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DEVELOPMENT OF AN INVENTORY OF OPERATIONAL DATA BASES. VOLUME I--ETC(U)
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OFFICE OF NAVAL RESEARCH

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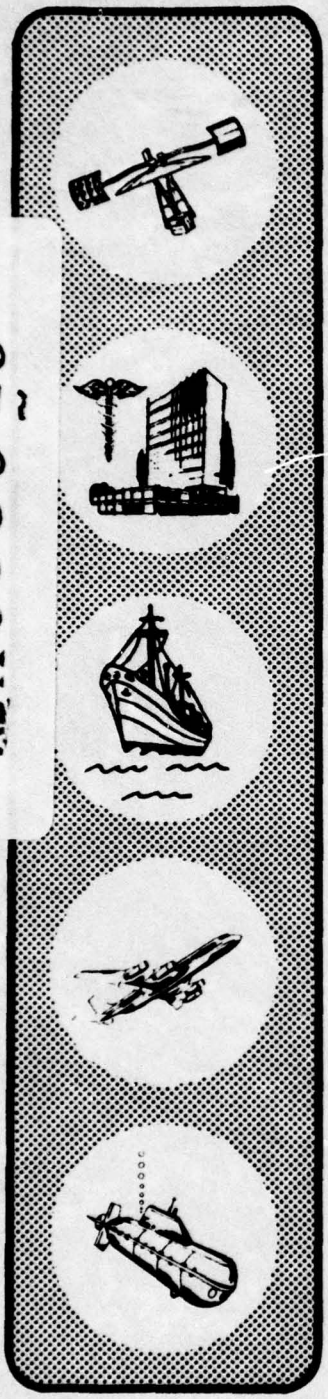
TASK NO. NR 105-774



FINAL REPORT

DEVELOPMENT OF AN INVENTORY OF OPERATIONAL DATA BASES

Volume One
Narrative Discussion

1 February 1976

DOT SYSTEMS INC.
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703/938-5250

OFFICE OF NAVAL RESEARCH

(15) CONTRACT N00014-74-C-0281
Task No. NR 105-774

(9) FINAL REPORT.
16 Aug 75 - 1 Feb 76.

(6) Development of
an
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of
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Narrative Discussion.

(11) 1 February 1976

(12) 42p.

DOT Systems, INC.
513 Maple Avenue West
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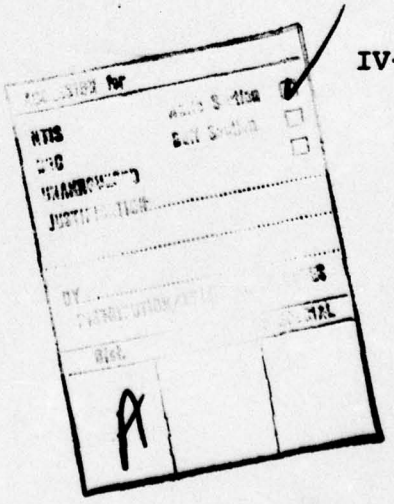

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SUMMARY

Introduction

This report documents the study effort accomplished by DOT Systems, Inc., under Office of Naval Research Contract N00014-74-C-0281 (Task No. NR 105-774), "To Develop an Inventory of Operational Data Bases." Work was accomplished during the period 16 August 1975 to 1 February 1976. (This study documents)

The purpose of the study was to document Navy and Marine Corps automated data bases which are managed at the Departmental level and are currently operational. This documentation is to provide an inventory of selected data bases which have a potential for use in planning, programming, and budgeting by the Bureau of Medicine and Surgery (BUMED). (cont on p. 3)

Methodology

The study was conducted in two phases as follows:

Phase 1: The Department of Defense "Automated Data Processing Systems Catalog, LSPC 3-70-1, Volumes I and II," and the five-year automated data processing systems plans of the Navy and Marine Corps were reviewed to identify those systems with potential utility for BUMED application. The criteria for selecting the systems were provided by the Director, Surface Medicine Division, (BUMED Code 52). Based on these criteria, systems were selected by DOT Systems, Inc., and a brief narrative description of each was submitted to the Director, Surface Medicine Division (BUMED Code 52). The Director of BUMED Code 52 then selected those systems which were to be subjected to detailed documentation in Phase 2 of the study.

Phase 2: The below listed Navy and Marine Corps systems were selected by the BUMED Code 52 Director for detailed documentation.

NAVY SYSTEMS

Navy Manpower and Personnel Management Information System (MAPMIS)

- Manpower Requirements System
- Officer Personnel System
- Enlisted Personnel System
- Reserve Personnel System
- Fiscal System

Chief of Naval Operations Command Management Information System (CNOCOM/MIS)

- Readiness Analysis Trends
- Navy Resource Model
- Amphibious Lift File
- Total Force Information Retrieval System
- CNO/VCNO Action Sheet Retrieval System

Navy Facilities System (NFS)

- Civil Engineer Support/Management Information System
- Navy Facilities Assets Data Base
- Environmental Quality Data System
- Construction, Automotive, and Special Equipment/ Management Information System

NAVSEA Support System

MARINE CORPS SYSTEMS

Manpower Management System (MMS)

Table of Manpower Requirements (TMR)

Reserve Personnel Management Information System (REPMIS)

Retired Pay/Personnel System

Information for the detailed documentation was gathered from Navy and Marine Corps system managers. This information was condensed, edited, and presented in a format suitable for use by the Surface Medicine Division.

(cont fr p. 1)

Conclusions

The following conclusions were drawn based on the study: (1)

- There is a need to develop and make available non-technical systems documentation for use by managers and staff personnel who are not trained in automated data processing. (2)

- The DOD Automated Data Processing Catalog, LSPC 3-70-1, Volumes I and II, is of questionable value because of its lack of timeliness and completeness.

- The NAVCOSSACT automated listing of Navy automated data systems appears to provide the most promising source for initially identifying systems relevant to a specific information requirement; (3)

- The large number of systems and the diverse methods for maintaining systems documentation inhibit functionally oriented managers from maintaining a current awareness of systems applications; and (4)

- There is a requirement within the Bureau of Medicine and Surgery for a comprehensively documented inventory of both internally and externally managed automated data processing systems and their related data bases for use by medical and dental functional managers.

Recommendations

To meet the requirements for management information within BUMED the following actions are recommended:

- Establish management information requirements for each functional area within BUMED. These information requirements should address specific subjects and functions necessary for application in planning, programming, and budgeting, e.g., manpower requirements determination, personnel accounting, active duty/beneficiary population profiles, facilities configuration determination, base loading determination, unit mission assignment, etc.

- Develop an inventory of information systems, both with and external to BUMED, which can satisfy specific management information requirements. The inventory should include the identification of systems that are operational as well as those that are planned for implementation, e.g., in the conceptual or developmental phase.

- Document information systems, identified in the above recommendation, in a degree of detail suitable for use by non-ADP managers and planners. This documentation should be such that it provides a ready reference that is cataloged by major subject, e.g., manpower, personnel, facilities, supply, equipment, etc.

- Maintain and update the inventory and systems documentation under the aegis of the Management Information Division (Code 022), Director of Program Planning and Analysis (Code 02), Bureau of Medicine and Surgery.

