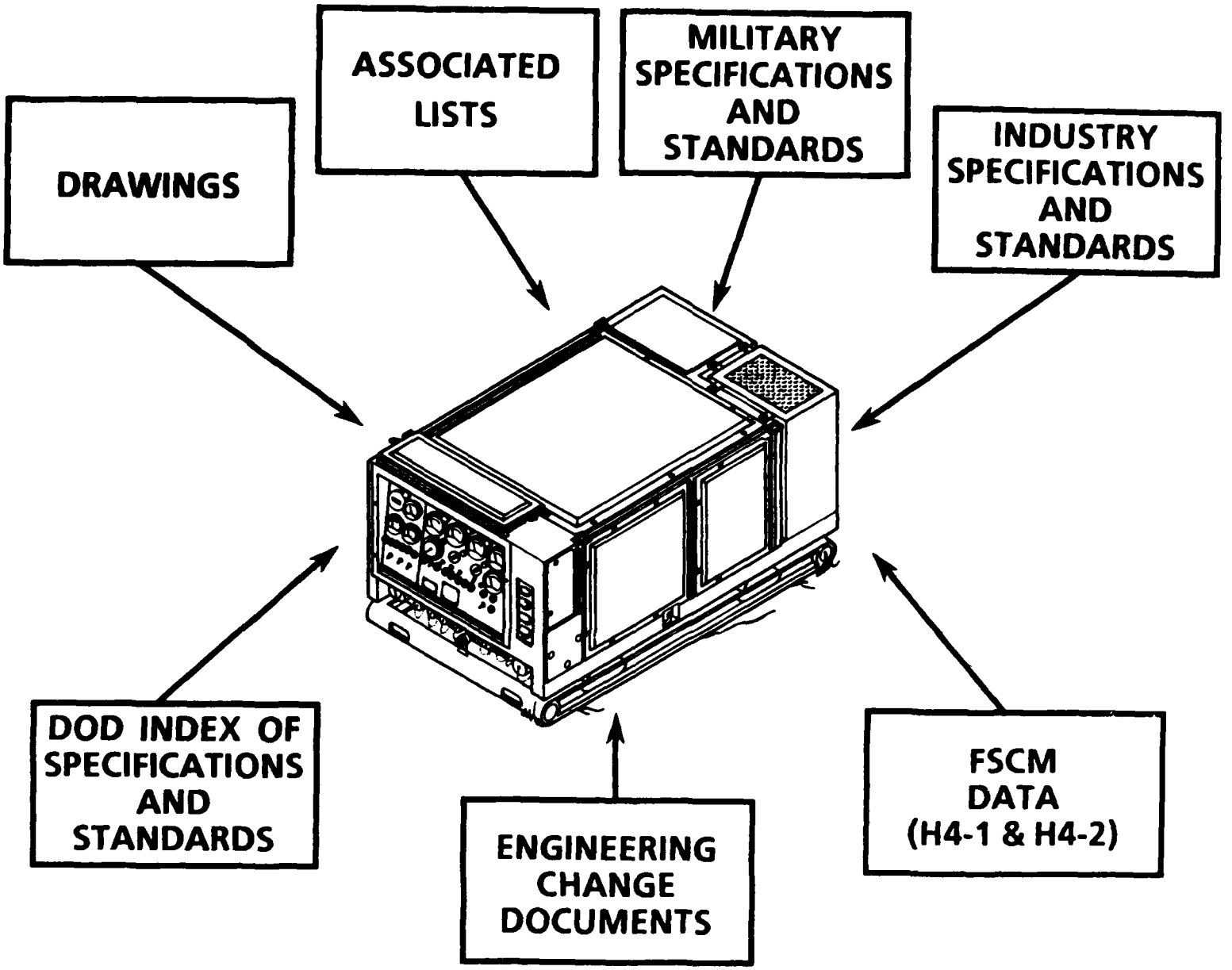
TECHNICAL DATA/CONFIGURATION MANAGEMENT SYSTEM

TD/CMS IS A COMPREHENSIVE PROCEDURE FOR RECORDING, MAINTAINING, AND REPORTING THE BASIC ENGINEERING DATA THAT IDENTIFIES AND DESCRIBES THE RELATIONSHIP OF HARDWARE ITEMS AND THOSE TECHNICAL DOCUMENTS REQUIRED TO FABRICATE, TEST, PACKAGE, PROCURE, AND MAINTAIN THE HARDWARE DURING ITS LIFECYCLE.


DRAWINGS
ASSOCIATED LISTS
MILITARY SPECIFICATIONS AND STANDARDS
INDUSTRY SPECIFICATIONS AND STANDARDS
DOD INDEX OF SPECIFICATIONS AND STANDARDS
ENGINEERING CHANGE DOCUMENTS
FSCM DATA (H4-1 & H4-2)

DOD-STD-100 DRAWING TYPES

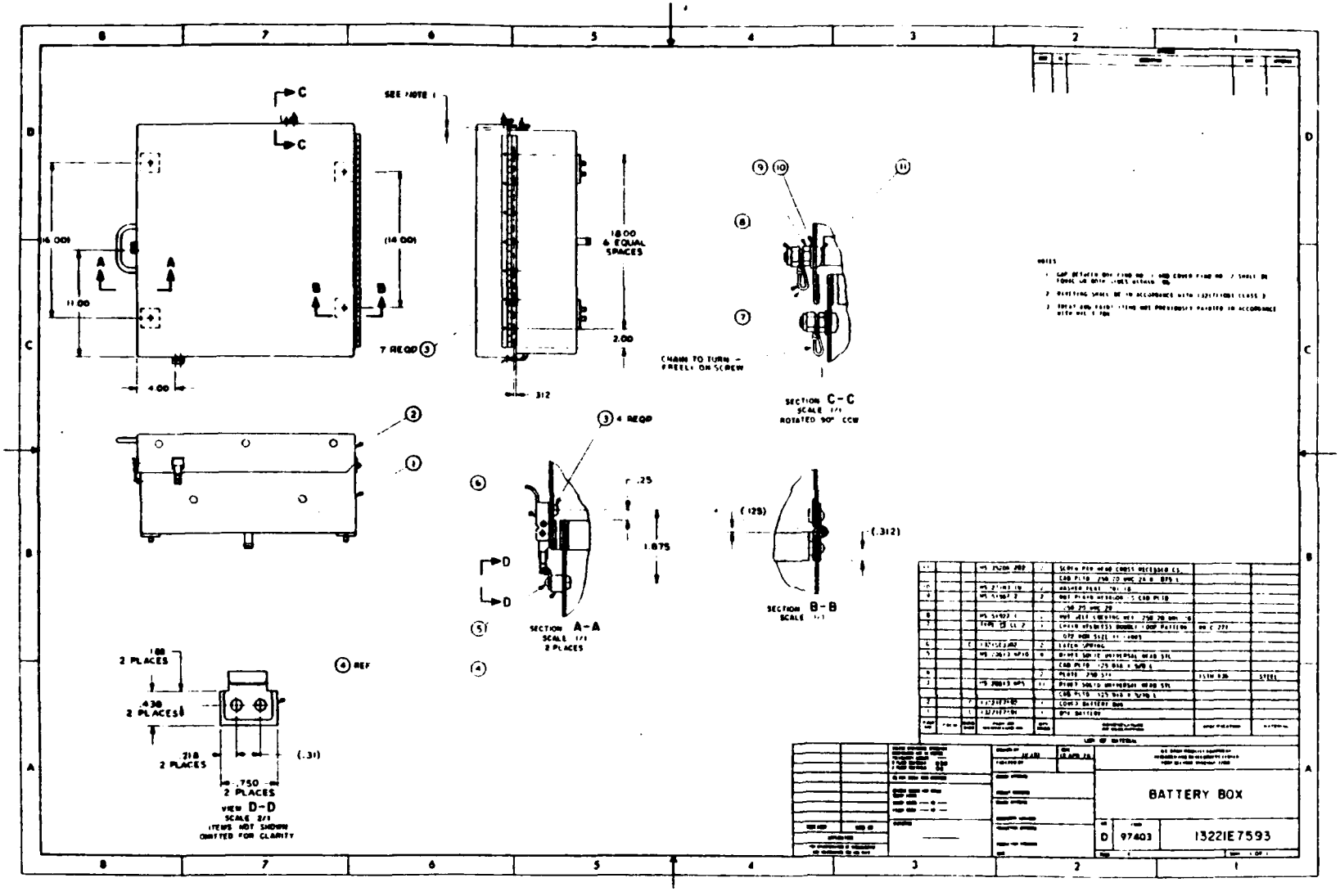
MONO-DETAIL
MULTI-DETAIL
ASSEMBLY
DETAIL
ALTERED ITEMS
ARRANGEMENTS
BOOK FORM
CABLE ASSEMBLY
TABULATED
TUBE BEND
PHOTO-ASSEMBLY
INSEPARABLE ASSEMBLY
INSTALLATION ASSEMBLY
EXPLODED ASSEMBLY
MATCHED PARTS
ARRANGEMENTS

CONTROL
ENVELOPE
SPECIFICATION CONTROL
SOURCE CONTROL
SELECTED ITEMS
INTERFACE CONTROL
INSTALLATION CONTROL
INSTALLATION
ELEVATION
DIAGRAMMATIC
SCHEMATIC
CONNECTION WIRING DIAGRAM
INTERCONNECTION DIAGRAM
LOGIC DIAGRAM
PIPING DIAGRAM
CONSTRUCTION

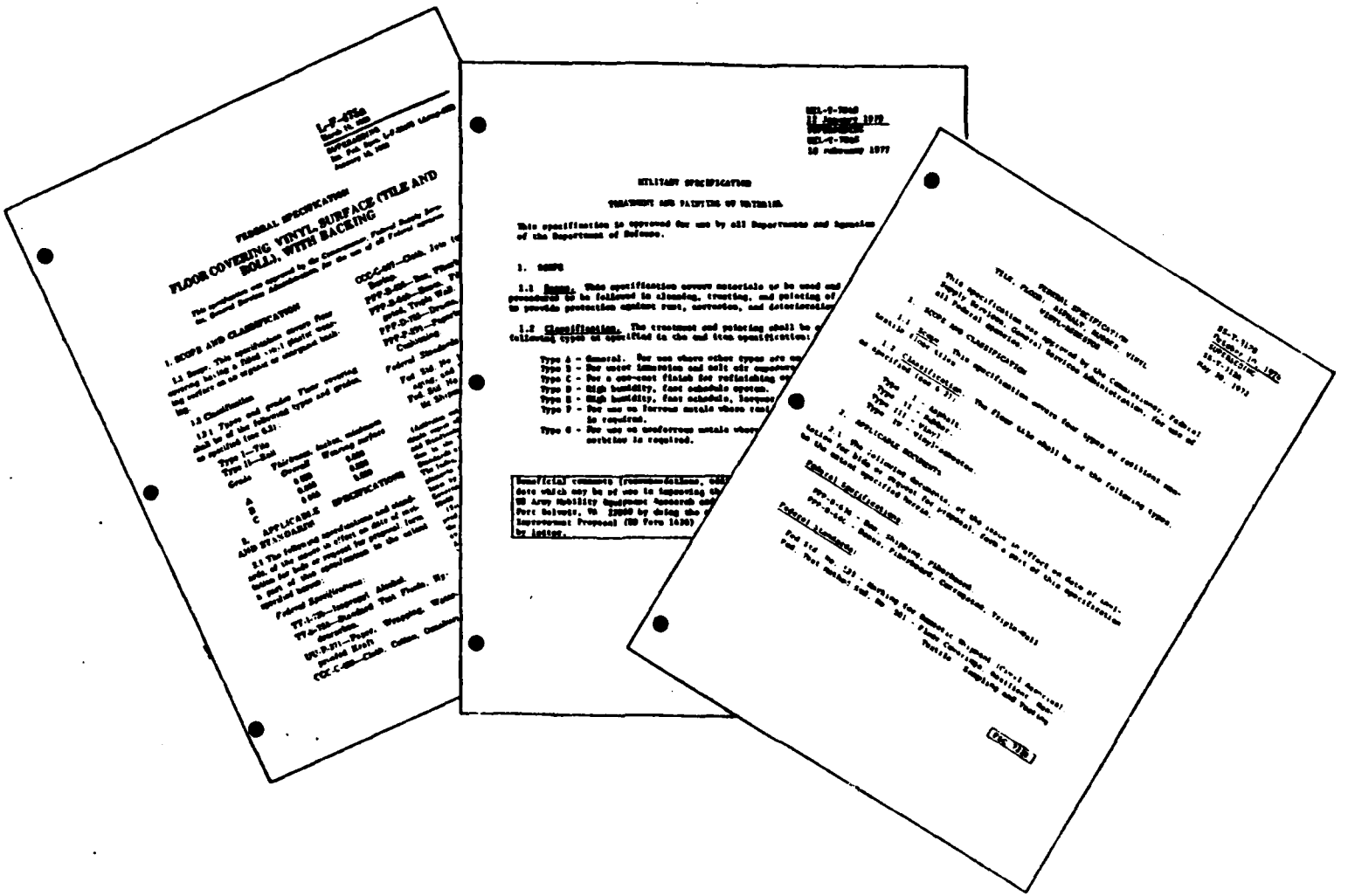
ERECTION
PLOT
SITE
SPECIAL PURPOSE
WIRING LIST
NUMERICAL CONTROL
OPTICAL SYSTEM
WIRING HARNESS
KIT
ADOPTED ITEMS
SHIP EQUIPMENT
FORMULATION
CONTOUR DEFINITION
MODIFICATION
LAYOUT

193

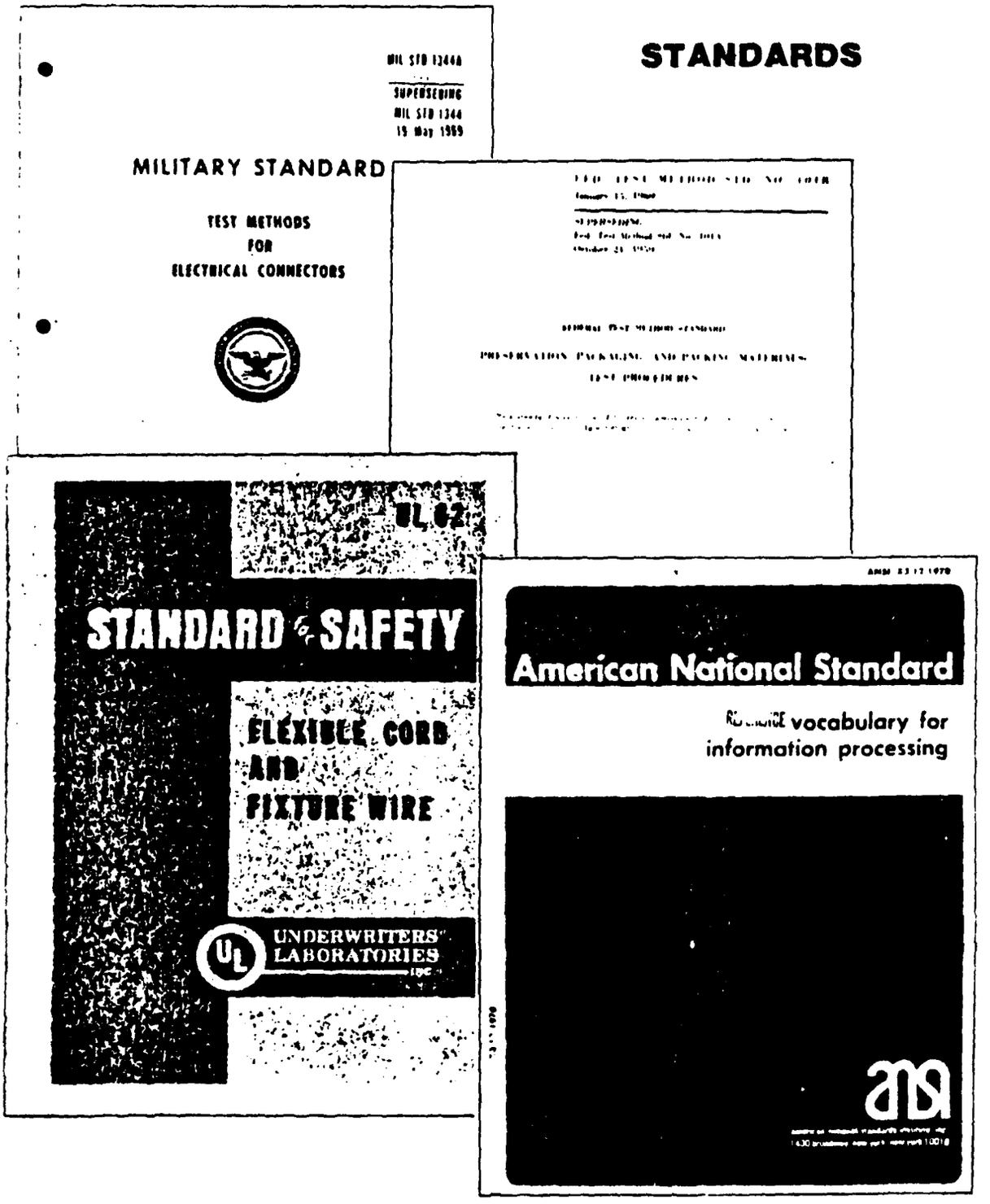
LEVEL 3 DRAWING



SPECIFICATIONS



STANDARDS


MIL STD 1344A
SUPERSEDING
MIL STD 1344
15 May 1969
MILITARY STANDARD
TEST METHODS
FOR
ELECTRICAL CONNECTORS
UL 62
STANDARD of SAFETY
FLEXIBLE CORD
AND
FIXTURE WIRE
UNDERWRITERS'
LABORATORIES
American National Standard
vocabulary for
information processing

SPECIFICATION CHANGE NOTICE

(SEE MIL-STD-490 FOR INSTRUCTIONS) DATE PREPARED

1. ORIGINATOR NAME AND ADDRESS	2.	3. CODE IDENT.	4. SPEC. NO.
STRBE-JBE, Belvoir RDE Center Ft. Belvoir, VA 22060-5606	[X] PROPOSED [ ] APPROVED	81349 5. CODE IDENT. 81349	MIL-R-14364F 6. SCN NO. 001F

7. SYSTEM DESIGNATION	8. RELATED ECP NO.	9. CONTRACT NO.	10. CONTRACTUAL ACTIVITY
TL-MIL-R-14364 TA-13215E9750	86CE0212	DAAK01-85-C-B237	

11. CONFIGURATION ITEM NOMENCLATURE	12. EFFECTIVITY
Roller, Rubberized	

THIS NOTICE INFORMS RECIPIENTS THAT THE SPECIFICATION IDENTIFIED BY THE NUMBER (AND REVISION LETTER) SHOWN IN BLOCK 4 HAS BEEN CHANGED. THE PAGES CHANGED BY THIS SCN BEING THOSE FURNISHED HEREWITH AND CARRYING THE SAME DATE AS THIS SCN. THE PAGES OF THE PAGE NUMBERS AND DATES LISTED BELOW IN THE SUMMARY OF CHANGED PAGES. COMBINED WITH NON-LISTED PAGES OF THE ORIGINAL ISSUE OF THE REVISION SHOWN IN BLOCK 4, CONSTITUTE THE CURRENT VERSION OF THIS SPECIFICATION.

13. SCN NO.	14. PAGES CHANGED (INDICATE DELETIONS)	* S	* A	15. DATE
001F	Page 4 Paragraph 3.5 Fabrication. Line 9, Delete: "steam" Reason: Either steam heat or dry heat - pressure - autoclave is acceptable.			04 Feb 86

16. TECHNICAL CONCURRENCE
C, Bridge Division, BRDEC, Ft. Belvoir, VA 22060-5606

DATE 4 Feb 86

DD FORM 1696

*"S" indicates supersedes earlier page. *"A" indicates added page.

KEY DATA ELEMENTS-
STANDARDS AND SPECIFICATIONS

DOCUMENT IDENTIFIERS:

- DOCUMENT NUMBER
- NOMENCLATURE
- REVISION LEVEL
- DATE
- FSCM

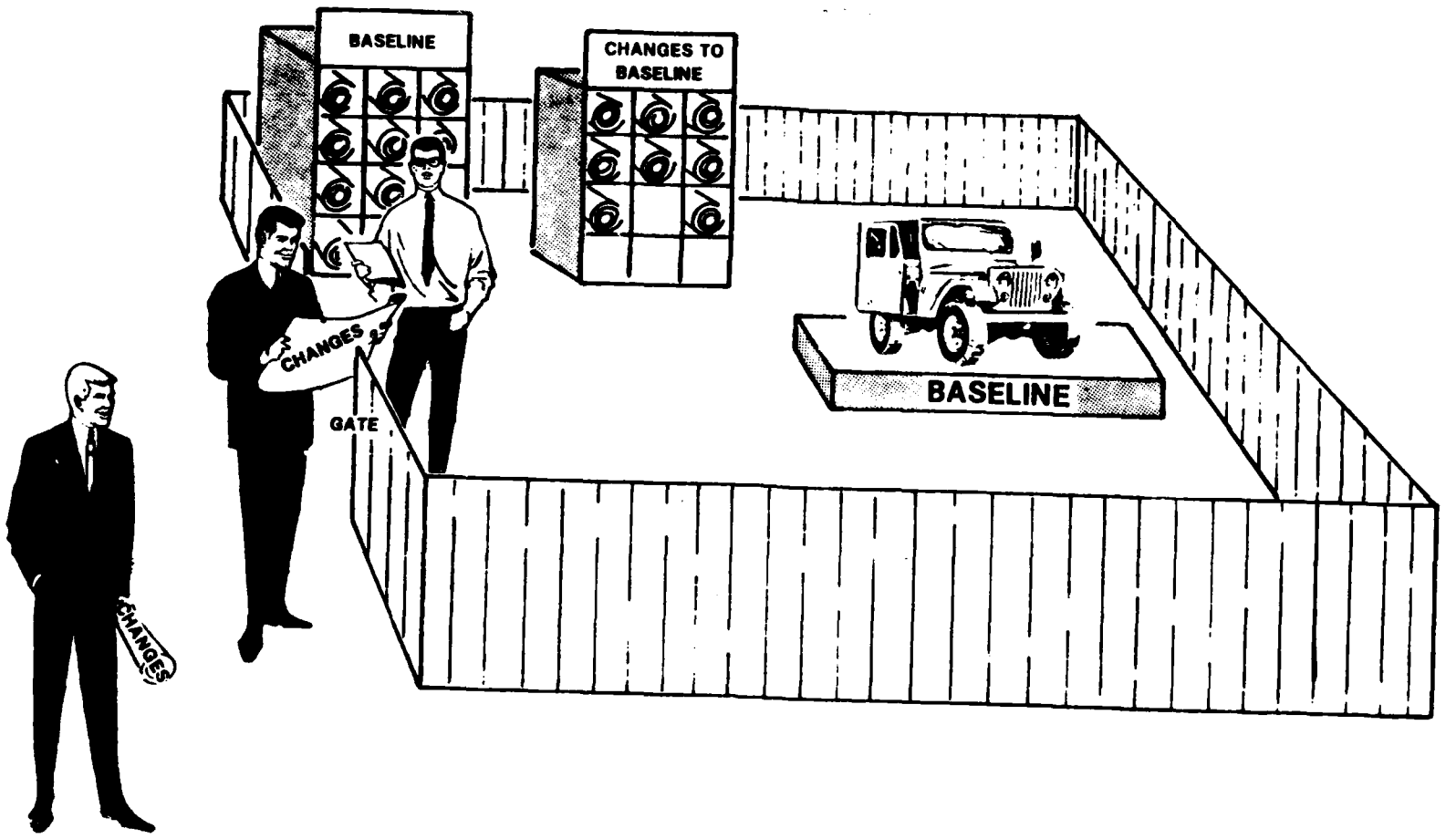
DOCUMENT MODIFIERS: (IF APPLICABLE)

- ALLOY
- CATEGORY
- CLASS
- COLOR
- COMPOSITION
- CONDITION
- FINISH
- GRADE
- GROUP
- LEVEL
- METHOD
- STYLE
- TYPE
- PATTERN

TECHNICAL DATA PACKAGE CONTENT

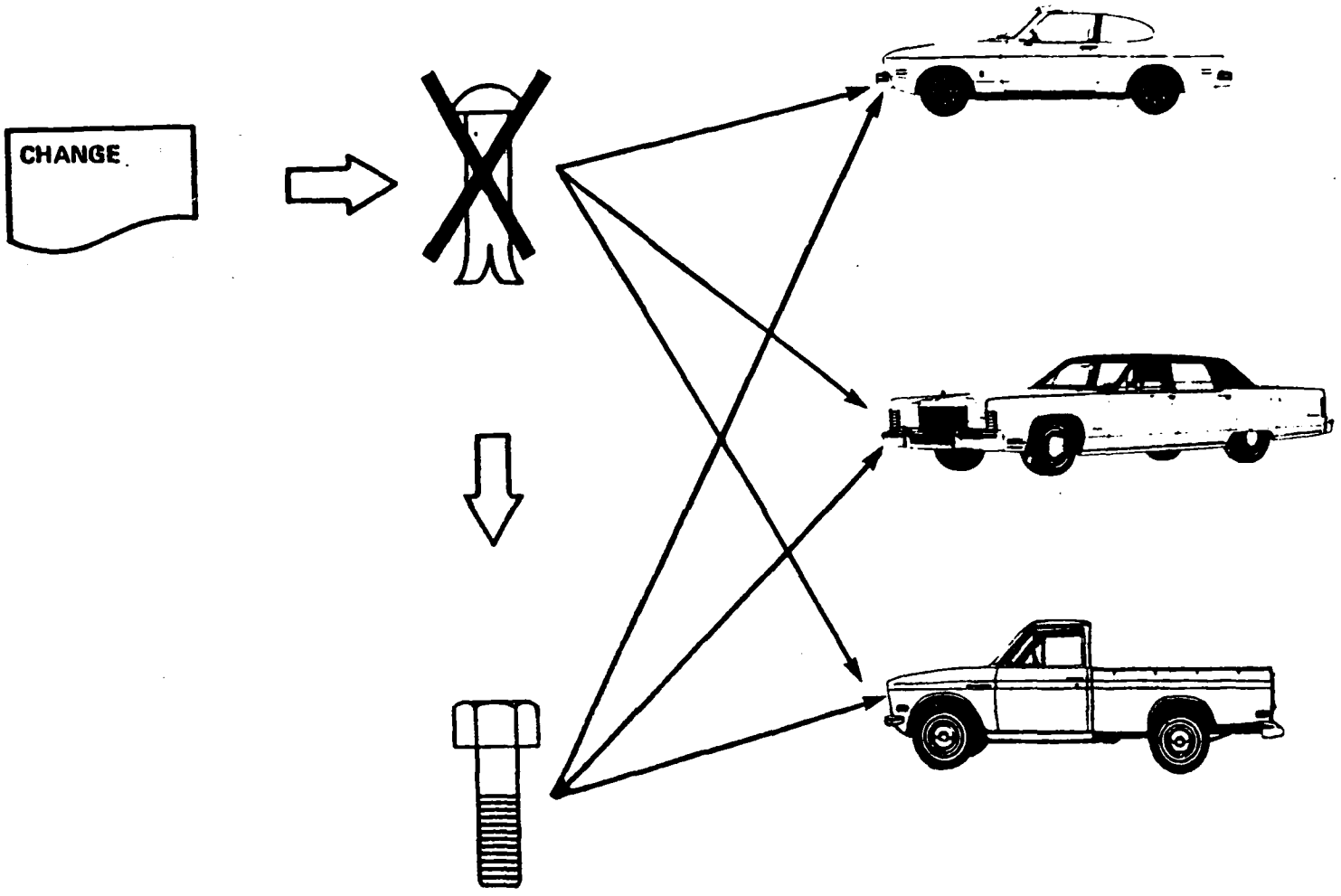
- TECHNICAL DATA PACKAGE LIST
- END ITEM SPECIFICATION
- PARTS LISTS
- DRAWINGS
- QUALITY ASSURANCE DATA
- STANDARDS
- SPECIFICATIONS
- UNIQUE MANUFACTURING PROCESS