Report Organization

This report consists of two separately bound volumes entitled:

- Volume One - Final Report, Narrative Discussion
- Volume Two - Final Report, Inventory of Operational Data Bases

SECTION I

INTRODUCTION

1.1 Purpose

This report documents the study effort accomplished by DOT Systems, Inc., under Office of Naval Research Contract N00014-74-C-0281 (Task No. NR 105-774), "To Develop an Inventory of Operational Data Bases." Work was accomplished during the period 16 August 1975 to 1 February 1976.

The purpose of the study was to document Navy and Marine Corps automated data bases which are managed at the Departmental level and are currently operational. This documentation is to provide an inventory of selected data bases which have a potential for use in planning, programming, and budgeting by the Bureau of Medicine and Surgery (BUMED), specifically the Surface Medicine Division (BUMED Code 52).

1.2 Background

BUMED Code 52 has a continuing requirement for data to assist in the planning, programming, and budgeting (PPB) of medical requirements which include manpower, facilities, and equipment. In addition to the PPB requirement, BUMED Code 52 must have data for use in developing medical requirements in support of contingency operations for given scenarios and for responding to ad hoc queries or study requests from higher agencies, e.g., the Department of the Navy, Department of Defense, Office of Management and Budget, and Congress. The PPB cycle follows

formally established phases and time cycles; however, the interactivities among the phases during the total PPB cycle are characterized by relatively short suspense dates. Further, the response time associated with contingency planning and ad hoc queries is unpredictable, but usually does not permit extensive or protracted data collection and analysis efforts. Within this management environment, it is essential that BUMED Code 52 have access to data that is readily available and that covers all functional areas.

To meet this management challenge, BUMED Code 52 requires an inventory of current operational data bases which is suitable for either manual or automated search techniques for determining data content relevant to a given management problem. The purpose of such an inventory is to provide a vehicle to BUMED Code 52 for rapidly determining which data base has the needed information and the most effective method of access to satisfy particular data requirements.

1.3 Data Sources

The data sources for this study included:

- The Department of Defense "Automated Data Processing Systems Catalog, LSPC 3-70-1, Volumes I and II."
- The Navy and Marine Corps five year automated data systems plans.
- Individual system's documentation provided by the system's sponsor or manager.

Each of these sources is discussed in successive paragraphs.

1.3.1 Department of Defense "Automated Data Processing Systems Catalog, LSPC 3-70-1, Volumes I and II."

The Catalog was developed by Task Group 3-70, Logistics Systems Policy Committee, Directorate for Automation, Policy,

Technology, and Standards, Office of the Assistant Secretary of Defense (Comptroller), and was published in 1974. The Catalog provides an index and a brief technical description of systems under the cognizance of the four military services, Joint Chiefs of Staff, and Defense Supply Agency. A sample of the format and data content of Volumes I and II is contained in Figures I-1 and I-2 respectively on the following pages.

The purpose of the Catalog is to provide an inventory and detailed technical information regarding systems characteristics which should enable DOD managers to:

- identify systems with similar purposes, so that all may be considered in plans for standardization or integration
- compare proposed new systems with those in being to avoid unnecessary duplication of development costs
- improve management information retrieval with respect to automated systems by using standard methods for their classification and description
- respond to higher authority requirements for automated systems planning information.

The Catalog contains approximately 1800 Navy and 71 Marine Corps systems.

1.3.2 NAVY ADP Five Year Plan FY 1974-FY 1979

This document, published in January 1974, describes Navy plans for administering the Department of the Navy Automatic Data Processing Program (DON ADP Program) and managing the resources reflected in the DON ADP Program budget. The plan also describes (in some 250 pages) the 45 major systems managed at Departmental level. The system descriptions, while more

AUTOMATED DATA SYSTEM DESCRIPTION

IDENTIFICATION ELEMENTS

ADS IDENTIFIER: P01 PARENT ADPS(S): MAPMIS (100)

TITLE: Officer Personnel System ACRONYM: Officer System

MANAGER: DACMP For Management Information
Navy Annex - Columbia Pike
Arlington, VA 20370

ACTIVITY ADDRESS CODE: 00022

DESIGNER: Same as Manager

MAINTAINER: Same as Designer

CONTROL ELEMENTS

STATUS: Operational

MILESTONES:
(1) CONCEPT APPROVED: A6809
(2) PROTOTYPE OPERATIONAL:
(3) FULLY IMPLEMENTED: A6906
(4) PHASE OUT: P7604

DESCRIPTION ELEMENTS

	SUBJECT(S)	FUNCTION(S)
PRINCIPAL SUBJECT/FUNCTION(S):	Personnel Govt-Military Officers	Det/Qual Reqs Schedule Movemnt Estab Acct Rcd Retrieve/Rpt Inf Classify/Sorting Updating (Note: All Functions Modeled.)
SECONDARY SUBJECT/FUNCTION(S):		

USER(S):*	LEVEL	TYPE	NUMBER
(1)	OPNAV	Headquarters	1
(2)	BUPERS	Headquarters	1
(3)	NAVCRUITCOM	Headquarters	1
INPUT SOURCE(S):			
(1)	BUPERS	Headquarters	1
(2)	NAVCOMPT	Headquarters	1

SECURITY CLASSIFICATION:
(1) FILES: Uncl (2) PROCESSES: Uncl (3) PRODUCTS: Uncl

INTERFACE RELATIONSHIP(S): None

NUMBER OF INCLUDED DATA SYSTEMS: 5

STANDARD PROCEDURES USED IN ADS: NA

HARDWARE:
(1) ADPE: IBM 360 65 IBM 360 30 IBM 360 40
(2) ON-LINE QUERY CAPABILITY: No

LANGUAGES USED: COBOL - 30%; ALC - 70%

MAJOR ADS COST:
(1) NET COST FOR DEVELOPMENT:

(2) NET COST FOR OPERATIONS:

TOTAL DEVELOPMENTAL COST RANGE:

*Continued on next page.

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Figure I-1. Example of Format and Data Content Contained in DOD "Automated Data Processing Systems Catalog, LSPC 3-70-1, Volume I"