TD/CMS — THE GATEKEEPER



- THE REPORTS PIN-POINT PROBLEM AREAS
- IDENTIFY MISSING DOCUMENTS
- IDENTIFY ERRONEOUS DATA
- IDENTIFY ACTION NECESSARY TO FINALIZE A DATA PACKAGE FOR PROCUREMENT
- IDENTIFY ENGINEERING CHANGE ACTION REQUIRED

DOCUMENTS
CROSS REFERENCE
DATA BASE
END ITEM
SUB-ASSEMBLY

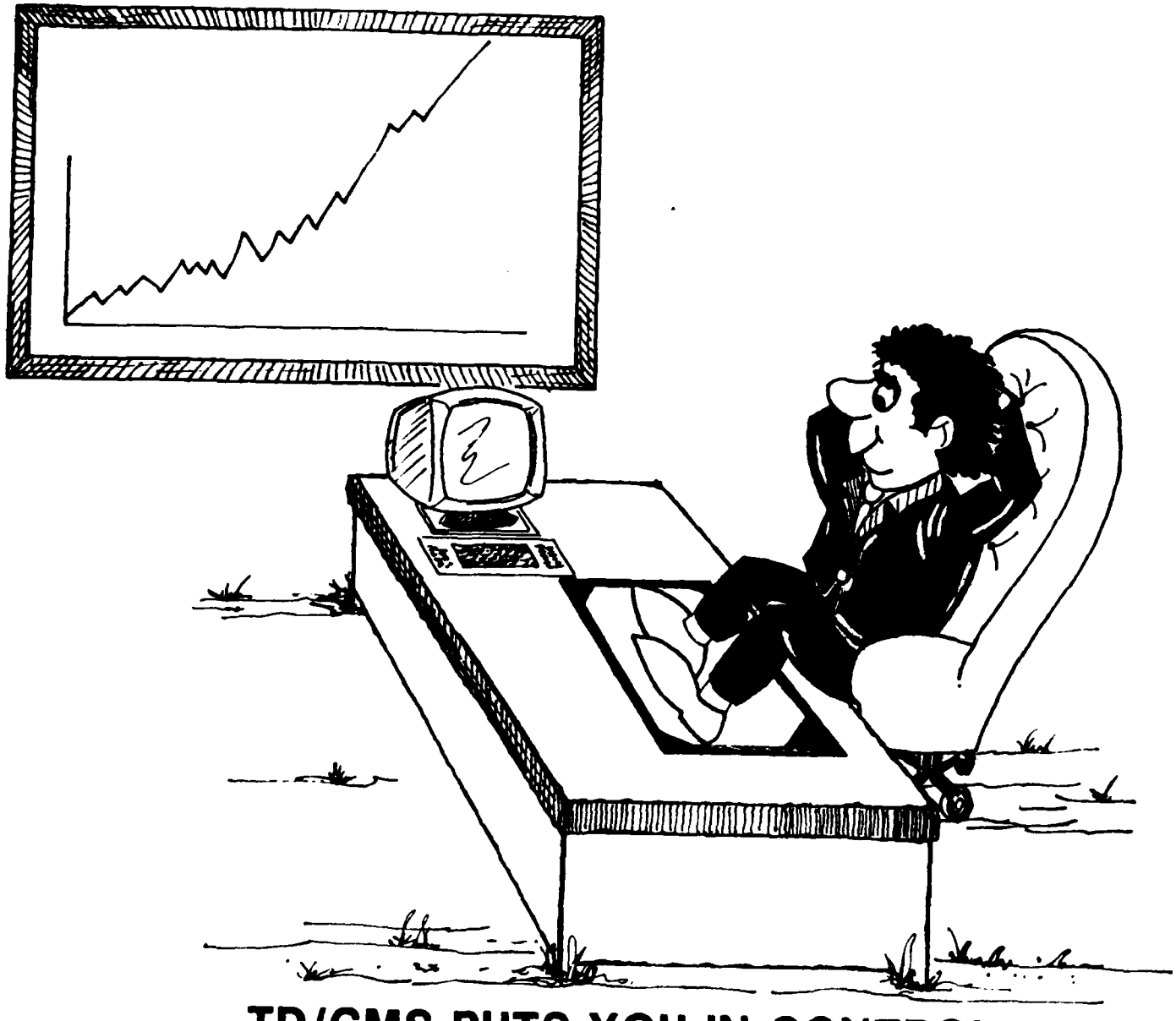

CHANGE

KEY TD/CMS STANDARD AND SPECIFICATION REPORTS

- LISTING OF ALL STANDARDS & SPECIFICATIONS
- SELECTED SPECIFICATIONS LISTING
- WHERE USED LIST FOR STANDARDS & SPECIFICATIONS
- TECHNICAL DATA PACKAGE LIST (TDPL)
- DOCUMENT USAGE LIST (DUL)

TD/CMS SUPPORTS

- MANAGEMENT
- ENGINEERING
- LOGISTICS
- PROCUREMENT
- PRODUCTION
- CONFIGURATION MANAGEMENT



TD/CMS PUTS YOU IN CONTROL

THE ADEQUACY AND ASSIGNMENT (A&A) INDEX

TOPICS FOR DISCUSSION

1. The system was designed to store the identity and current status for all of our responsible Technical Data Packages and related items of supply and standardization i.e., engineering drawing number, NSNs, standards, and handbook. Our standardization document responsibility encompasses both MCA and custodial documents as well as our own prepared documents.

2. The data stored for each document are: Federal Supply Class, item material manager, internal document managers (preparing and technical personnel), age, ADCoP designator, engineering support requirements, valid or invalid for procurement, referenced drawings/NSNs, Active Project assigned for updating, and document responsibility i.e., preparer, MCA, or custodian.

3. Our system has no users that can gain access to the computer. The system is updated/edited via key-punch cards. However, the procurement centers, standardization managers, specification writers, maintenance and technical personnel receive monthly reports from the system that pertain specifically to them.

4. We receive data for inclusion in our system from this Center, Item Material Managers, Procurement Centers, and other standardization activities.

5. The hardware used for our system is a UNIVAC 1106 computer.

6. The system's programs are written in COBOL.

7. The system is maintained internally (See No. 3).

8. The following monthly reports are obtained from the system: management run (all inclusive printout), procurement center runs, ALPHA/FSC listings, cross reference (document to NSNs/DRWGS), drawing list, ADCoP designation, CID, Workload by type document, and summary reports totalling specific documents.

9. See No. 3.

10. See No. 3.

11. There is no remote access to the system.

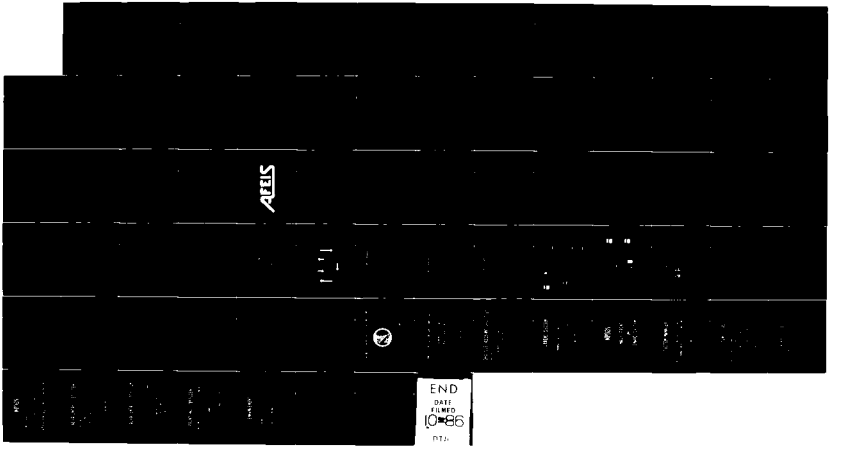
12. Our current computer system which is called a sequential file system is being revamped and a complete on-line data base management system (DBMS) should be in operation sometime in the latter part of 1987. The DBMS will enable us to access the system via remote terminals.

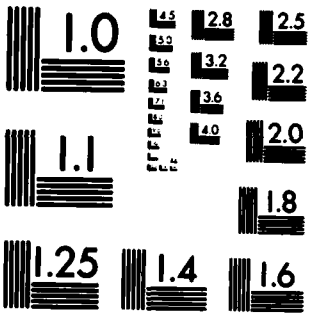
13. Our current systems documentation are available upon request.

14. We do not have a data base management system.

AD-A171 326 PROCEEDINGS OF THE DOD AUTOMATED STANDARDIZATION WORKSHOP HELD IN ARLINGT..(U) KILKEARY SCOTT AND ASSOCIATES INC ARLINGTON VA 13 MAY 86 N00140-85-D-E034 3/3

UNCLASSIFIED F/G 5/2 NL





SYNOPSIS OF BRIEFING

NATICK's STANDARDIZATION AND SPECIFICATION COMPUTER SYSTEM IS CALLED THE ADEQUACY AND ASSIGNMENT (A&A) INDEX. THE A&A INDEX CONTAINS THE IDENTITY AND STATUS (PROCUREMENT AND STANDARDIZATION) OF ALL NATICK's TDP ASSIGNED RESPONSIBILITY AS PREPARING, MCA, OR CUSTODIAN ACTIVITY AND INCLUDES RELATED ITEMS OF SUPPLY AND STANDARDIZATION. THREE VERSIONS OF THE A&A ARE PRODUCED TO MEET USER's NEEDS: (1) INTERNAL MANAGEMENT RUN THAT CONTAINS ALL THE DATA IN THE BANK, AS LISTED IN ATTACHED CHART, FOR NATICK's STANDARDIZATION DOCUMENTS, (2) CENTER RUNS WHICH CONTAIN TDP LISTINGS TAILORED TO EACH RESPONSIBLE PROCUREMENT ACTIVITY, AND (3) INTERNAL REPORTS CONTAINING DATA TAILORED TO VARIOUS ELEMENTS OF RESPONSIBILITY AT NATICK. THE PRIMARY PURPOSE OF THE A&A IS TO INDICATE TO EACH PROCUREMENT ACTIVITY THEIR TDPs THAT ARE ADEQUATE/VALID FOR IMMEDIATE PROCUREMENT. THE SECONDARY PURPOSE IS TO PROVIDE VISIBILITY OF STANDARDIZATION STATUS OF THE DOCUMENTS. THE COMPUTER PROGRAMS ARE WRITTEN IN COBOL AND THE A&A INDEX IS UPDATED/EDITED MONTHLY VIA AN INTERVAL KEY-PUNCH OPERATION.

WE RECEIVE DATA FOR INPUT TO THE A&A INDEX FROM THIS CENTER, ITEM MANAGERS, AND OTHER STANDARDIZATION ACTIVITIES. DATA THAT IS APPLIED TO EACH LISTED DOCUMENT IS EXPLAINED IN THE ATTACHED A&A INDEX LEGEND.

THE A&A INDEX SERVES AS A MULTI-PURPOSE MANAGEMENT TOOL i.e., INVENTORY ACCESS, READY IDENTIFICATION, CURRENT STATUS, AND PROCUREMENT SUPPORT. PROCUREMENT CENTERS/ACTIVITIES ARE FURNISHED SEPARATE, UPDATED MONTHLY REPORTS ON THE PROCUREMENT STATUS OF ALL THEIR RESPONSIBLE TDPs FOR WHICH NATICK IS THE PREPARING ACTIVITY. THE A&A INDEX GENERATES MONTHLY/QUARTERLY REPORTS FOR BOTH INTERNAL AND EXTERNAL DISTRIBUTION IN HARD COPY OR MICROFILM. SAMPLE PAGES OF REPORTS ARE AVAILABLE FOR YOUR REVIEW.

THE ATTACHED CHARTS LIST THE TITLES OF REPORTS THAT ARE PRODUCED ON A MONTHLY AND QUARTERLY BASIS. A QUICK RUN DOWN ON THE PURPOSE OF EACH REPORT:

VIEWGRAPH 1 - MONTHLY REPORTS

VIEWGRAPH 2 - QUARTERLY REPORTS

THE A&A INDEX IS CURRENTLY BEING REVAMPED AND A COMPLETE ON-LINE DBMS IS SCHEDULED TO BE IN OPERATION BY THE LATTER PART OF 1987.

ALSO, NATICK STORES THE FULL CONTEXT OF EACH CURRENT STANDARDIZATION DOCUMENT THAT IT PREPARES ON FLOPPY DISCS FOR FAST RETRIEVAL FOR UPDATING OR REPRODUCTION. NATICK's CURRENT AND HISTORICAL STANDARDIZATION DOCUMENTS ARE ALSO STORED ON 16MM FILM REELS. FURTHER, NATICK HAS A SEPARATE COMPUTER PROGRAM THAT MONITORS THE PROGRESS OF ACTIVE STANDARDIZATION PROJECTS.

3 ATTACHMENTS
LEGEND OF A&A INDEX
VIEWGRAPH CHART OF DATA BASE
VIEWGRAPH CHARTS OF REPORTS

Updated

1 January 1986

U. S. ARMY NATICK RESEARCH, DEVELOPMENT and Engineering CENTER
US ARMY TROOP SUPPORT COMMAND
NATICK, MASSACHUSETTS 01760-5014

PROCUREMENT DOCUMENTS ADEQUACY AND ASSIGNMENT INDEX LEGEND

INTRODUCTION

The A&A Index contains all of technical data packages (TD) for which NRDEC has either preparing, military coordinating activity, or custodian responsibility. Also included is a cross-reference between National Stock Numbers (NSN) and the applicable procurement document. The TDP's are grouped, first, by responsible procurement activity and, second, by the type of NRDEC responsibility for the TDP. The TDP's are in alpha sequence by document title except Section IV items which are in numerical sequence by NSN. The NSN listing appears at the end of each responsibility-group (Section). The primary purpose of the A&A Index is to indicate to the responsible procurement activities the current data elements that make up each TDP for which NRDEC has responsibility, and to indicate which TDP's are valid for use in immediate procurement. The secondary purpose is to provide visibility to, and current status of, all TDP's assigned to NRDEC as preparing activity, military coordinating activity or DA custodian. Three versions of the Index are produced to meet users' needs: (1) an internal NRC "MANAGEMENT RUN" containing total data, (2) a procurement activity "CENTER RUN" containing all Section I documents for which NRDEC is preparing activity and, where applicable, Section IV TDP's and (3) internal reports containing data tailored to meet the needs of NRDEC elements.

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POINT OF CONTACT
CHIEF, DOCUMENT PREPARATION DIVISION: DEPM

Mr. D. E. Luppino Telephone: AUTOVON 256-5221

Commercial Area Code 617
651-5221

CONTENTS

NOTE Critical (as defined in AR 715-13) specifications are signified with a plus sign (+) in the amendment column on the first line of the technical data package.

NOTE: Single Number/Pound sign (#) at the right of FSC class or group (GP) denotes that document is being used for procurement by one or more procurement activities.

NOTE: Single asterisk (*) also at the right of FSC class or group (GP) denotes that document covers more than one class.

DATA SEQUENCE

SECTION I Basic full, limited or interim coordinated specifications, standards, handbooks and CIDs (alpha sequence).
- Applicable full or limited coordinated amendments.
- Applicable interim DoD amendments or deviation lists.
- Applicable notices or supplements.
- Applicable engineering drawings.
- Applicable engineering support packages.

Interim purchase descriptions (alpha sequence).
Formal purchase descriptions (alpha sequence).
Limited production purchase descriptions (alpha sequence).

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SECTION II Basic full or interim coordinated federal specifications, standards, CIDs, USDA schedules and IMPS (alpha sequence).
- Applicable full or interim coordinated federal amendments.
- Applicable interim DoD amendments or deviation lists.

SECTION III Basic full limited or interim coordinated specifications or standards (alpha sequence).
- Applicable full or limited coordinated amendments or notices.
- Applicable interim DoD amendments or deviation lists.

SECTION IV National Stock Numbers

DOCUMENT INPORMATION
COLUMNAR LEGEND (SECTIONS I, II, III and IV)

COLUMN HEADING	
IND	INDIVIDUAL RESPONSIBLE FOR DOCUMENT
FSC	Federal supply class designation.
DOC/DWG TITLE	Title of specifications, standards, engineering drawings, interim, formal and limited production purchase descriptions and commercial item descriptions (CID).
DOC PREFIX/NO	Document prefix symbol and document number.
RV	Document revision suffix.
LMT	Limited coordinated document suffix.
AMT	Applicable specification, full, limited or interim DoD coordinated amendments. Limited and interim DoD amendments are preceded by a zero (0)) and NRDEC engineering support packages (ES).

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NOTE: The right double asterisk (**) denotes DoD comments on a proposed federal specification and/or amendment forwarded to GSA or USDA for inclusion in a proposed document, and the date is shown in approval date column. These proposed documents contain valid DoD requirements and, upon request, NRDEC will publish a procurement document only to satisfy either an immediate or pending procurement, pending federal document approval. Contact the Chief, Document Preparation Division, DEPM for document availability information.

DRW NO. Applicable NRDEC engineering drawing numbers (interpret as in examples below):
Example - 01 12 0048 Example - 05 01 0100 Example - 03 10 0001

When a drawing number is too large to enter on one line the number is carried over to second line in drawing number sequence.

DWG NO columns also used:
To identify notices to military or federal standards, as NO TI CE-1.
When a document is reinstated, identified as RE IN STAT.
To identify packaging data sheets, as PA DA SHT.
To identify pattern packages, as PT RN PKG.

RV Applicable engineering drawing revision.

APVL DATE Approval date for applicable: Specifications, Standards, Amendments, Handbooks Purchase Descriptions, Commercial Item Descriptions, NRDEC Engineering Support Packages (ES), Notices, Supplements or Engineering Drawings. Only exception is double asterisk (**), [see Amt Column Legend.

R NRDE document responsibility code:
Code P - Preparing activity.
Code M - DoD military coordinating activity.
Code C - DA custodian only.

T ADCOP Codes:
Code A - CID approved
Code B - CID available but backlog remains (CID does not cover all items in document)
Code C - Commercial-Off-The-Shelf
Code D - GSA to prepare CID
Code E - National industries for the blind, national industries for severely handicapped procured item (exception to CID program)
Code F - Federal prison industries procured (exception to CID program)
Code G - Government unique
Code H - Other exception to CID program
Code M - Modified commercial
Code P - Process document

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S Document status code:
Code A - Active standardization project in process.
Code Z - Projected Standardization project in process.

SCD Scheduled completion date for projected and active projects, indentified by year and quarter.

PA Responsible procurement activity code, or in those cases where a document is not used in direct support of procurement of items (e.g., material and process specification), the responsible DoD standardization assignee activity code. The activity codes are as explained in Standardization Directory SD-1, except symbol TS which is used for non-aviation items procured by US Army Troop Support Command.

LAB For internal NRDEC use.

AGE Age in months for each technical data package. 99 denotes those technical data packages that are eight years or older. Technical data package age is determined from basic document or full amendment approval month and year through current index month and year. Whenever an item is a Standard and NOTICES are approved - the AGE will not reflect the NOTICE update - but will remain AGE f/basic Standard.

VAL Procurement technical data package validity codes.
Code V - Technical data package which is Valid for procurement.
Code I - Technical data package which is Not Valid for procurement.

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NOTE: For immediate procurements involving a technical data package shown with an "I", contact the Chief, Document Preparation Division, for citation.

NOTE: For routine pending or future procurements involving a technical data package shown with an "I", forward request for citation, (e.g., DSA Form 339) to NRDEC ATTN: STRNC-ES.

SEQ Monthly index sequential computer numbering system and data line identification. This numbering identification remains in effect for each line of data until current index has been superseded. The following monthly index numbering system readjusts automatically to the new order of lines of data based on the number of lines of data added to or deleted from the preceding index.

SC	Double asterisk (**) denotes change(s) or addition(s) in a technical data package since the previous issue of the Index. This column is useful to ascertain current changes.
SECTION IV	Items by NSN and drawing part number. (Items are not always covered by individual specifications).

COLUMNAR LEGEND (SECTION IV)

NSN	National Stock Number
ITEM/PRT NO/DOC/PKG REQ/DEV LST/ES/DWG	
ITEM	Nomenclature of item.
PRT NO	Part Number (identifies the item).
DOC	Document (includes Air Force general specification, amendment and qualified products list when applicable).
PKG REQ	Packaging requirements (packaging data sheet or detailed requirements).
DEV LST	Deviation list (includes changes to drawings, specification, etc.).
ES	Engineering support (includes letter changes to the TDP).
DWG	Drawing (for listing of NRDEC and Air Force drawings). (Data for Columnar Legend "ITEM THROUGH DWG listed in sequence in one column.)
SH NO	Sheet Number (applicable to drawings which consist of more than one sheet with the same drawing number).
RV	Revision (applies to general specifications, amendments, QPL's, PKG REQ's, and drawings).
AMEND	Amendment (applies to general specification's and QPL's).
DOC DATE	Document date (applies to the general specifications, amendments, QPL's, PKG REQ's, DEV Lists and ES's).
DOC RESP	Document responsibility (NRDEC AF, etc.).
LAB	For internal NRDEC use only.
PROC ACT	Procuring activity.
VAL	Validation (V indicates TDP is valid - I indicates TDP is invalid).

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SUPPLEMENTARY INFORMATION

The technical data package consists of a basic document and all applicable amendments, deviation lists, notices, supplements, engineering drawings, etc. The technical data package does not include subsidiary reference documents, which are the prime responsibility of each preparing activity. Technical data packages are easily identifiable by document prefix symbol and revision suffix column. Data being identical for all lines of data comprising the technical data package.

Responsible NRDEC personnel will carefully review each index for errors and omissions. Whenever errors or omissions are discovered, corrected data will be immediately transmitted to all interested activities.

Monthly Index is generally forwarded to interested activities on the second Wednesday of each month.

NATIONAL STOCK NUMBER (NSN) INFORMATION
COLUMNAR LEGEND

COLUMN HEADING	
IND	For internal NRDEC use only.
NSN	National stock number.
ITEM NAME	Item name for the NSN as recorded on the defense Logistic Services Center Federal Item Logistic Data Record.
APPLIC DOC	Applicable document to be used for the procurement of the item of supply covered by the NSN.
USERS	The two (2) character user activity code is obtained from Defense Logistic Services Center and has been converted as follows: A = Army F = Air Force C = Civil Agencies N = Navy M = Marine Corps Coast Guard Veterans Administration

NOTE: Service code with an asterisk (*) indicates a subsistence item used only in Federal Hospital Feeding Programs. In those cases where the only recorded user is a DLA center, the applicable center has been indicated (i.e., DGSC, DPSC, DISC, DCSC, etc.).

ISC	Item Standardization Code (ISC) as recorded in the DLSC TIR. ISC 3 (non-procureable) items have not been included in the NSN listing.
DATE	Date of which the NSN data was extracted from DLSC TIR.
R	Same as corresponding legend under document information.
S	Code C - Document cancelled (no longer required) Code S - Document referenced replaces cancelled document Code P - Same as Code 'S' except catalog action has been requested to correct document reference. Code W - Coordination Waived on document (NRDEC is Assignee for Class)
PA	Same as corresponding legend under document information.
LAB	For Internal NRDEC use only.
SEQ	Same as corresponding legend under document information.
SC	Same as corresponding legend under document information.

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LEGEND

DEPM	Director for Engineering Programs Management
NRDEC	Natick Research, Development and Engineering Center
TDP	Technical Data Package
CID	Commercial Item Description
DA	Department of the Army
ES	Engineering Support
IMPS	Institutional Meat Purchase Specifications
USDA	Agriculture Marketing Service (Food) Agriculture Stabilization Service (Packaging)

NRDEC's ADEQUACY & ASSIGNMENT (A&A) OF PROCUREMENT DOCUMENTS

DATA BASE LISTED UNDER A&A COLUMN HEADINGS

US ARMY TROOP SUPPORT COMMAND
NATICK RD&E CENTER

IND	FSC	DOC/DWG TITLE	DOC-NO	REV	LMT
INDENTIFIES SPEC MANAGER ASSIGNED TO DOCUMENT	FEDERAL SUPPLY CLASS OF ITEM/ DOCUMENT	DOCUMENT OR DRAWING NOMENCLATURE	TYPED OF DOCUMENT CID, SPEC, STD, HANDBOOK AND DOCUMENT NUMBER	LISTS THE LATEST REVISION LETTER OF DOCUMENT	(GL)

AMT	DRW. NO.	NSNs	APVL DATE	R
IDENTIFIES LATEST AMENDMENT NUMBER OR LISTS ENGINEERING SUPPORT REQUEST	LISTS DRAWING NUMBER(S) REFERENCED AGAINST DOCUMENT	LISTS THE NSN(S) AND USERS OF ITEM REFERENCED AGAINST DOCUMENT	LISTS DATE OF BASIC, REVISION AMENDMENT, ENGINEERING SUPPORT REQUEST INITIATION	RESPONSIBLITY FOR DOCUMENT AS PREPARER MCA, OR CUSTODIAN P.M. OR C

T	PA	LAB	AGE	VAL
LISTS TYPE OF ADCoP DESIGNATION TO ITEM, 10 IDENTIFICATION LETTERS	LISTS RESPONSIBLE PROCURING ACTIVITY OF TDP	IDENTIFIES THE SPECIFIC AREA OF TECHNICAL RESPONSIBILITY AT NATICK	AGES THE BASIC OR THE LATEST UPDATED ACTION, REGISTERS FROM 0-99 MONTHS	LISTS PROCUREMENT STATUS OF DOCUMENT VALID OR INVALID V OR I

MONTHLY PRINTOUT REPORTS

1. MANAGEMENT RUN (MASTER FILE)
2. CENTER RUNS
3. CROSS REFERENCE BY DOCUMENT TO NSN
4. CROSS REFERENCE BY PROCURING ACTIVITY
5. ALPHA LISTING OF DOCUMENTS
6. ALPHA PERSONNEL - DOCUMENT RESPONSIBILITY
7. COMMODITY LABORATORY RUNS
8. DRAWING LIST
9. INVALID TDPs
10. INVALID TDPs BY PROCURING ACTIVITY

QUARTERLY PRINTOUT REPORTS

1. FEDERAL SUPPLY CLASS LISTING OF DOCUMENTS W/SUMMARY

2. NATIONAL STOCK NUMBERS LISTING W/SUMMARY

3. ADCoP W/SUMMARY

4. CID W/SUMMARY

5. WORKLOAD BY TYPE DOCUMENT

ENGINEERING CRITERIA MANAGEMENT SYSTEM (ECM) AND AUTOMATED FACILITY ENGINEERING INFORMATION SYSTEM (AFEIS)

Engineering Criteria Management (ECM) System

The ECM System is a management information system developed for the NAVFAC Engineering and Design Criteria Management Division and used to manage the development and revision of all criteria documents produced or used by NAVFAC. It is an inventory of NAVFAC criteria and a plan for criteria update. The main objectives of the ECM System, which uses the combined input of NAVFAC Headquarters and the EFDs are: (1) to determine criteria requirements, (2) to plan and execute the Navy's Facility construction programs, (3) to maintain the status of all criteria documents, (4) to track scheduled and actual milestone dates, and (6) to monitor the progress of planned versus actual performance.