IDENT	SUBJECT	FUNCTIONS	TITLE	ADPE	SYS TYPE	CTL SYS	LANGUAGES	CORE	NBR PGMS	QUERY	STATUS	CONTACT POINT
ADS N019 ADPS N154 N353310029	MATERIEL MAJOR ITEMS	INVENTORYNG SUPP	ARMY INVENTORY SYSTEM	RCA7045	A	S7000S	COBF	037B	004	N	O	DATA SERVCS CNTR ORL DETA N/A N3532 SAN DIEGO CA 92132 A7914393
	ADDL SUBJ MATERIEL, SECONDARY ITEMS ..... FUNCTIONS INVENTORYNG SUPP											
	ADDL SUBJ FACILITIES, TRAINING ..... FUNCTIONS INVENTORYNG SUPP											
ADS N019 ADPS N154 N353310030	SERVICES SYSTEM DESIGN	RDT&E* SIMULATING*	SCIENTIFIC APPLICATIONS	RCA7045	A	S7000S	FORTIV GASPIV	100B	042	N	P	DATA SERVCS CNTR ORL DETA N/A N3532 SAN DIEGO CA 92132 A7914393
	ADDL SUBJ DATA SYSTEMS, SINGLE INSTL ..... FUNCTIONS RDT&E*, SIMULATING*											
ADS N019 ADPS N154 N353310031	SERVICES SYSTEM DESIGN	RDT&E* SIMULATING*	SIMULATION APPLICATIONS	RCA7045	A	S7000S	FLOSIM GASPIV FORTIV	100B	040	N	P	DATA SERVCS CNTR ORL DETA N/A N3532 SAN DIEGO CA 92132 A7914393
	ADDL SUBJ DATA SYSTEMS, SINGLE INSTL ..... FUNCTIONS RDT&E*, SIMULATING*											
ADS N019 ADPS N154 N353310032	PERSONNEL GOVT MILITARY	REQ BY LOCATION	MILITARY LOCATOR	RCA7045	A	S7000S	COBF	050B	006	N	P	DATA SERVCS CNTR ORL DETA N/A N3532 SAN DIEGO CA 92132 A7914393
ADS N019 ADPS N154 N353310033	PERSONNEL GOVT MILIT&CIV	ANALYZING ASSIGN PRIORITY EVAL PERS PERF REQ BY LOCATION	WORKLOAD MANAGEMENT SYSTEM	RCA7045	A	S7000S	COBF	080B	002	N	P	DATA SERVCS CNTR ORL DETA N/A N3532 SAN DIEGO CA 92132 A7914393
	ADDL SUBJ SERVICES, MANAGEMENT ..... FUNCTIONS ANALYZING, ASSIGN PRIORITY, EVAL PERS PERF, REQ BY LOCATION											
ADS NP01 ADPS N100 N00022P001	PERSONNEL GOVT MILITARY OFFICERS	CLASSIFY/SORTING DET QUAL REQS ESTAB ACCT RCD	INPUT	IBM-360/65	A	OS-360	ASMBLR	150B	011	N	O	BUPERS HEADQUARTERS N/A N0002 WASHINGTON DC 20370 A2244519
ADS NP01 ADPS N100 N00022P002	PERSONNEL GOVT MILITARY OFFICERS	CLASSIFY/SORTING DET QUAL REQS ESTAB ACCT RCD RETRIEVE/REPT INF UPDATING	FILE MAINTENANCE	IBM 360/65	A	OS-360	ASMBLR	150B	040	N	O	BUPERS HEADQUARTERS N/A N0002 WASHINGTON DC 20370 A2244519
ADS NP01 ADPS N100 N00022P003	PERSONNEL GOVT MILITARY OFFICERS	CLASSIFY/SORTING DET QUAL REQS ESTAB ACCT RCD RETRIEVE/RPT INF SCHEDULE MOVEMNT UPDATING	REPORT WRITING	IBM 360/65	A	OS-360	ACOB ASMBLR	260B	250	N	O	BUPERS HEADQUARTERS N/A N0002 WASHINGTON DC 20370 A2244519
ADS NP01 ADPS N100 N00022P004	PERSONNEL GOVT MILITARY OFFICERS	CLASSIFY/SORTING DET QUAL REQS RETRIEVE/RPT INF	ASSET (REPORT WRITER UTILITY)	IBM-360/65	A	OS-360	ACOB	100B	999	N	O	BUPERS HEADQUARTERS N/A N0002 WASHINGTON DC 20370 A2244519
ADS NP01 ADPS N100 N00022P005	PERSONNEL GOVT MILITARY OFFICERS	ADM SUPPORT MGT*	MODELING	IBM-360/65	A	OS-360	FORTIV ACOB	100B	007	N	O	BUPERS HEADQUARTERS N/A N0002 WASHINGTON DC 20370 A2243033
ADS NP02 ADPS N100 N00022P101	PERSONNEL GOVT MILITARY ENLISTED	CLASSIFY/SORTING DET QUAL REQS UPDATING	INPUT	IBM-360/65	A	OS-360	ACOB	155B	066	N	O	BUPERS HEADQUARTERS N/A N0002 WASHINGTON DC 20370 A2241883
ADS NP02 ADPS N100 N00022P102	PERSONNEL GOVT MILITARY ENLISTED	CLASSIFY/SORTING DET QUAL REQS ESTAB ACCT RCD RETRIEVE/RPT INF SCHEDULE MOVEMNT UPDATING	FILE MAINTENANCE	IBM-360/65	A	OS-360	ACOB ASMBLR	800B	325	N	O	BUPERS HEADQUARTERS N/A N0002 WASHINGTON DC 20370 A2241883

Figure I-2. Example of Format and Data Content Contained in DOD "Automated Data Processing Systems Catalog, LSPC 3-70-1, Volume II"

extensive than those contained in the DOD Catalog, are of a general nature. The Navy five year plan is under the cognizance of Information Systems Division (OP-91), Chief of Naval Operations. An example of a systems description contained in the Navy five year plan is shown in Figure I-3 on pages I-7 to I-11.

1.3.3 Marine Corps Automated Data Systems Plan (ADSP), FY75-80

The Marine Corps five year ADSP plan is published as Marine Corps Bulletin 5200 to serve:

> "...as a reference document to guide the development of automated data systems (ADS) within the Marine Corps and to assist Marine Corps planners in prioritizing ADS support requirements through the period of the Five Year Defense Program (FYDP)."[1]

The plan contains a general outline of the 28 major systems which are the parent systems of the 71 systems listed in the DOD Catalog. The five year plan is under the cognizance of the Information Systems Support Management Division, Headquarters, U.S. Marine Corps. An example of a system description contained in the Marine Corps plan is shown in Figure I-4 on pages I-12.

1.3.4 Systems Documentation

System sponsors and managers were contacted to obtain system documentation beyond that contained in the DOD Catalog, and the Navy and Marine Corps five year plans, but essential to the objectives of this study. The documentation was furnished in various forms such as users' manuals, operators'

[1]Marine Corps Bulletin 5200 of 15 January 1975.

(13) Navy Manpower and Personnel Management Information System (100). The Navy Manpower and Personnel Management Information System (MAPMIS) supports the management responsibilities of the Chief of Naval Personnel, the Chief of Naval Operations (OP-01), and all echelons of the Navy and higher authority in their planning for and utilization of naval personnel. Organizations participating directly in MAPMIS are the Bureau of Naval Personnel (BUPERS), and the Personnel Accounting Machine Installations (to be replaced by the Personnel Management Information Center, New Orleans, in Fiscal Year 1975). All activities with naval personnel assigned have inputs to and outputs from the system.

(a) Responsible Office. The Chief of Naval Personnel is the system proponent for MAPMIS.

(b) Design Activity. Bureau of Naval Personnel, Washington, DC.

(c) Functional Characteristics. The fundamental objective of the MAPMIS is to provide adequate and timely information which managers may use to develop, implement, and control plans, programs, and policies that best meet manpower requirements of the Navy through effective utilization of its personnel. Proper personnel utilization is vital to the effectiveness of the operating forces and their support by the shore establishment. The need for new data, reporting procedures, and reports are not dictated by MAPMIS but by the dynamic environment in which its users operate. Changes in laws, regulations, and management policies and procedures create new user requirements for MAPMIS support. Major functions supported are requirements planning, performance evaluation, cost accounting, budgeting, career planning, personnel distribution, training, billet allocation, and military pay. Four major and three minor subsystems (modules) have been designed, programmed and implemented on third-generation computer systems. The major modules are officer, requirements, fiscal, and inactive personnel. Minor modules that can provide support for any of these major application areas are operations analysis, training, and optical character input.

(d) System Characteristics. MAPMIS is a centrally designed, programmed and maintained system, using standard (IBM 360 series hardware). MAPMIS utilizes direct access storage devices, communications terminals, and third generation equipment to transfer, collect, and store personnel data.

(e) Nature of Development Effort. The planned development effort for fiscal 1974 and the functional areas to be supported are outlined in this paragraph. The programming language for these applications will be COBOL and FORTRAN IV. FORTRAN is used only for the mathematical models. These models comprise less than 10 percent of the total programming workload.

PROJECT	FUNCTIONAL AREA SUPPORTED
OFFICER	
1. *New Strength Programs*	*Personnel planning*

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Figure I-3. Example of Format and Data Content Contained in the "Navy ADP Five Year Plan FY 1974 - FY 1979"

PROJECT		FUNCTIONAL AREA SUPPORTED
2.	"Total Navy" Officer Candidate system	Personnel planning
3.	Officer fitness data base	Performance evaluation
4.	BUIC to UIC conversion	Cost accounting
5.	Redesign of aviation data base	Career planning and personnel distribution
6.	Expand automated Officer Order Writing system	Personnel distribution
7.	Support of Integrated Financial Management system	Cost accounting
8.	PERMIC interface	Personnel planning
9.	C.N.S.T. interface	Training/personnel planning
10.	Officer PCS Cost Accounting	Cost accounting
11.	Officer error research	Personnel planning
12.	Support of Navy Manpower Planning system	Personnel planning
ENLISTED		
1.	Billet sequence code detailing	Enlisted distribution
2.	Active reserve mobilization interface	Planning
3.	Centralized Standard Transfer Orders	Enlisted distribution
4.	Revised enlisted personnel requisition system	Enlisted distribution
5.	Manning projection system	Enlisted distribution
6.	Develop NES User Manual	Enlisted distribution/planning
REQUIREMENTS		
1.	UIC implementation	Financial planning
2.	Qualitative billet data in FYDP	Financial planning
3.	Manpower authorization change document	Billet allocation
4.	Revised MARP document	Requirements planning
5.	Expansion of requirements master	Requirements planning
6.	MARP total revisions	Requirements planning
FISCAL		
1.	UIC activity control	Budget and accounting
2.	Qualitative FYDP	Budget and accounting
3.	Qualitative costing	Budget and accounting
4.	RDT&E system	Budget and accounting
5.	OM&N revisions	Budget and accounting
6.	Revisions to strength statistics system	Budget and accounting
7.	Overseas deployment by country	Budget and accounting
8.	Centralized register consolidation	Budget and accounting

Figure I-3 (cont.). Example of Format and Data Content Contained in the "Navy ADP Five Year Plan FY 1974 - FY 1979"

PROJECT	FUNCTIONAL AREA SUPPORTED
JUMPS	
1. Officer JUMPS input	Military pay
2. Enlisted JUMPS input	Military pay
TRAINING	
1. CNET - BUPERS interface	Support for Commander, Naval Education and Training
2. Automatic availabilities	Enlisted detailing
3. Recruit allocation control system (RACS) quota generation	Support for Commander, Navy Recruiting Command
4. Formal Training Data System (FTDS) exception reporting	Support for Commander, Naval Education and Training
5. Formal training catalog reports	Support for Commander, Naval Education and Training
OPERATIONS ANALYSIS	
1. Recruit assignment system modification	Commander, Navy Recruiting Command
2. Officer strength, promotion, accession and cost planning	Planning
3. Enlisted skill projection and utilization	Planning
4. Enlisted rotation monitoring	Enlisted distribution and detailing
RECRUITING	
1. Statistical and trend analysis	Planning, programming and budgeting
2. Recruiter effectiveness mathematical model	Performance evaluation
3. Demographic data analysis	Planning
OCR	
1. Enlisted diary	Personnel accounting
2. Strength loss and activity accounting	Personnel accounting
3. Error tracking system	ADP operations
4. Enlisted evaluation program (E5/E6)	Performance evaluation
5. Officer fitness report program	Performance evaluation

The foregoing discussion addresses interim MAPMIS development through Fiscal Year 1974. Development efforts commencing in Fiscal Year 1975 will be directed toward transforming the present system from batch processing to a time sharing service that will make information directly

Figure I-3 (cont.). Example of Format and Data Content Contained in the "Navy ADP Five Year Plan FY 1974 - FY 1979"

accessible to action offices. New computer systems with broad band communications linkage are planned for BUPERS and the Personnel Management Information Center, New Orleans (consolidation of three former Personnel Accounting Machine Installations). This developmental effort has been identified as the Future Manpower and Personnel Management Information System (Future MAPMIS). The purpose of Future MAPMIS is to provide a means through ADP to improve Navy personnel management. Improvement must be achieved while the number of people to do the work of the Bureau is being reduced. A major problem confronting the BUPERS/OP-01 organization is management of the Military Pay, Navy (MP,N) appropriation. The MPN appropriation is particularly vulnerable to incorrectly charged expenditures due to the numerous pay record entries, the complex entitlement rate system, and inability to fully document these charges. Overexpenditure of MPN or any other appropriation is illegal. An underexpenditure is equally detrimental from the viewpoint of lost opportunities to promote, to issue needed PCS orders, and to meet proper manning levels. The existing formal financial and personnel reporting systems do not now provide the accurate and timely information necessary to make effective management decisions. The long range solution to the problem of MPN control is the implementation of JUMPS which will centralize and automate the pay records to provide accurate and timely pay information during budget execution periods. As an adjunct to JUMPS, the Bureau must implement an Integrated Financial Management System (IFMS) which will standardize appropriation accounting, and prepare budget reports and statistical projections. Full implementation of JUMPS and IFMS will create the need for additional communications and data processing support, including on-line files with current status information on all Bureau controlled funds. A six-month study of BUPERS/OP-01 information requirements (Futures Forum Report, Vol. II, May 1973) examined in detail each functional organization. It was found that task-related problems fall into these three general categories:

1. the inability to formulate plans with a high level of confidence and to monitor the execution cycle;

2. the lack of ADP support for clerical and administrative procedures and/or unresponsiveness of the computer system to procedural changes or one-time problems; and

3. inadequate formal lines of communications (ADP supported) within the BUPERS/OP-01 organization and with outside organizations that interact with BUPERS.

The proposed system will provide on-line access to data which will be updated on a more frequent schedule. Display will be via terminals, CRT, TTY, or printer, as appropriate. Improved communications will keep headquarters and field files in agreement so that Fleet Commanders and Bureau managers are operating from the same data base. Users will receive only that data which is useful for their purpose, and hard copy will be provided only when it is required.

(f) Benefits and Cost Savings. At the present high cost of Navy manpower and with an even greater requirement for proper and effective utilization of military manpower, precise control of the MPN appropriation (5 billion

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Figure I-3 (cont.). Example of Format and Data Content Contained in the "Navy ADP Five Year Plan FY 1974 - FY 1979"

dollars) requires a higher degree of management capability than presently exists. The only way to achieve management improvement is through the effective and imaginative use of ADP equipment. Most of the ADP development effort during FY 74 is planned for JUMPS, strength accounting, and personnel distribution.