The ECM System is an on-line, interactive MIS, written in COBOL and resident on an IBM 4300 series computer at FACSO, Port Hueneme, CA. The data base is accessed via remote terminals located at the EFDs and NAFVAC Headquarters. The on-line system will allow direct data access for updates and verification and will allow a user to queue reports to his/her remote printer immediately.

The ECM System works hand-in-hand with GSS, P-34, the NFGS Data Base and DM-50 to provide an accurate, up-to-date MIS. As NAFVAC criteria documents are updated and approved at Headquarters, the appropriate ECM System data base records are updated. Most data base records are currently updated by the activity responsible for preparing or updating a document. Other records are updated only by Headquarters personnel.

The ECM System maintains an inventory of over 300 NAVFAC Guide Specfications, 700 Military and Federal Specifications, 150 Standard Drawings, 130 Design Manuals and Publications, and over 550 Definitive Drawings. The data base also contains data categories pertaining to professional engineer/architect assignments, organization elements, job descriptions, job milestones, and resources data.

SYSTEM IDENTIFICATION

NAME

ENGINEERING CRITERIA MANAGEMENT SYSTEM/
CUSTODIAN-REVIEWER-USER-MCA-PREPARER MANAGEMENT SYSTEM

SYSTEM POINT OF CONTACT

MR. GARY JOHNSON
CESO, CODE 15612C
USNCBC
PORT HUENEME, CA 93043

USER POINT OF CONTACT

SAME

SYSTEM MANAGER POINT OF CONTACT

MR. THOMAS RUTHERFORD
NAVFAC, CODE 04M2
200 STOVALL STREET
ALEXANDRIA, VA 22332

SYSTEM DESIGN

PURPOSE

- STANDARDIZE CRITERIA MANAGEMENT
- LIFE CYCLE MANAGEMENT OF CRITERIA UPDATES
  - MILESTONES
  - INHOUSE/CONTRACT COST DATA
  - PRINTING COSTS
  - AVERAGE AGE
- WORKLOAD MANAGEMENT
  - BY BRANCH
  - BY INDIVIDUAL

SYSTEM DESIGN

CAPABILITIES

- PROVIDES ON-LINE SUPPORT TO USERS
  - ADD DATA/RECORDS
  - VIEW/UPDATE EXISTING RECORDS
  - QUERIES FOR STANDARD REPORTS
  - QUEUE BATCH REPORTS TO HIGH SPEED PRINTERS
  - AD-HOC QUERIES

PLANNED ENHANCEMENTS

- EXPAND USER ACCESS
- PROVIDE ADDITIONAL MANAGEMENT REPORTS
- INTEGRATE WITH
  AUTOMATED FACILITY ENGINEERING INFORMATION SYSTEM

SYSTEM USERS

WHO

- PROGRAM MANAGERS
- STANDARDIZATION MANAGERS
- SUPERVISORS
- ENGINEERS
- EQUIPMENT SPECIALISTS
- SPECIFICATION WRITERS

WHAT FOR

- PROGRAM MANAGEMENT
- DATA MANAGEMENT
- WORKLOAD MANAGEMENT
- HUMAN RESOURCE MANAGEMENT

INFORMATION STORED

- DOCUMENT IDENTIFICATION
- SECOND LEVEL REFERENCES
- APPROVAL DATE
- PLANNED/ACTUAL MILESTONES
- FINANCIAL DATA
- PRINTING COST DATA
- HEADQUARTERS/PREPARING ACTIVITY/EIC NOTES

DATA SOURCES

- CRITERIA DOCUMENTS
- PROGRAM MANAGERS
- USERS
- SUPERVISORS
- EIC'S
- SPECIFICATION WRITERS

SYSTEM OUTPUT

- ON-LINE QUERIES
  - CRITERIA DATA
  - MANAGEMENT REPORTS
  - USER REPORTS
- BATCH REPORTS
  - CRITERIA DATA
  - MANAGEMENT REPORTS
  - USER REPORTS

SYSTEM TYPE

- MULTI-USER
  - NAVFAC HQ
  - EFD's
  - CESO

ACCESS METHOD

- REMOTE
- UTILIZES NFS NETWORK
  - LEASED LINES (16.8K BPS)
  - CURRENTLY USES BISYNC COMMUNICATIONS PROTOCAL
  - WILL BE CONVERTED TO SNA/SDLC

QUERY CAPABILITIES

- STANDARD REPORTS AVAILABLE FROM ON-LINE QUERIES
- AD-HOC QUERIES THRU "ADR DATAQUERY/DATAREPORTER" SOFTWARE

EQUIPMENT

- MAINFRAME DATA PROCESSING SYSTEM
  - IBM 4381 COMPUTER AT CENTRAL SITE
  - IBM 4341 COMPUTERS AT EFD'S
  - WILL USE PC'S AS REMOTE TERMINALS AND AS STAND ALONE PROCESSORS

RECOMMENDATIONS

- CONCEPT COULD BE USED DOD-WIDE
- COORDINATE DEVELOPMENT OF A COMMON SYSTEM WITH OTHER DEPARTMENTS

Automated Facility Engineering Information System (AFEIS)

1. AFEIS is designed to provide specification and drawing (design criteria) data in text form on a optical disk, together with software, to make the engineer's job easier. It will replace reams of paper with a 5 1/4-inch optical disk weighing a few ounces. It will replace the manual effort of thumbing through volumes of paper with a high speed full text retrieval system. It will replace the manual keying of text to project specification documents with an electronic transfer to a word processor.

2. AFEIS currently has Naval Facility Guide Specifications and P-34 and OCE Specifications.

3. Users will be the engineering field activities of the Army, Navy, Air Force, other government engineering and design activities (e.g. HUD, VA, NASA), non-government A&E firms, and standard setting organizations.

4. Sources are Naval Facilties Engineering Command criteria and criteria of the Office of the Corps of Engineers.

5. Hardware:

   Central Data Base: IBM 4341

   User Sites: IBM PC/AT or compatible CD/ROM reader

6. Programs/Languages:

   - Full text search and retrieval language (to be selected from among 6)
   - MultiMate word processor
   - GSS as modified for use in MS-DOS
   - MS-DOS

7. A contractor will be used to maintain control data base - to be selected by the National Institute of Building Sciences.

8. Average answers are output from the system for quick review and research. Word processing documents can be created from query retrievals and output also.

9. AFEIS is a multi-user system.

10. Army and Navy preparing activities follow a regular update cycle. NAVFACENGCOM and OCE approve final versions of criteria and release to NIBS and the central data base manager for subsequent release.

Automated Facility Engineering Information System (AFEIS)

11. Since the data base is distributed on optical disk, no remote access or communication links are deemed necessary.

12. The system will be expanded to include all design and engineering criteria for facilities including drawings. The time target for this is Spring 1989.

13. There is no documentation at this point. The system is in the pilot and experimentation stage. It should be operational by Spring 1987.

14. No DBMS is used. A full text search and retrieval package will be used instead.

Automated Facility Engineering Information System (AFEIS)

The AFEIS is an engineering information system under development by the National Institute for Building Sciences (NIBS). This system, when fully implemented, will replace the P 34 and DM 50 systems.

NIBS contemplates putting all government and non-government facilities engineering and design criteria (e.g. specifications, design manuals, definitive drawings, military handbooks, standard drawings, military and Federal specifications, and a wide varitey of non-government standards), on a master data base and distributing it with sophisticated text search software designed for easy user access. Currently, it is planned that a master data file, a text search index, and a word processing software package will be mastered at a central contract location under NIBS management. The master data base will probably reside on an IBM 43XX. A data base copy on magnetic tape will be used to produce a master compact disk read only memory (CD-ROM) disk with sufficient copies for distribution to subscribers.

Subscribers having an IBM PC/AT or similar equipment with a CD-ROM reader, will be able to access all criteria and drawings on the disk using the search software package and move text found useful to the word processor for development of project specifications.

Since text search is being used, a data base manager is not needed. Search time should be approximately five seconds for an inquiry.

Currently, a system pilot test is being conducted by the NIBS and a private contractor and it is planned to be operational for Army and Navy Guide Specifications, and Reference Specifications, and P-34 by the Spring of 1987. Other criteria documents will be added in 1988.

The target users for this system are all architectural and engineering firms needing access to construction criteria and all Government activities and public works offices.

System documentation and the specific search software to be used in the operational system will be available in the Fall of 1986. Current CD-ROM technology allows 256,000 pages of text on a 5 1/4" optical disk. It is currently planned to distribute the text data base, search software, and several utilities to facilitate use of the data base for an annual subscriber fee of less than $500.

AUTOMATED FACILITY ENGINEERING INFORMATION SYSTEM

(AFEIS)

- SYSTEM MANAGER/POINT OF CONTACT - NATIONAL INSTITUTE OF BUILDING SCIENCES

- USER POINT OF CONTACT - TO BE DETERMINED

- AN AUTOMATED INFORMATION SYSTEM FOR READY ACCESS TO FACILITY CONSTRUCTION SPECS
  - USER ORIENTED
  - QUICK SEARCH/RETRIEVAL CAPABILITY
  - RAPID CONVERSION

AFEIS SYSTEM DESIGN

- PLACES ALL GOVERNMENT AND NONGOVERNMENT FACILITIES ENGINEERING CRITERIA ON AN OPTICAL DISK USABLE IN AN IBM-PC/AT ENVIRONMENT.

- REPLACES 67,784 PAGES OF HARDCOPY CRITERIA WITH A 5 1/4 INCH OPTICAL DISK.

- PLACES CAPABILITY FOR RAPID RETRIEVAL/USE IN HANDS OF USER ON THE OPTICAL DISK:
  - SEARCH/RETRIEVAL SOFTWARE
  - WORD PROCESSOR
  - DATA/TEXT HANDLING UTILITIES

- INITIALLY NAVY/ARMY GUIDE SPECIFICATIONS (SPRING 1987). LATER (87-88) ALL FEDERAL CRITERIA.

- PUBLISHED FOUR TIMES PER YEAR ON A SUBSCRIPTION BASIS ($500/YR OR LOWER).

AFEIS SYSTEM USERS

- ENGINEERING AND PUBLIC WORKS ACTIVITIES OF FEDERAL GOVERNMENT.
- STANDARDS/CRITERIA PREPARING ACTIVITIES OF PRIVATE SECTOR.
- A/E FIRMS
  - NOW DOING WORK
  - BIDDING WORK
  - DESIRING TO BID WORK
- EDUCATIONAL/RESEARCH INSTITUTIONS
- STATE/LOCAL GOVERNMENTS

THE SYSTEM IS TO BE USED FOR RESEARCH OF CRITERIA AND THE PREPARATION OF PROJECT SPECIFICATIONS.

AFEIS INFORMATION BASE

DOCUMENT	NUMBER	PAGES
DESIGN MANUALS (FAC)	103	13,390
DESIGN GUIDES (COE)	96	9,600
TECHNICAL MANUALS (COE)	190	5,700
TURNKEY HOUSING (FAC)	1	144
"P" PUBLICATIONS (FAC)	13	1,300
GUIDE SPECIFICATIONS (COMBINED)	650	16,250
FEDERAL CONSTRUCTION GUIDE SPECIFICATIONS (COMBINED)	325	8,125
INSTRUCTIONS (FAC)	8	40
STANDARD SPECIFICATIONS (FAC)	7	175
MILITARY/FEDERAL SPECIFICATIONS (COMBINED)	617	12,340
STANDARD DRAWINGS (FAC)	150	150
DEFINITIVE DRAWINGS (FAC)	570	570
TOTALS	2,730	67,784

AFEIS SOURCES FOR DATA/INFORMATION

- NAVAL FACILITIES ENGINEERING COMMAND
- U. S. ARMY CORPS OF ENGINEERS
- OTHER U. S. GOVERNMENT AGENCIES (E.G., HUD, VA, NASA)
- PRIVATE CRITERIA DEVELOPMENT ORGANIZATIONS (E.G., ASTM)

AFEIS OUTPUT

- FULL TEXT OF DOCUMENT SEARCHABLE
- SELECTED TEXT CAN BE MOVED TO WORD PROCESSOR ACCESSABLE FILE
- REFORMAT UTILITIES CAN BE USED TO STREAMLINE/REORGANIZE TEXT
- SUBSEQUENTLY A WORD PROCESSOR AND UTILITIES CAN BE USED TO PREPARE:
  - REPORTS
  - LETTER TEXT
  - PROJECT SPECS

AFEIS SYSTEM CHARACTERISTICS

- A MULTI-USER SYSTEM
  - EVERY USER HAS A DISK
  - CAN SUPPORT MULTIPLE TERMINALS OR NETWORKED PCS
- DOES NOT USE COMMUNICATION LINKS ALTHOUGH OTHER PCS CAN ACCESS A CENTRAL CD/ROM READER USING NORMAL PC COMM LINKS OR NETWORKS
- SYSTEM WILL HAVE ON-DISK QUERY CAPABILITY FOR WORD, PHRASE, OR KEY-WORD-IN-CONTEXT SEARCH/RETRIEVAL (5 SECONDS OR LESS RESPONSE TIME)
- AFEIS IS A PC BASED COMBINATION WORD AND DATA PROCESSING SYSTEM

RECOMMENDATIONS

- AFEIS SHOULD BE USED THROUGHOUT DOD (AND THE FEDERAL GOVERNMENT AND THE PRIVATE SECTOR) TO:
  - REDUCE PAPER VOLUME
  - REDUCE DISTRIBUTION COSTS
  - INCREASE UTILITY OF CRITERIA
  - ASSURE MORE PRODUCTIVE AND RELIABLE USE OF ENGINEERING RESOURCES (THINK TIME)
  - SPEED ACCESS TO SPECIFIC DATA

- ANYONE INVOLVED IN FACILITY CONSTRUCTION SHOULD SUBSCRIBE TO AFEIS

ATTACHMENT 12

THE ARMY SPECIFICATIONS AND STANDARDIZATION COMPUTER SYSTEM (DEPSOMIS)

1. SYSTEM IDENTIFICATION

SLIDE #1 THE ARMY SPECIFICATIONS AND STANDARDIZATION COMPUTER SYSTEM IS THE DEPSO-MIS.