Improvements in accuracy in strength accounting favorably impact MPN management. The present level of error in strength accounting is one-half of one percent. At this level of error, there can be a strength accounting error of approximately 3,000 military personnel and an error of $25 million MPN expenditure. Error must approach one-tenth of one percent; consequently, the major thrust is to develop more precise MPN control through improvements in strength accounting accuracy and the availability of management information for planners and decision makers who must have it while there is time within the fiscal year under consideration to carry out policy changes. Improvements in personnel distribution contributes directly to more effective utilization of Navy manpower.

(g) Costs. Budget requirements for Fiscal Year 1974 are shown in Figure 21. Funding estimates beyond Fiscal Year 1974 are tentative, pending review in accordance with established budget approval procedures.

(h) Development Milestones. Development of the projects listed in subparagraph (e) above will be completed in June 1974.

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Figure I-3 (cont.). Example of Format and Data Content Contained in the "Navy ADP Five Year Plan FY 1974 - FY 1979"

SYSTEMS PLANNING SHEET
REPMIS

1. Part I--BASIC DESCRIPTION

a.	System name:	Reserve Personnel Management Information System.
b.	Functional area:	Personnel (Reserve).
c.	System sponsor:	Director of Marine Corps Reserve.
d.	System phase:	Implemented.
e.	Subsystems:	Mobilization.

2. Part II--SYSTEMS CHARACTERISTICS

a.	Objectives:	1. Replace the electronic accounting machine (EAM) equipment at six Marine Corps districts and MARTC with ADP equipment at a central location. 2. Centralize the class II Reserve personnel reporting and class III Reserve administrative and recordkeeping functions of the six Marine Corps districts and MARTC. 3. To provide personnel data for the Mobilization subsystem at a central location. 4. Facilitate a future interface of REPMIS and the Centralized Automated Reserve Pay system (CAREPAY).
b.	Narrative system description:	REPMIS input for class II reservists is obtained through the unit diary while the input for class III reservists is accomplished by the use of a white paper OCR application. The master personnel file contains class II, class III, and Fleet Marine Corps Reserves. An extract of the REPMIS file is provided DOD monthly for personnel accounting. In addition reports are provided this Headquarters as well as the CG, 4th MarDiv, CG, 4th MAW/MARTC and district directors.
c.	Relation to internal systems:	Mobilization (MOB) and Manpower Management System (MMS).
d.	Relation to external systems:	None.
e.	Organizations providing input:	USMCR-(O)- units and the Marine Corps Reserve Forces Administrative Activity, Kansas City.
f.	Users of system output:	DOD, HQMC, CG, 4th MarDiv, CG, 4th MAW/MARTC, directors of Marine Corps districts, and USMCR-(O)- units.
g.	Communications requirements:	None.

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Figure I-4. Example of Format and Data Content Contained in the "Marine Corps Automated Data System Plan (ADSP), FY75-80"

manuals, Departmental directives, and onsite interviews. The various media and volume of this source documentation makes it impractical to provide a representative example.

The below listed offices were contacted in order to obtain this more detailed documentation and information.

NAVY

Chief of Naval Operations
- Program Development Branch (OP-901)
- General Planning and Programming Division
- Program Planning Office

Vice Chief of Naval Operations
- Special Assistant to the CNO/VCNO for Decision Coordination (OP-09C)

Deputy Chief of Naval Operations (Plans, Policy, and Operations)
- Mid and Long Range Plans and Policy Branch (OP-605)
- Strategic Plans, Policy and Nuclear System NSC Affairs Division
- WWMCCS Coordination and Fleet Readiness Capabilities Branch (OP-643)
- Fleet Operations Readiness and Navy Command Support Center Division

Deputy Chief of Naval Operations (Surface Warfare)
- Amphibious Warfare Branch (OP-323)
- Surface Warfare Division

Naval Facilities Engineering Command
- Program Coordinator (NFAC-06C)
- Assistant Commander for Military Readiness
- Assistant Commander for Operations and Maintenance (NFAC-10B)
- Systems Division (NFAC-011)
- Programs and Comptroller
- Requirements Planning Division (NFAC-20])
- Facilities Planning and Real Estate

Naval Sea Systems Command
- Ship Systems Engineering and Design Department
- Naval Ship Engineering Center

Naval Command Systems Support Activity
Command Management Information System Department

Command and Control Systems Department

Special Projects and Standards Department

MARINE CORPS

Deputy Chief of Staff for Manpower
Manpower Control Branch
Manpower Plans and Policy Division

Manpower Management Information Systems Branch
Manpower Plans and Policy Division

Director of Marine Corps Reserve
Reserve Automated Systems Management Branch
Marine Corps Reserve Division

Fiscal Director of the Marine Corps
Disbursing Branch
Fiscal Division

Information Systems Support and Management Division
Review and Analysis Section
Resource Management Branch

1.4 TECHNICAL APPROACH

1.4.1 General

The study was conducted in two phases with each phase encompassing distinctly identified tasks. The discussion of the study's technical approach will be related to these phases and tasks. The study technical approach is depicted schematically in Figure I-5 on the next page.

1.4.2 PHASE 1: Initial Identification of Systems for Probable Immediate Use

1.4.2.1 Task 1.1. Analysis of DOD Catalog, LSPC 3-70-1, Automated Data Processing Systems (Volumes I and II).

The systems listed in the DOD Catalog were reviewed with respect to their subject and function descriptions to initially