THE DEPSO-MIS USES SD-4 AND DODISS DATA SOURCES IN ADDITION TO ARMY STANDARDIZATION ACTIVITIES INPUT, TO PROVIDE MANAGEMENT ORIENTATED INFORMATION.

SLIDE #2 THE SYSTEM IS OPERATED BY HQ AMC AND ASSISTED BY BDM CORP WHO IS CONTRACTED TO ADMINISTER THE DATA BASE. A CYBER 180/835 COMPUTER LOCATED AT FORT BELVOIR IS THE HOST COMPUTER FOR THE DEPSO-MIS. CURRENTLY THE 14 STANDARDIZATION ACTIVITIES SHOWN ARE USING THE SYSTEM. THIS REPRESENT OVER 95% OF ARMY SPECIFICATIONS AND STANDARDIZATION WORKLOAD.

2. SYSTEM DESIGN

SLIDE #3 THE DEPSO-MIS WAS DESIGNED TO AUTOMATE ESSENTIAL STANDARDIZATION INFORMATION REQUIRED BY STANDARDIZATION ACTIVITIES TO EFFECTIVELY MANAGE THEIR PORTION OF THE ARMY STANDARDIZATION PROGRAM.

THIS STANDARDIZATION INFORMATION INCLUDES SUCH DATA AS PROVIDED IN THE SD-4, SD-1,DODISS AND SO FORTH.

SLIDE #4 THIS SLIDE SHOWS THE INPUT, OUTPUT AND FLOW OF DATA THAT PROVIDES MANAGEMENT WITH THE INFORMATION FOR PLANNING, BUDGETING AND DECISION MAKING. THE DATA FLOW FOLLOWS BASIC COMPUTER CONCEPTS.

SLIDE #5 THIS SLIDE SHOWS MAJOR STANDARDIZATION PROGRAM AREAS OF INFORMATION THAT ARE REQUIRED BY STANDARDIZATION MANAGERS TO SATISFY THEIR PROGRAM REQUIREMENTS.

SLIDE #6 DATA BASE REVIEW
I WANT TO DISCUSS AND PROVIDE YOU MORE INFORMATION PERTAINING TO THE DEPSO-MIS DATA BASE. THIS SLIDE IS AN OUTLINE OF THE DATA BASE AREAS THAT FOLLOW.

SLIDE #7 FUNCTIONALLY, THE DEPSO-MIS PROVIDES FOR A MENU, CONSISTING OF THESE CATEGORIES AND TYPES OF INFORMATION FOR USE IN QUERYING, REPORTING AND SUMMARIZING.

SLIDE #8 THIS SLIDE IS A DIAGRAM OF HOW THE DATA INTERACTS WITH THE MAIN COMPUTER AND TERMINALS. THE SYSTEM IS INTERACTIVE AND INCLUDES A SEPARATE FILE FOR MAINTENANCE, BACKUP AND SECURITY REASONS.

SLIDE #9 DATA INPUT MAYBE INTERACTIVE WITH THE COMPUTER OR LOCALLY PROCESSED AND TRANSMITTED BY MAIL. IN EITHER CASE, THE DATA IS SCREENED BY THE DATA BASE ADMINISTRATOR PRIOR TO INCLUSION IN THE DATA BASE.

SLIDE #10 USING THE SD-4 DATA CURRENTLY IN THE DEPSO-MIS DATA BASE ANY PROJECT CAN BE SCREENED AND LISTED IN A GIVEN CATEGORY (I.E. OVERAGE, METRICATION, CIDs ITEM REDUCTION, ETC) FOR STATUS REPORTS AS SHOWN ON THIS NEXT SLIDE #11.

SLIDE #12 THE DEPSO-MIS ALSO INCLUDES AUTOMATED DODISS INFORMATION WITH LIMITED SEARCH AND DISPLAY CAPABILITY. IT CAN BE SCREENED BY PA, CUSTODIAN, VALIDATION DATE, FSC...HOWEVER, THE DODISS DATA BASE IS STILL UNDER DESIGN AND WILL REQUIRE A CONTRACT EXTENSION TO COMPLETE THE DESIGN.

SLIDE #13-14 THE NEXT 2 SLIDES ARE PARTS CONTROL FORMATS THAT ARE IN THE DATA BASE ARE USED IN PARTS CONTROL REPORTING.

THE FIRST SLIDE OF THESE TWO RELATES TO CONTRACT PERFORMANCE BY EACH STANDARDIZATION ACTIVITY.

THE SECOND SLIDE REPORTS PARTS CONTROL ACCOMPLISHMENTS BY A STANDARDIZATION ACTIVITY FOR A MAJOR WEAPON SYSTEM/EQUIPMENT.

IN ADDITION TO THESE TWO REPORTS THE PCP DATA BASE CAN BE QUERIED AND SCREENED ON SELECTED DATA ELEMENTS; I.E. CONTRACT NAME, NUMBER, TYPE.

SLIDE #15 AND 16 THE LAST TWO SLIDES ARE SAMPLES OF THE DEPSO-MIS SUMMARY REPORTS. THE SUMMARY REPORTS ARE FORMAL REPORTS FOR MAJOR STANDARDIZATION AREA OF INTEREST THAT USUALLY LIST STANDARDIZATION ACTIVITIES PERFORMANCE BY QUARTER/YEAR.

SLIDE #15 THIS SLIDE SHOWS THE STATUS OF OVERAGE DOCUMENTS FOR A SPECIFIC ARMY STANDARDIZATION ACTIVITY BY QUARTER/YEAR.

SLIDE #16 THIS SLIDE SHOWS THE STATUS OF OVERAGE DOCUMENTS FOR A SPECIFIC PERIOD FOR ALL THE ARMY ACTIVITIES.

NOTE: THE DATA SUPPORTING THESE REPORTS IS INPUT BY STANDARDIZATION ACTIVITIES IN THE DEPSO-MIS PERIODIC REPORT.

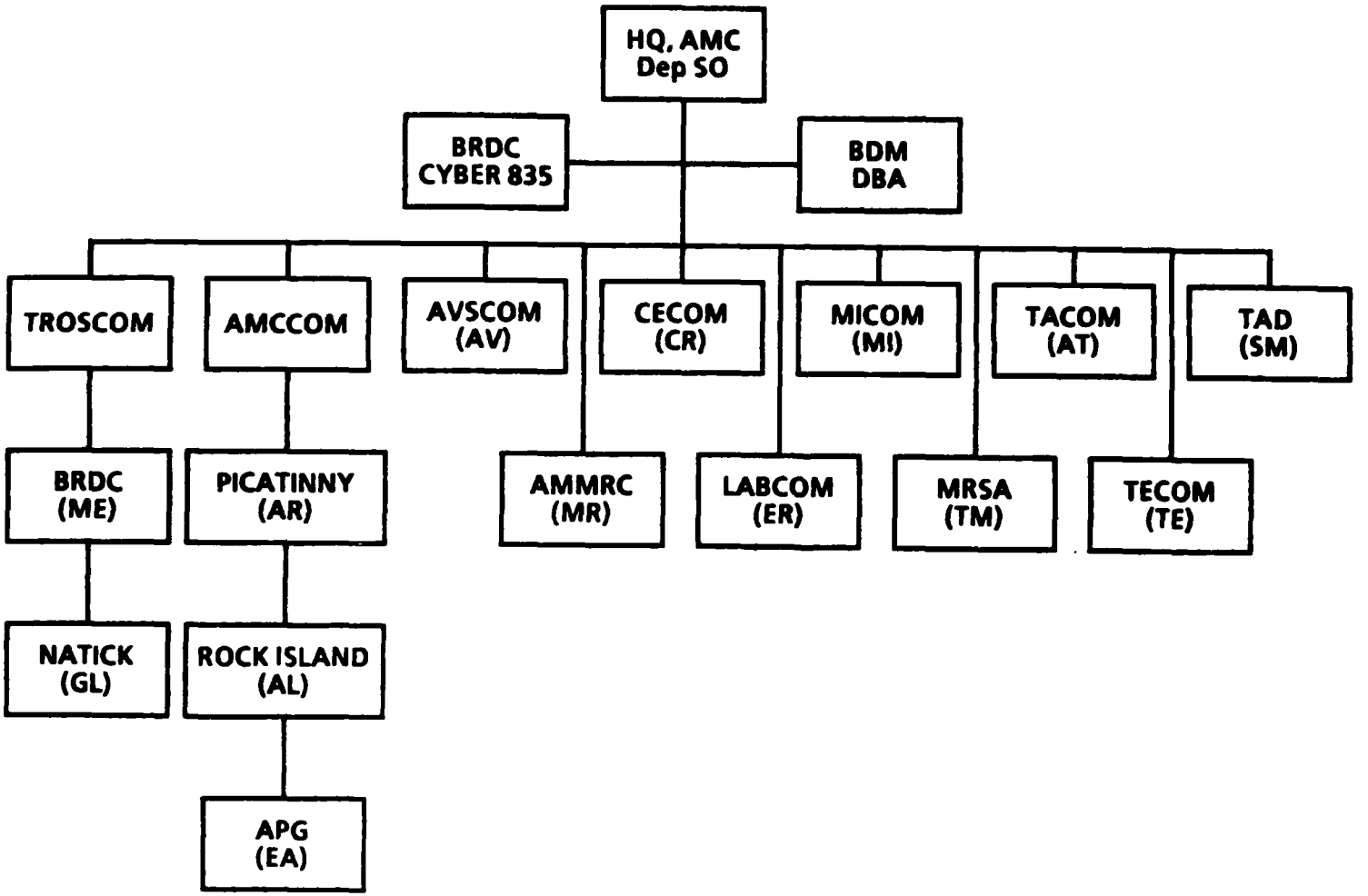
U.S. ARMY

DEPARTMENTAL STANDARDIZATION OFFICE

MANAGEMENT INFORMATION SYSTEM

(DepSO MIS)

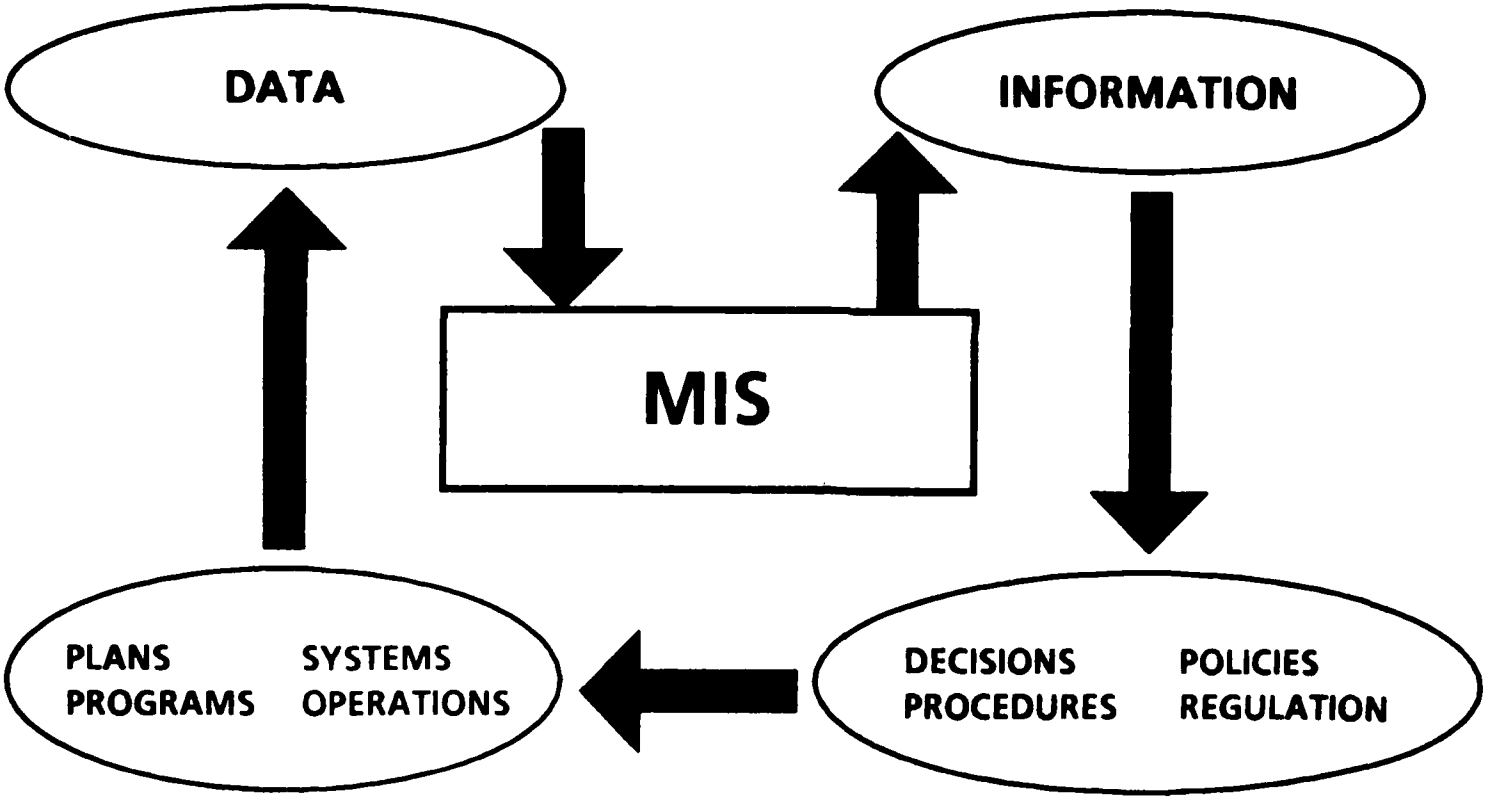
DEPARTMENTAL STANDARDIZATION OFFICE (DepSO)
MANAGEMENT INFORMATION SYSTEM (MIS)