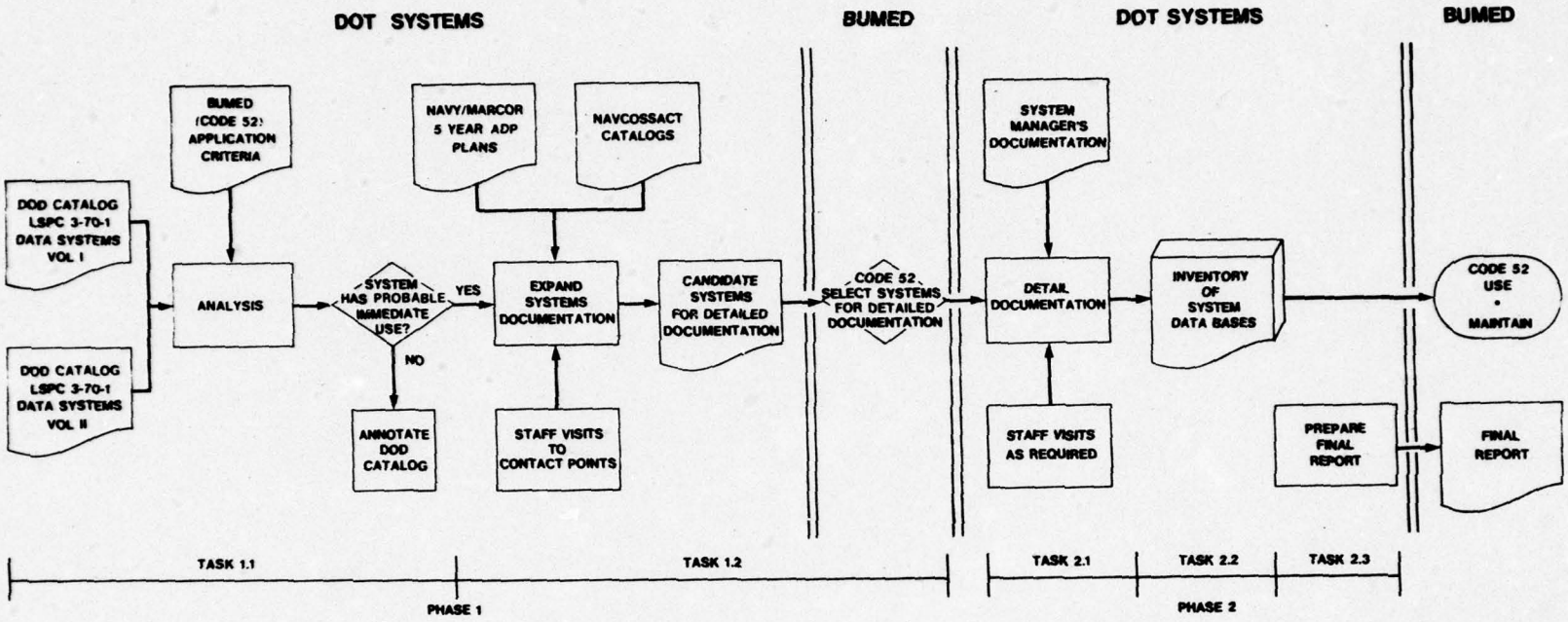

Figure I-5. Technical Approach

determine their probable value for providing data base or files for immediate use by BUMED Code 52. This determination was made by comparing each system's subject and function descriptors with a set of "application criteria" provided by BUMED Code 52. These application criteria were furnished by BUMED Code 52 letter of 12 August 1975, and are quoted below:

- Documentation of force readiness.
- Data related to mission assignment.
- Data bases regarding contingency response procedure and resource status/availability.
- Data bases concerning logistics support structure, manning standards, and facility standards.

Using the BUMED Code 52 application criteria, each system listed in the DOD Catalog was categorized by degree of probable immediate use as follows:

- Positive -- system's subjects and functions are directly related to the application criteria and the system appears to have a data base of immediate use
- Negative -- system's subjects and functions are not directly related to the application criteria and the system does not appear to have a data base of immediate use
- Uncertain -- system's subjects and functions are not sufficiently defined and further research/analysis is required to determine available data bases.

Those systems identified as having positive probable immediate use then became candidates for expanded documentation to be accomplished in Task 1.2 of PHASE 1.

1.4.2.2 Task 1.2. Expanded Documentation of Positive Probable Immediate Use Systems

The systems categorized in Task 1.1, as having positive probable immediate use, were subjected to additional expanded

documentation beyond that contained in the DOD Catalog. The purpose of this step was to provide a level of documentation for a more detailed evaluation and definitive determination of probable data bases for immediate use. The primary sources of information for this expanded documentation were the five year automated data processing plans published by the Navy and Marine Corps which were discussed in paragraphs 1.3.2 and 1.3.3 respectively. In some cases, the five year plans did not provide sufficient information on data base content and, in those cases, system sponsors or managers were interviewed to obtain the necessary information.

The product of this task was an inventory of systems which were candidates for further detailed documentation in PHASE 2. This inventory was furnished to BUMED Code 52 for selection of those systems which would be documented in detail during PHASE 2. This inventory was submitted to BUMED Code 52 by separate letters of 8 and 15 October, and 17 November 1975.

1.4.2.3 BUMED Selection of Candidate Systems for Further Detailed Documentation

BUMED Code 52 reviewed the PHASE 1 documentation and selected those systems which were to be the subjects of detailed documentation in PHASE 2. BUMED Code 52 selections were furnished to DOT Systems, Inc. by letter of 9 and 17 October 1975.

1.4.3 PHASE 2: Develop Inventory of Systems

1.4.3.1 Task 2.1. Detailed Documentation of BUMED Selected Systems

The systems selected by BUMED Code 52, as a result of PHASE 1, were documented in a level of detail that would facilitate understanding and use by persons not totally familiar with ADP terminology. This effort concentrated on obtaining systems' documentation by onsite visits to system sponsors, managers, and operators in the Washington, D. C. area. System documentation was then reviewed, edited, and condensed into a format suitable for use by BUMED Code 52. The format used for the system descriptions is presented in Figure I-6 on the following page.

1.4.3.2 Task 2.2. Compile Inventory of Systems

The systems documented in PHASE 2, along with those PHASE 1 systems not selected for PHASE 2 documentation, have been compiled to form an inventory. Individual systems have been indexed according to related functional subject matter, e.g., manpower requirements, personnel accounting, financial planning, facility specifications, etc. This inventory is presented as a separately bound document (Volume Two) of this report. This manner of presentation is used so that the inventory may be used as a "desk top" reference separate from the main body of the report.

1.4.3.3 Task 2.3. Final Report

This final report documents the effort for archival purposes. This report is composed of two separately bound volumes as follows:

Volume One -- Narrative Discussion
Volume Two -- Inventory of Operational Data Bases

SYSTEM DESCRIPTION

SYSTEM TITLE: (Self-explanatory) ACRONYM: (Self-explanatory)

DOD ADPS/ADS/IDENTIFIER CODE: (The three codes used for indexing purposes in the DOD "Automated Data Processing Systems Catalog, LSPC 3-70-1, Volumes I and II)

REFERENCES: (The Navy/Marine Corps document or directive which governs the operation of the system.)

PARENT SYSTEM: (Title of the major system which incorporates the system being described.)

MANAGER: (The departmental functional manager responsible for policy direction of the system's operation.)

CONTACT POINT: (The specific office, under the system manager, responsible for the system's operation.)

SUBJECT/FUNCTIONS: (The subject and functions description used in the DOD Catalog for indexing systems. If the system is not listed in the DOD Catalog, the SUBJECT/FUNCTIONS were derived by DOT Systems, Inc.)

SYSTEM CHARACTERISTICS:

General: (A general statement of the purpose of the system with a schematic of the systems flow.)

Input: (A narrative description of input sources, data content/format, and flow, supported by examples of sources documents.)

Processing: (A narrative description of the processing steps, data elements, and file maintenance frequency.)

Output: (A narrative description of the types and formats of information available from the system supported by examples of output produced.)

INTERFACES: (Identification of other systems which interface with the system being described.)

USER: (Identification of the commands, types of command, and/or headquarters agencies that use data/information from the system.)

INPUT SOURCE: (Identification of the commands, types of command, and/or headquarters agencies that enter data into the system.)

METHOD FOR ACCESSING: (Instructions for requesting data or information from the system.)

Figure I-6. Format for System Description

SECTION II

FINDINGS

2.1 Introduction

This section presents a discussion of findings related to the effort to obtain information and documentation on Navy and Marine Corps systems. These findings are considered relevant since they highlight areas associated with the exchange and maintenance of systems information within and among DOD components.

2.2 Standards for System Documentation

The Department of Defense has issued guidelines which standardize systems documentation. The guidelines are published in:

- Department of Defense Instruction (DODI) 4120.17
- Department of Defense Manual 4120.17-M "Automated Data System Documentation Standards Manual."

The guidelines are "mandatory for use by all Defense activities," but recognize that the total complexity of a project, from initiation to operation, will determine the degree of necessary documentation. The DOD Manual provides a point-scoring method for determining required documentation based on total project complexity. Using this method, required standard documentation (containing specific instructions for content e.g., sections, paragraph headings, illustrations, etc.) may range from a minimum of only a Users Manual to a maximum of eight document types covering the following areas:

- Functional Description (FD) -- the initial definition of a project that provides the ultimate users with a clear statement of the operational capabilities to be developed.