DepSO MIS

- AUTOMATION
- INFORMATION
- COMMUNICATION

MANAGEMENT INFORMATION SYSTEM



DepSO PROGRAM

HQ, AMC DepSO	PROJECTS	MSC'S ASSIGNEE, PREPARING ACTIVITY
FUNDING	DoD PROJECTS	BUDGETING
RESOURCE ALLOCATION	ITEM REDUCTIONS	WORKLOAD SCHEDULING
WORK ALLOCATION	OVERAGE DOCUMENT REVIEWS	MANPOWER ALLOCATION
ORGANIZATION	VOLUNTARY STANDARDIZATION	PROJECT ACCOMPLISHMENT
PERFORMANCE MEASUREMENT	METRICATION	
POLICIES	PARTS CONTROL	
PLANS		

*SN-00N6447

DATA BASE

- DEPSO MIS FUNCTIONS (CURRENT)
- DEPSO MIS DATA FLOW
- SD-4
- DODISS
- PARTS CONTROL
- SUMMARY REPORTS

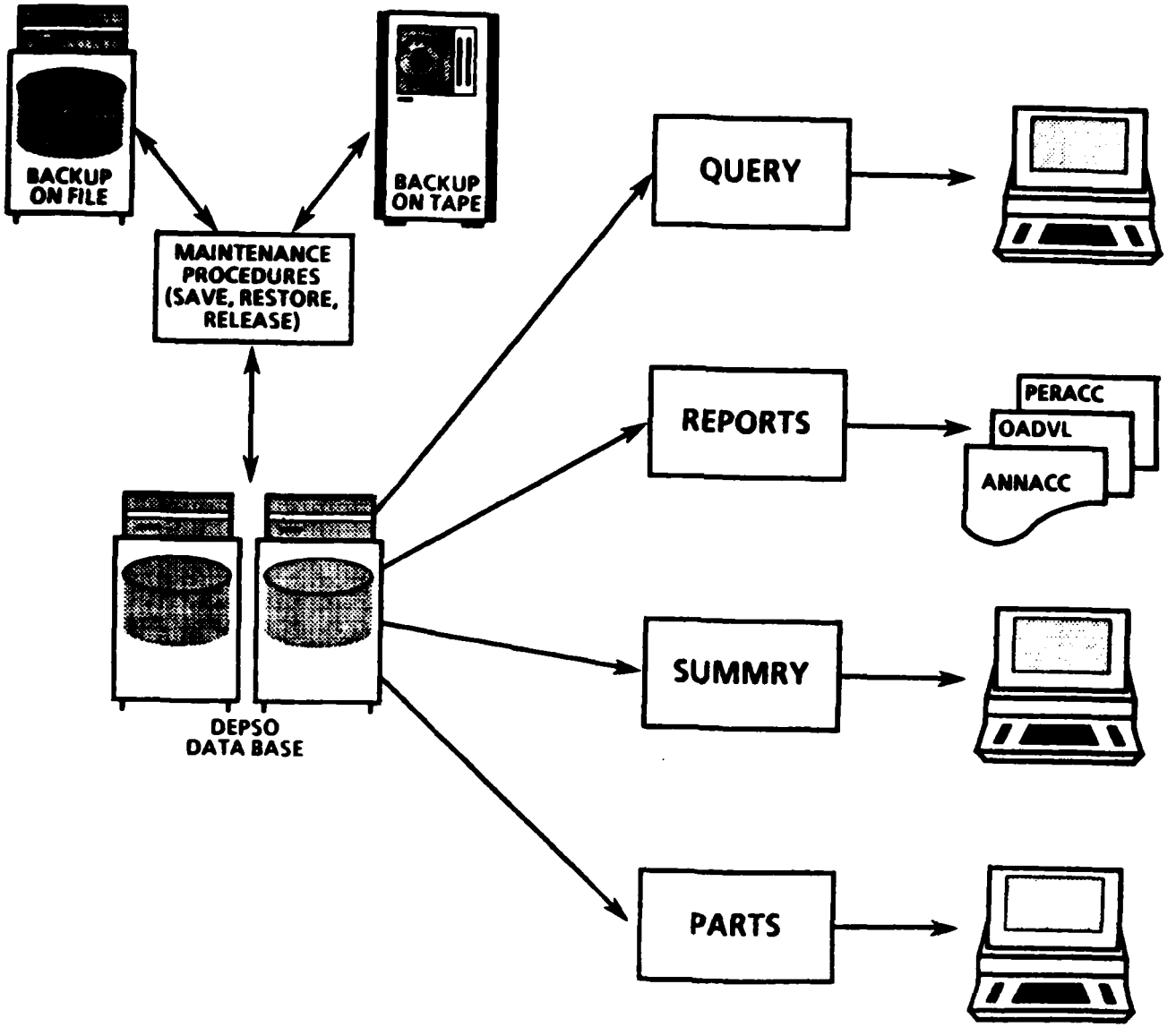
DepSO MIS

FUNCTIONS

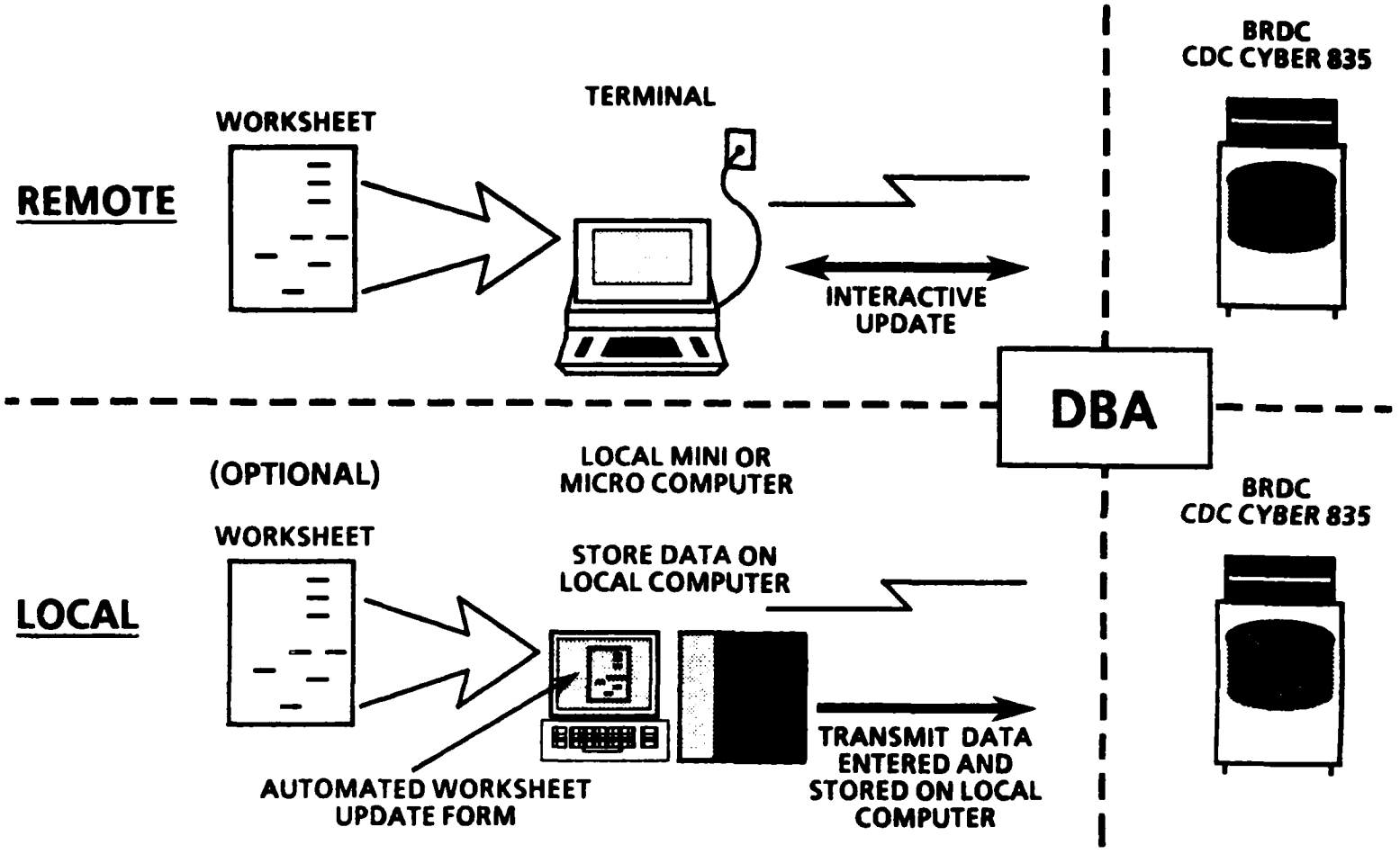
- ANNUAL ACCOMPLISHMENT REPORT (USER INPUT)
- PERIODIC ACCOMPLISHMENT REPORT (USER INPUT)
- QUARTERLY OVERAGE DOCUMENT VALIDATION LISTING (DODISS)
- QUERY (DODISS, SD-4 AND USER DATA)
- SUMMARY REPORTS (OUTPUT)
- PARTS CONTROL PROGRAM (USER INPUT)
- SD-4 (OUTPUT)

*SN-00N6447

DEPSO MIS
DATA FLOW



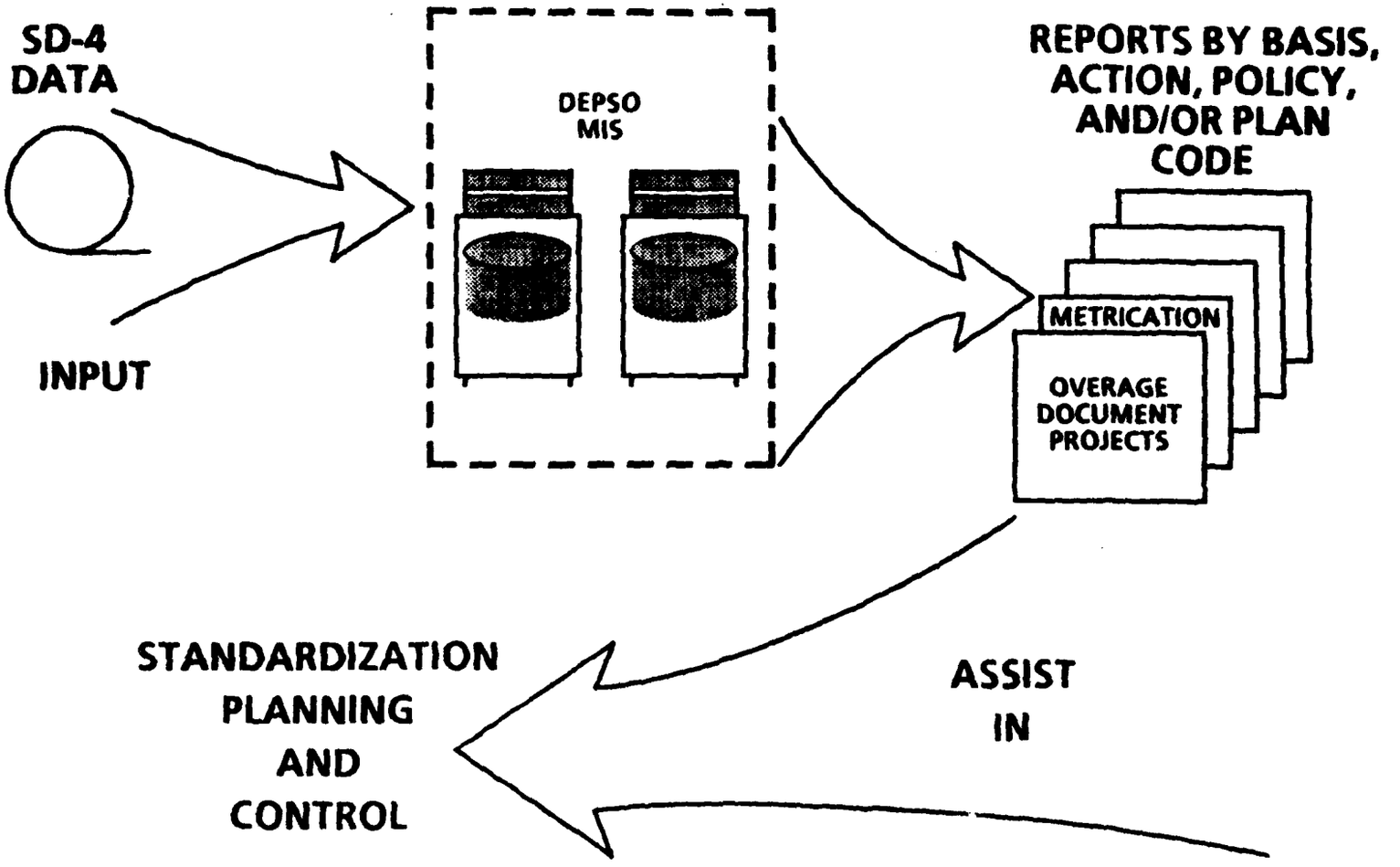
DATA ENTRY METHODOLOGIES



*5N-0327100A

9

DEPSO MIS CAPABILITIES FOR USING SD-4 DATA



SD-4 QUARTERLY SUMMARY

MSC	TOT	CONDITION (NUMBER OF PROJECTS)				STATUS (NUMBER OF PROJECTS)			
		START LATE (A)	PAST PLAN COMPL DATE (B)	PAST PLAN COMPL & NOT EXTEND (C)	COMPL NEXT QTR (D)	INIT'D (A)	COMPL'D (G)	CANCEL (Y)	PLANNED (Z)
AL	79	0	6	0	9	29	49	1	0
AR	184	1	16	22	21	102	79	2	1
EA	91	6	0	9	11	47	33	0	11
AT	225	1	3	36	55	172	46	6	1
AV	12	0	2	5	3	11	1	0	0
CR	284	0	88	5	31	198	83	3	0
ER	252	0	0	50	57	173	21	58	0
GL	413	0	8	28	54	289	72	52	0
ME	372	0	120	10	40	336	23	13	0
MR	108	2	18	0	17	49	54	2	3
TM	17	4	0	1	7	11	1	1	4
ET	0	0	0	0	0	0	0	0	0
SM	7	0	2	0	2	5	1	1	0
TE	0	0	0	0	0	0	0	0	0
MI	23	4	2	0	2	14	4	1	4
AD	2	0	0	2	0	2	0	0	0
IH	29	8	0	3	3	10	11	0	8
TOTAL	2098	26	265	171	312	1448	478	140	32