- System/Subsystem Specification (SS) -- a technical document describing the environment and design elements to provide maximum guidance to the program design effort.

- Program Specification (PS) -- a technical document, containing more detail than the FD and SS, intended to provide detailed information on a segment of the FD or SS.

- Users Manual (UM) -- a non-technical document for users (managers or staff personnel) intended to provide a general description of the system's characteristics and operation.

- Computer Operation Manual (OM) -- a technical document containing precise and detailed information on the control requirements and operating procedures to initiate, run, and terminate a system.

- Program Maintenance Manual (MM) -- a technical document presenting general and specific information for personnel who are responsbile for maintenance of computer programs.

- Test and Implementation Plan (PT) -- a tool for directing the system testing, event scheduling and material delivery, and to conduct orientation of personnel necessary to complete the system.

- Test Analysis Report (RT) -- a non-technical document for management and staff personnel that describes the status of the system after testing and presents deficiencies for review.

The above listed documents are prepared through a system's development and evaluation phases and lay the foundation for the documentation to be maintained during the system's operation phase. Of the eight documents listed above, only the Users Manual, Computer Operation Manual, and Program Maintenance Manual are indicated as the minimum documentation required to

be maintained during the system's operation phase, depending on the degree of the system's complexity.

The contents of a Users Manual, as set forth in DOD Manual 4120.17-M, are presented in Figure II-1, on the next page. As previously mentioned, the Users Manual is a non-technical document which describes the system's characteristics and operation. The objective of a Users Manual is to provide non-ADP personnel with the information necessary to effectively use the system. With this objective in mind, a review of the contents of a Users Manual, as shown in Figure II-1, would indicate that there should be no problem in obtaining information or documentation on a particular system. This is not the case, however, since documentation is available in a wide variety of formats and degrees of completeness. Documentation may be found in any one or a combination of the following formats:

- Official directives, e.g., SECNAVINST, Marine Corps Orders, etc., published to provide instructions or procedures to field activities.
- Specialized in-house developed documentation limited to technical ADP applications, e.g., computer program statements, computer operator instructions (run books), etc.
- Technical reports or abstracts that present very generalized technical and non-technical information associated with the operation of a system.
- Contractor reports or manuals using industry developed formats for presenting systems descriptions.
- Working papers for use within the ADP support activity.

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Figure II-1. Table of Contents for Users Manual from DOD 4120.17-M "Automated Data System Documentation Standards Manual"

Further, individual segments of a system's total documentation may be maintained by separate activities responsible for the overall operation of the system, e.g., functional manager, design activity, ADP support installation, etc. To obtain documentation, in the level of detail presented in Volume Two of this report, requires the review, condensation, and incorporation of information from multiple documents and repository sources. The diverse nature of documentation format and responsibilities for maintaining documentation may cause misinterpretation as to a system's function and current status. This can best be illustrated by the following systems which were selected by BUMED Code 52 for detailed documentation in Phase 2.

- Navy Resource Model (NARM) Integration System. Force Level Analysis Interactive Language (FLAIL). A brief description of this system was furnished BUMED (Code 52) in the first phase of this project. Information on the system had been obtained from the current NAVCOSSACT data systems catalog which indicated that the system was an outgrowth of the NARM II system developed in 1972 and which had been used with a particular data file. Investigation into the documentation for the present FLAIL system reveals that it is actually a type of data base management system designed to be independent of the meaning of the data it works on and is useful in virtually any application which requires manipulation of matrix-type data bases (e.g. financial management and planning systems).

- Total Forces Information Retrieval System
A description of this system was included among the briefs furnished BUMED (Code 52) during the first phase of the project because it was indicated as operational in the July 1975 NAVCOSSACT ADP catalog (Volume 5). When action was initiated to obtain detailed information on the system for phase two documentation, contact was made with the system's user, OPNAV-605. It was then determined that the system had not been used or maintained

for some months and that it was to be officially deactivated as soon as the required formal staff action was completed.

- Navy Facility Assets Data Base (NFADB)
  A brief of this system was provided to BUMED (Code 52) during Phase 1 of the effort. The data file for this system is used in conjunction with the Shore Facilities Planning/Management Information System (SFP/MIS) to produce the Military Construction Requirements Data Books (MRDB) for all activities required to participate in the shore facilities planning system. At the time of initial contact with NAVFACS personnel to obtain data on the system, it was planned to extend the data base and planning logic to include a capability to output data for advanced base planning. On 8 December 1975, while gathering data needed for the detailed documentation of the system, it was learned that plans for this latter phase of of this system have now been dropped since an advanced base functional component outfitting list is maintained as part of the NAVFACS Civil Engineer Support/Management Information System (CES/MIS).

- Naval Sea Systems Command (NAVSEA) Support System
  This system is listed in the Navy five year ADP plan and DOD Catalog, Volume I as "NAVSHIPS Support System." Based on these two documents the system was catagorized in Phase 1 of this study as an "uncertain" candidate for Phase 2 detailed documentation. This "uncertain" catagorization was based on the general description contained in the Navy five year ADP plan and the listing of the Computer-Aided Ship Design and Construction (CASDAC) subsystem in Volume II of the DOD Catalog. The DOD Catalog, Volume II shows the status of CASDAC as a partially implemented system. Detailed research of the NAVSEA system revealed that the majority of data are handled manually and are resident only at the various Naval Ship Engineering Centers. Further, the data systems are described by the system manager (NAVSEA Code 095B) as informal in nature with much of the data not being formally designated, organized, or integrated. CASDAC's partial implementation does not yet address medical aspects of ship designs.

The main reason for the apparent inconsistent documentation standards is that the systems examined by DOT Systems became operational or were close to operational prior to the effective date (29 December 1972) of DOD Instruction 4120.17, which established the documentation standards. DOD Instruction 4120.17 does not require redocumentation of existing systems (prior to 29 December 1972), but does require that, in the event of redocumentation of an existing system, the redocumentation will be accomplished in accordance with instructions contained in the DOD Manual for documentation standards.

2.3 Department of Defense "Automated Data Processing Systems Catalog, LSPC 3-70-1, Volumes I and II."

This DOD Catalog was described in Section 1.3.1. The Catalog represents the first attempt at categorizing, describing, and cataloging all automated systems within DOD, whether conceptual, developmental, or operational in nature. Information for the catalog system was submitted based on guidelines furnished by the DOD Task Force in November 1973. The four military services, JCS, and DSA submitted information in a prescribed format using magnetic tape as the submitting medium. Information was submitted on a one-time basis during the first six months of calendar year 1974. The Catalog was published in October 1974.

The DOD manager of the Catalog estimates that it is about 73% complete. There are no plans at the present time to update

the Catalog; however, there are plans to review the concept behind the initial Catalog to determine whether:

- The Catalog should remain only as an inventory for exchange of systems information among DOD components.
- The Catalog should be developed and used to fulfill only ADP systems management and budget purposes.
- The Catalog should have a combined purpose to be both an inventory for an exchange of systems information as well as to serve in the managing and budgeting of systems at the DOD level.
- The keyword descriptors for systems subjects and functions, which are currently logistics oriented, should be restructured.