*6N-00N6447A

DODISS

- CURRENT STATUS
- IMPROVED SEARCH AND DISPLAY CAPABILITY
- CROSS REFERENCE OF DOCUMENTS AND PROJECTS

SUMMARY REPORTS

PARTS CONTROL

CONTRACTUAL PCP APPLICATION PERFORMANCE

FY _____ QTR _____

MSC	CONTRACTS AWARDED OVER $25K		CONTRACTS QUALIFIED FOR PCP		CONTRACTS INCLUDING PCP	
	QUARTER	CUM**	QUARTER	CUM**	QUARTER	CUM**
AL ROCK ISLAND AR PICATINNY EA APG AT TACOM AV AVSCOM CR CECOM ER LABCOM GL NATICK ME BRDC MI MICOM MR AMMRC SM TAD TE TECOM TM MRSA ET AMETA						

** ANNUAL ACCUMULATION

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*6N-00N6447A

SUMMARY REPORTS

PARTS CONTROL

CONTRACTED SYSTEM/EQUIPMENT PCP ACCOMPLISHMENT

MSC _____ FY _____

SYSTEM/EQUIPMENT NAME	CONTRACTOR	CONTRACT NUMBER	CONTRACT TYPE	AWARD DATE	PERCENT STANDARDIZATION BEFORE PARTS REVIEW		PERCENT STANDARDIZATON AFTER PARTS REVIEW	
					QUARTER	CUM***	QUARTER	CUM***

*** ACCUMULATION FROM DATE OF AWARD

SUMMARY REPORTS

OVERAGE DOCUMENTS

MSC _____ FY _____

	1ST QTR	2ND QTR	3RD QTR	4TH QTR	FY
A. OVERAGE DOCUMENT UPDATES SCHEDULED					
1. BACKLOG					
2. SCHEDULED					
B. UPDATES COMPLETED					
1. DOCUMENTS VALIDATED					
2. DOCUMENTS REVISED					
3. DOCUMENTS CANCELLED					
C. REVIEWS IN PROCESS					
1. DOCUMENTS UNDER REVIEW					
2. DOCUMENT REVIEWS DEFERRED					

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*6N-00N6447A

SUMMARY REPORTS

OVERAGE DOCUMENTS
DOCUMENT UPDATES

FY _____ QTR _____

MSC		SCHEDULED			COMPLETED				IN PROCESS		
		BACKLOG	THIS FY	TOTAL	VALIDATED	REVISED	CANCELLED	TOTAL	UNDER REVIEW	DEFERRED	TOTAL
AL	ROCK ISLAND										
AR	PICATINNY										
EA	APG										
AT	TACOM										
AV	AVSCOM										
CR	CECOM										
ER	LABCOM										
GL	NATICK										
ME	BRDC										
MI	MICOM										
MR	AMMRC										
SM	TAD										
TE	TECOM										
TM	MRSA										
ET	AMETA										

THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND NAVY PRINT ON DEMAND SYSTEM (NPODS)

NAVAL PUBLICATIONS AND FORMS CENTER
ALICE BELL, PRESENTOR

SPECIFICATIONS AND STANDARDS RELATED COMPUTER SYSTEMS
MEETING HELD AT SHERATON NATIONAL HOTEL, ARLINGTON, VA
MAY 13-14, 1986

BRIEFING SYNOPSIS

The system being described has been contracted but is not yet implemented. Full implementation is anticipated by February 1987. The current processing methods for standardization document issuing and DODISS preparation is encumbered by manual efforts. The only automation accomplished today through computer usage is the DODISS catalog file. The present filing system stores catalog information without capabilities of on-line update or inquiry.

The new system, NPODS, is described in two subsystems, the order entry and the printing. The Navy Publications and Printing Service Office, Philadelphia and the Naval Publications and Forms Center are the users of NPODS.

The order entry subsystem will contain basic data for item identification, inventory management capabilities, DODISS catalog data, requisition processing requirements, and have the ability to provide statistical data both standard and unique.

The printing subsystem will contain the full text of standardization documents and be capable of producing the paper imaged documents for requestors.

Remote access to non-user activities is not included in the initial installation of NPODS, but is considered among future enhancement.

"SERVING THE WORLD WITH PUBS AND FORMS"

NAVAL PUBLICATIONS & FORMS CENTER

NAVAL PUBLICATIONS AND FORMS CENTER
IS THE
DEPARTMENT OF DEFENSE
SINGLE STOCK POINT
(SSP)
FOR
SPECIFICATIONS AND STANDARDS

DOD SSP RESPONSIBILITIES

PREPARE

DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DODISS)

DISTRIBUTE

- STANDARDARDIZATION DOCUMENTS
- DODISS

CURRENT SYSTEM

* MANUAL PROCESSING

* DODISS CATALOG FILE

* DISTRIBUTION ADDRESS FILE

NPODS

NAVY PRINT ON DEMAND SYSTEM

SYSTEM MANAGER

NAVY PUBLICATIONS AND PRINTING SERVICE MANAGEMENT OFFICE (NPPSMO)

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POC - MR. J. KARPOVICH

SYSTEM USERS

NAVY PUBLICATIONS & PRINTING SERVICE OFFICE PHILA (NPPSO)

POC - MR. V. HEENAN

NAVAL PUBLICATIONS & FORMS CENTER (NPFC)

POC - MR. D. FORTUNE
MRS. A. BELL

CAPABILITIES

* INPUT DATA
* ACCESS DATA
* UPDATE DATA
* OBTAIN REPORTS & STATISTICS
  (STANDARD & UNIQUE BY FORMULA)

NPODS

MAINFRAME DATA PROCESSING SYSTEM

TWO SUBSYSTEMS

ORDER ENTRY AND PRINTING

ORDER ENTRY SUBSYSTEM

CONTAINS

* DOCUMENT IDENTIFICATION
* PREPARING ACTIVITY CODE
* USER ACTIVITY CODE
* FEDERAL SUPPLY CLASS
* INVENTORY MANAGEMENT RECORDS

ORDER ENTRY SUBSYSTEM

WILL

PRODUCE -- THE DODISS

PROVIDE -- STATISTICS, USER INFORMATION, REPORTS

PROCESS -- INVENTORY CONTROL RECORDS FOR DOCUMENTS NOT AVAILABLE FROM THE PRINTING SUBSYSTEM

PRINTING SUBSYSTEM

CONTAINS -- FULL TEXT OF DOCUMENTS

UPDATE -- SCANNER DEVICES

PROVIDES -- PAPER IMAGES UPON REQUEST

ENHANCEMENTS

* REMOTE ACCESS

* MORE TERMINALS

NAVY AUTOMATED PUBLISHING SYSTEM (NAPS)

The Navy Automated Publishing System (NAPS) is the overall concept for all initiatives in electronic information storage, retrieval, multi-media output and distribution of Navy Printing and Publishing. NAPS is adopting state of the art automated publishing and printing technologies for transition to a digital technical information database with a print-on-demand capability. The NAPS concept capitalizes on developments and trends in information technology toward improving the movement, storage, local availability, and timeliness of documentation Navy-wide. NAPS will integrate independent data bases to process information utilizing electronic preparation, production, and distribution of full page images. The application of database management and automated publishing and printing techniques will reduce overhead costs, labor intensive warehousing requirements, out-of-stock conditions, secondary printing, and out-dated technical information.

The Navy Publications and Printing Service (NPPS) plans to integrate this concept through service bureau type facilities. These service bureau facilities are currently co-located with major Navy activities throughout the world. The corporate structure of NPPS enables it to provide both policy and line control over all items printed within the Navy. This responsibility is ultimately controlled within the NPPS Management Office; thereby allowing coordination for all automation initiatives at one central location which allows for total system compatibility. The Industrial Fund concept under which NPPS operates allows for the purchase of required hardware and/or systems for operating purposes under a capital equipment program whereby such equipment or system can be reimbursed on the basis of the services provided to customer activities.

By capitalizing on this coprorate structure, NPPS needs only to network its present facilities to transition from a manufacturing based entity producing line items of printing to an information processing organization which will offer Navy a fully automated network of central data bases structured to improve movement, storage, local availability, and timeliness of documentation.

NAVY PRINT ON DEMAND SYSTEM (NPODS)

The NPODS project was initiated in 1979 as an attempt to more rapidly provide Military Specifications and Standards to the user community (primarily the private sector) and to eliminate out of stock conditions and back order problems through the use of automated data base publishing techniques. The objective of the NPODS initiative is to reduce labor costs and response times associated with printing and handling shelf stock. Appropriate ADP and Congressional Joint Committee on Printing (JCP) approvals were solicited and granted by the JCP in January of 1982 and by GSA/NAVDAC in October 1983.

NPODS is being developed in support of the Naval Publications and Forms Center (NPFC), Philadelphia. The system consists of three functions: order entry, digital storage, and demand printing. Orders for non-digitized documents will be satisfied via warehouse picking personnel using computer-generated retrieval lists. The data

base will consists of approximately 800,000 pages, which will be stored on optical disk and output on demand on high speed laser printers. Expected to handle 45 million pages annually, the project is funded at $5.5 Million under NPPS NIF for FY 85-86.

Many small businesses made bid requests on NPODS through the 8A Small Business Set Aside Program of SBA. The contract was awarded in Feb 1986 to Capital Systems Inc. in conjunction with groups from the Ziff and Xerox corporations. Their proposal offerred initial scanning of 85% of the original collection, which precluded the need for a second phase.

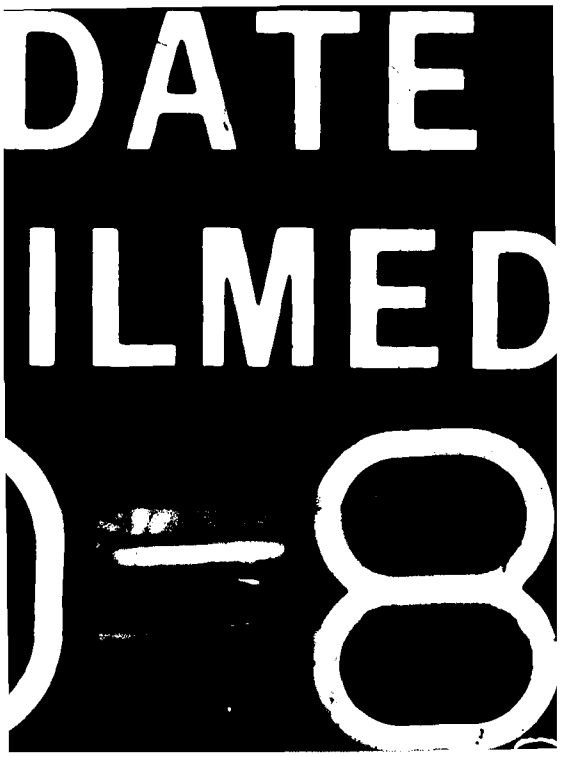
Site preparation and total system implementation is anticipated within one year.

Concurrent with the initial NPODS project, a study will be conducted to determine the feasibility of migrating the NPODS pilot project to other NPPS sites as well as demand printing aboard ships. In addition, the following specific functions will be explored: (1) alternative storage media such as optical disks and conversion technologies; (2) the ability for specified document sponsors to access the data base from remote sites in order to make online revisions/changes; (3) the ability for sponsors and users to query the data base and perform content searches; and (4) the ability to provide an online Department of Defense Index of Specifications and Standards (DODISS).

Additional document collections that have been identified for potential NPODS application include forms, directives, technical manuals, and other administrative material currently stocked at the NPFC.

OPTICAL DIGITAL DATA DISK CONVERSION SERVICES

A specification has been written which will provide a digitization service bureau facility to Naval activities through their local NPPS. Such a service contract, when awarded, will provide for various types of scanning technologies and the mastering of the scanned data to optical disk storage media. Due to our NIF structure, all services can be acquired with customer activities reimbursing NPPS on the basis of services provided or units produced. This will obviate the necessity for individual activity funding and establish a vehicle which will also provide Navy inherent compatibility.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