There are certain deficiencies in the DOD Catalog that only become apparent after repeated use such as in this study. The significant deficiencies related to BUMED Code 52 data base information requirements are as follows:

- There is no distinction between those systems which have only local command application and those that have Departmental level application. This presents no problem if one is looking only for software applications, since it is possible to tailor existing software to meet new requirements. If, however, one is attempting to determine the level of use of the data contained in the system, it is of particular interest to know whether the data base content is limited in scope to local activity or whether the data base reflects Navy-wide activity. This latter type of information can be obtained only from the point of contact listed in the Catalog.
- The "Contact Point" for each system is supposed to be the "...organizational entity responsible for providing additional data systems information." This may or may not be the case, depending on the command listed and the type of information desired. In the majority of cases, the "Contact Point" is the organizational entity that provides ADP computer programming support. They can furnish technical data such as programming language, type of equipment, file content and format, frequency of update, and type of output. As a general rule, however, they are

not familiar with the "why" for the system or how the information from the system is ultimately used. This latter type of information is provided by the system manager.

- The publication date of the Catalog can be misleading as to the currency of the information it contains. The call for data was issued in November 1973, data were submitted by June 1974, and the Catalog was published in October 1974. In the interim, some systems that are listed as operational have been phased out or incorporated into other systems, while some systems listed as in the developmental phase have become operational. This is to be expected in the highly dynamic environment of ADP systems. This, coupled with the estimated initial completeness of the Catalog (73%) and no immediate plan for its update, means that the continued utility of the Catalog is questionable.

- The content and distribution of Volumes I and II are different. Volume I primarily contains description of parent systems, while Volume II contains description of subsystems included in the parent system. For example, the Naval Safety System is listed in Volume I, but because it has no sub-components, it is not listed in Volume II. Similarly, the Manpower Management System (MMS) is the Marine Corps' only system for personnel accounting, but since it is a parent system it is not listed in Volume II. Navy had approximately 50 copies of Volume I for Navy-wide distribution, therefore, Volume I was distributed to major command levels only. Volume II received wider distribution which included some 250 field activities. Marine Corps distribution was similar in that Volume I was limited to the major headquarters level, with Volume II being distributed to field level data processing installations or management agencies. It is evident, that the method for cataloging systems between the two volumes, coupled with the varying distribution of the volumes, creates a user's information gap that is not apparent unless the two volumes are compared.

2.4 NAVCOSSACT Navy Systems Listing

An automated listing of Navy systems, with the same data content as that contained in Volume II of the DOD Catalog, is maintained by the Special Projects and Standards Department (Code 70), NAVCOSSACT, Washington, D.C. The listing is updated as changes occur in the descriptions of the listed systems. The NAVCOSSACT system has the capability to provide a listing of specific Navy systems identified by selected keyword subjects and functions descriptors. Access to this selective retrieval capability is through the Special Projects and Standards Department (Code 70), NAVCOSSACT, referencing the Department of the Navy Data Catalog System, Project Number 02A061.

2.5 Access Methods

Access to Navy and Marine Corps data bases is somewhat restrictive in nature. As a general rule, the Navy and Marine Corps do not permit direct access to a data base or file extracts by organizations external to the sytem manager's immediate organization. This type of access may be authorized by the system manager based on the merits of individual cases.

Access of the data bases through the system manager or contact point is encouraged and supported. The primary reason for this data base access approach is that the extensive use of codes and the code meanings require analysis by persons who

work with them on a continuing basis. For this reason, the Navy and Marine Corps feel that the assistance of an analyst, who is intimatly familiar with the data base content, can assure that data retrieved from a data base are correct and meaningful to the requirements of the requestor.

2.6 Management Information Division (Code 022), BUMED

The Bureau of Medicine and Surgery Organizational Manual (BUMEDINST 5430.4A), establishes the Management Information Division (Code 022) as the "...focal point for gathering and storing all information related to the management of the Medical Department." The Management Information Division's functions include the development and maintenance of an integrated information system to meet the requirements of all levels of management within BUMED. In addition, the Division is charged to investigate and report on special and unique management information requirements. The Division has undertaken a project to compile an inventory of those systems which operate or are managed within BUMED. The object of the inventory is to identify those internal BUMED systems which may have utility to the Division in accomplishing its assigned functions. It is not intended that the inventory will contain documentation on the internal BUMED systems in the same detail as presented in Volume II to this report, nor does the Division intend to broaden its project scope beyond internal BUMED systems.

SECTION III

CONCLUSIONS

On the basis of the findings presented in section II, the following conclusions are drawn:

- There is a need to develop and make available non-technical systems documentation for use by managers and staff personnel who are not trained in automated data processing.

- The DOD Automated Data Processing Catalog, LSPC 3-70-1, Volumes I and II, is of questionable value because of its lack of timeliness and completeness.

- The NAVCOSSACT automated listing of Navy automated data systems appears to provide the most promising source for initially identifying systems relevant to a specific information requirement.

- The large number of systems and the diverse methods for maintaining systems documentation inhibit functionally oriented managers from maintaining a current awareness of systems applications.

- There is a requirement within the Bureau of Medicine and Surgery for a comprehensively documented inventory of both internally and externally managed automated data processing systems and their related data bases for use by medical and dental functional managers.

SECTION IV

RECOMMENDATIONS

Medical resources planning is a dynamic process influenced by factors such as military missions, manpower ceilings, budgetary limitations, Congressional pressures, and private sector medical practices. Astute medical planning requires the incorporation of substantive data from sources which may not necessarily be under the cognizance of the Bureau of Medicine and Surgery. For example, medical program justifications may call for the use of data related to total Navy manpower requirements which are generated by the Bureau of Personnel (BUPERS). The use by BUMED planners of data and time frames that are different from those used in justifications prepared by BUPERS planners can result in data that is inconsistent. The submission of inconsistent data to DOD, OMB, or Congress can place a suspect aura around management practices and jeopardize approval of such programs. Medical planners, therefore, must be assured that data used in program justifications are in consonance with like data used by other planners within the Department of the Navy. Toward this end, it is essential that BUMED managers maintain a working awareness of the various data bases, both internal and external to BUMED, that are used in developing program justifications.

In an effort to improve response to BUMED management information requirements, the following recommendations are made:

- Establish management information requirements for each functional area within BUMED. These information requirements should address specific subjects and functions necessary

for application in planning, programming, and budgeting, e.g., manpower requirements determination, personnel accounting, active duty/beneficiary population profiles, facilities configuration determination, base loading determination, unit mission assignment, etc.

- Develop an inventory of information systems, both within and external to BUMED, which can satisfy specific management information requirements. The inventory should include the identification of systems that are operational as well as those that are planned for implementation, e.g., in the conceptual or developmental phase.

- Document information systems, identified in the above recommendation, in a degree of detail suitable for use by non-ADP managers and planners. This documentation should be such that it provides a ready reference that is cataloged by major subject, e.g., manpower, personnel, facilities, supply, equipment, etc.

- Maintain and update the inventory and systems documentation under the aegis of the Management Information Division (Code 022), Director of Program Planning and Analysis (Code 02), Bureau of Medicine and Surgery.

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Navy and Marine Corps Data Bases
Navy and Marine Corps Data Systems Documentation

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

A survey of Navy and Marine Corps operational data systems managed at the Department level was conducted. Documentation was prepared on selected systems with data bases which have potential for use by the Navy's Bureau of Medicine and Surgery (BUMED) in planning, programming and budgeting efforts. Recommendations for BUMED to maintain an inventory of systems documentations are presented.

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